IN THE COMMONWEALTH CONCILIATION AND ARBITRATION COMMISSION

In the matter of the *Conciliation and Arbitration Act* 1904-1967

and of

THE METAL TRADES AWARD, 1952

(Nos 11 of 1949; 430 and 439 of 1950; 254 of 1954)

(C No. 1855 of 1966)

and of

METAL TRADES EMPLOYERS' ASSOCIATION and others

Claimants

v.

THE AMALGAMATED ENGINEERING UNION (AUSTRALIAN SECTION) and others

Respondents

(C No. 3 of 1966)

Variation of award—Margins—Decisions issued.

Industrial dispute—Total wage payable in the metal industries—Margins—Work value investigation—Inclusion of Appendices in inspections—Method of conducting work value review—Use of check sheet for evaluation of work—Previous work value studies in Metal industries—Previous marginal relativities—Effect of new engineering techniques and modern machines on the skill, responsibility and concentration required of employees—Ability to adapt to changing requirements—Versatility and specialization—Training of apprentices—Worth of an employee—Economic considerations and effects—Capacity to pay—Over award payments and absorption of increases granted—'Flow on' to other industries—Conciliation and Arbitration Act 1904-1965 *s.* 34 (6)*—Decisions issued.*

On 8 July 1966 the Commonwealth Conciliation and Arbitration Commission (Wright, Gallagher and Moore *JJ.*, Deputy Presidents and Commissioner Winter) issued decisions[1] and made an order[2] in part settlement of the above matters.

In the course of the said decisions, Commissioner Winter was directed, pursuant to section 34 (6) of the *Conciliation and Arbitration Act* 1904-1965, to make an investigation and furnish a report or reports to the Commission with respect to the following matters:

(1) What, if any, rearrangements or re-designations of classifications or additional classifications under Part I of the award are necessary or desirable to bring them into accord with present day requirements;

(2) What, if any, alterations of marginal rates prescribed under Part I of the award or additional marginal rates are justified upon the grounds of work value, the economic considerations which have been presented to this bench, or for any other reason.

On 5 April 1967 Commissioner Winter issued an interim decision[3] in connection with the said direction.

The matters insofar as they concerned the said work value investigation, were relisted before the Commission (Gallagher and Moore *JJ.*, Deputy Presidents and Commissioner Winter) in Sydney on 26 April 1967.

1967.
SYDNEY, April 26, 27; May 29; June 15, 26, 29; July 3, 4, 5, 6, 10, 11, 13, 17, 18, 19, 20, 24.
MELBOURNE, July 31.
BALLARAT, Aug. 1.
MELBOURNE, Aug. 2, 3, 7, 8, 15, 16, 17, 18, 22.
HOBART, Aug. 23, 24, 25.
SYDNEY, Sept. 6, 7, 8.
MELBOURNE, Sept. 12, 13, 14, 15.
SYDNEY, Sept. 21, 22, 26, 27, 29; Oct. 3, 4, 5, 6.
MELBOURNE, Oct. 10, 11, 12, 16, 17, 18, 19, 24, 25, 26, 27.
SYDNEY, Oct. 31; Nov. 1, 2, 7, 8, 9, 10.

(1) 115 C.A.R. 93 (2) *Ibid* p. 235 (3) 118 C.A.R. 31

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

The Commission]

MELBOURNE, Nov. 14, 15, 16, 17.
SYDNEY, Dec. 11.

Gallagher *J.*
Moore *J.*
Commr Winter.

D. L. McBride for the Electrical Trades Union of Australia and with
J. Baird for The Boilermakers' and Blacksmiths' Society of Australia.
T. Murphy for The Federated Ironworkers' Association of Australia.
J. B. Holmes for the Australasian Society of Engineers.
J. McLagan for the Federated Moulders' (Metals) Union of Australia.
J. E. Heffernan for The Sheet Metal Working, Agricultural Implement and Stove Making Industrial Union of Australia.
A. Horsburgh for The Amalgamated Engineering Union (Australian Section); and
J. Manser for The Federated Miscellaneous Workers Union of Australia.
C. L. Cullen, of counsel, for the Metal Trades Employers' Association of Australia and others.
A. P. Aird, Q.C., and *I. E. Douglas*, of counsel, for Her Majesty the Queen in Right of the State of Victoria and others, and with *K. D. Marks*, of counsel, for the Hydro-Electric Commission of Tasmania.
L. Ferdinandy, of counsel, for the Electricity Trust of South Australia.
A. H. Crews for the Metropolitan Transport Trust, Tasmania.
J. G. Henningham for The Colonial Sugar Refining Company Limited.
J. A. Keely, of counsel, for the Attorney-General of the Commonwealth of Australia (intervening).

On 15 June 1967 the following decision was issued by the Commission:

Reasons for Decision of Gallagher J., Moore J. and Mr Commissioner Winter

We have given consideration to the submissions for and against the proposal that the current investigation into work in the metal trades, now commonly known as the Winter Inquiry, should include inspections of classifications in the Appendix as well as those covered by clause 4.

Whatever may have been Mr Aird's intention at the outset of his argument, the only matter of substance left for determination at the conclusion of the proceedings was whether the inspections should extend to electricity supply undertakings in Victoria, South Australia and Tasmania. There is no specific application before the Commission about employees of electricity supply undertakings. Without deciding the matter we indicate our present view that in the absence of such an application there may be difficulties in including these employees in any final order we make in the cases now before us.

Mr McBride, who presented the case for the unions thoroughly and with great clarity, did not exclude the feasibility of a full work value inquiry into these undertakings, but he argued that it would need to be done separately and subsequently. He discussed in detail the historical position, pointed out that there is no application before the Commission for increases in margins for employees covered by the Appendix, including those working in electricity supply undertakings, emphasised that orders for general economic marginal increases have not automatically extended to Appendix classifications, contended that the Winter Inquiry is concerned only with the classifications covered by clause 4 and submitted that it would be wrong to associate the particular with the general. He contested the importance to be attached to the statement of Mr Aird that work under Appendix classifications common to those covered by clause 4 is the same, stressed the fact that a very substantial number of employees at power

stations and covered by the Appendix receive an additional allowance, and submitted that this was evidence of possession by them of greater skill than that required of their so-called counterparts working under clause 4 classifications.

Having closely considered the issues raised, we have formed the opinion that no investigation of work value in the metal trades would be complete without inspection of the skill duties and responsibilities of key metal trades employees in electricity supply undertakings. We are influenced by the vital importance of electricity, not alone to industry but to the way of life of every man, woman and child in the community. The necessity for the existence of proper industrial conditions for those charged with its generation and reticulation is self-evident. We have no doubt as to the wisdom of making inspections, and we think that those proposed by Mr Aird and Mr Ferdinandy would furnish an adequate sample.

We pause to consider however whether, notwithstanding the potential value of the inspections, we would be justified in taking a course of action which could prolong the inquiry. Mr Aird has intimated that he would adhere to a programme which would be completed in a maximum of five days in Victoria and two days in Tasmania. Mr Ferdinandy would complete his programme in South Australia in two or three days. However, Mr McBride, emphasising the need for thoroughness, has stated that if we accede to the employers' request, the unions may feel obliged to take steps that could occupy a considerable time.

The Commission is fully conscious of the desirability of expediting the investigation, and indeed Mr Commissioner Winter has already applied his mind to the problems involved. On 18 July 1966 he first emphasised to the parties, amongst other things, that inspections of metal trade industries must necessarily be in sample form. On 8 August 1966 he stressed that 'in order to complete its task with a minimum of delay and with a maximum of expedition it will be necessary for the Commission to limit the inspections to what may be termed pilot classifications'. These intimations were repeated in the Commissioner's decision of 5 April 1967 when he further stated that he was more interested in work qualities than fixed classifications, and he then went on to explain that by reference to work quality he had in mind such factors as skill, qualifications, aptitude, experience, nature of the work and conditions in which or under which the work is carried out. He requested the parties to consider his views, but they were unable to reach agreement. The Commissioner then decided that the examination of the work of male employees should be confined to eleven pilot classifications as well as classifications for adult females.

We think that the extensive knowledge gained from the thorough inspections already completed, the fact that a full transcript note is taken of each inspection, the steps recently taken by the learned President to relieve Mr Commissioner Winter from dealing with matters in the metal trades other than those which are part heard and the possession by the Commission of the statutory power to control the length of the proceedings should in combination enable the enquiry to proceed with reasonable expedition.

Weighing carefully all material considerations, we rule that the inspections proposed for electricity supply undertakings in Victoria, South Australia and Tasmania should be allowed to proceed. However, we wish to make one point clear beyond all doubt. At this stage the fundamental objective of the Commission is the ascertainment of facts. Our agreement to the inspections must not be taken to indicate that we have formed an opinion that there should be interference with existing practice of making special provision in the metal trades award for specified undertakings, including those engaged in the supply of electricity.

The Commission]

The matters again came on for hearing before the Commission (Gallagher and Moore *J.J.*, Deputy Presidents and Commissioner Winter) in Sydney on 26 June 1967 and on the same day the hearing was adjourned *sine die*.

The matters again came on for hearing before the Commission (Commissioner Winter) in Sydney on 29 June 1967, and continued by way of inspections in the States of New South Wales and Victoria until 8 August 1967.

The matters were relisted before the Commission (Gallagher and Moore *J.J.*, Deputy Presidents and Commissioner Winter) in Melbourne on 15 August 1967 when it was announced that consideration had been given to ways and means of expediting the hearing, that the Deputy Presidents would join Commissioner Winter on inspections and the hearing of further evidence, that the Commission aimed at bringing down a final order before the end of the year, and that an application by the unions for an interim increase would be left in abeyance.

D. L. McBride for the Electrical Trades Union of Australia.

R. J. Hawke with *J. E. Heffernan* for The Sheet Metal Working Agricultural Implement and Stove Making Industrial Union of Australia and with

T. Murphy and *M. E. Heagney* for The Federated Ironworkers' Association of Australia.

J. Baird, J. W. Bevan and *R. Scott* for The Boilermakers' and Blacksmiths' Society of Australia.

R. Manser for The Federated Miscellaneous Workers Union of Australia.

J. P. Devereux and *A. E. Horsburgh* for The Amalgamated Engineering Union (Australian Section) and with

A. McLagan for the Federated Moulders' (Metals) Union of Australia.

A. T. Brodney, solicitor, *T. Addison* and *J. B. Holmes* for the Australasian Society of Engineers.

J. Robinson, of counsel, and *C. L. Cullen*, of counsel, for the Metal Trades Employers' Association and others.

A. P. Aird, Q.C., and *I. E. Douglas*, of counsel, for Her Majesty the Queen in Right of the State of Victoria and others.

J. G. Manningham for The Colonial Sugar Refining Company Limited.

A. H. Crews for the Metropolitan Transport Trust, Tasmania.

K. D. Marks, of counsel, for the Hydro-Electric Commission of Tasmania.

L. Ferdinandy, of counsel, for the Electricity Trust of South Australia.

A. E. Woodward, Q.C., and *J. A. Keely*, of counsel, for the Attorney-General of the Commonwealth of Australia (intervening).

On the same day proceedings were adjourned for inspections, which were conducted in the States of New South Wales, Victoria and Tasmania until 15 September 1967 on which day the said inspections were concluded.

The matters again came on for hearing before the Commission (Gallagher and Moore *J.J.*, Deputy Presidents, and Commissioner Winter) in Sydney on 21 September 1967, and on 25 October 1967 the following statement was made by Moore *J.* on behalf of the Commission outlining the method of concluding the proceedings.

In view of submissions which have been made as to the best method of concluding these proceedings, and in order to avoid any misunderstanding, we consider it desirable to announce now what we have in mind.

Subject to what any party or intervener may say, we propose to pursue the following course. As soon as we reasonably can after the hearing has concluded we will aim at announcing the rates for the 26 classifications seen on inspections and also for such other classifications as we find practicable. We cannot of course inform the parties before that decision what precise number of classifications it will cover, but it will not include a rate for storemen and packers, consideration of which has by agreement been deferred. Nor have we as yet formed any view on the new classifications suggested by the Commonwealth or indeed on the necessity for any new classifications. Despite the fact that we cannot be more specific, we ask the parties to commence now to apply their minds to what will happen after we have announced our decision on those classifications. We take this course with the object of achieving as much as possible by agreement and therefore we will require the parties to confer and within 14 days of the announcement of that decision:

(a) to inform us what agreement has been reached as to rates for classifications not covered by our decision. These rates will be included in our final order.

(b) as to the classifications about which agreement may not have been reached, to supply us with their views either joint or several as to what should be paid together with a short statement of the work done by each classification about which there is disagreement.

As to (b) above we will, in the light of material supplied, decide whether or not we will require argument about those classifications. We would hope then to be in a position to announce our decision on these outstanding classifications shortly afterwards.

We realise that this proposed procedure may cause strain on the parties but we consider that, given goodwill by all concerned, it should succeed and should achieve a proper result.

We also ask the parties to consider whether some of the smaller differences now existing between rates which appear in this day and age to be somewhat unreal, might be eliminated and the number of rates payable under the award thereby reduced. Consideration might also be given to renaming some of the classifications either because the present name does not accurately describe what the employee is doing or because it is inappropriate for the kind of work which he is called upon to perform. As examples only, 'fitter' or 'machinist 1st class' seem to us to be inadequate to describe skilled tradesmen and the work which they do. Similar considerations apply to a number of the definitions. We would also therefore ask the parties to apply their minds to the problems of definitions, some of which have already been raised in these proceedings.

We are of the view that clause 4 could be simplified if the following steps were taken:

(i) to remove those divisions which apply to only one or two employers and put them in the appendix, namely, KA, NA,, NB and NC;

(ii) where practicable to put into the appendix rates which apply to only one employer, e.g., 264A:

(iii) to eliminate those classifications which appear to be obsolete, for example, B46 Tilter, O285B Rigger's assistant (Morts Dock), and B37 Faggoter;

(iv) to eliminate the present breakup into divisions, to set out the tradesmen classifications in one group and the non-tradesmen alphabetically in another. This would make clause 4 much easier for reference and might reduce some duplication.

This is our *prima facie* view but anyone who is opposed to all or any of the changes proposed in this paragraph will be given an opportunity to make submissions after we have given our decision on rates.

Because it appeared to us that this might be an opportune time to deal with any other unsatisfactory aspects of this award from the drafting point of view, we invited the Industrial Registrar to supply any suggestions he might have as to improved drafting. He has suggested the following changes:

(a) Clause 2 to become clause 1 because it is preferable to have an index at the beginning of a document.
(b) The industries in the incidence clause to be set out alphabetically for easier reference.
(c) The amalgamation and rationalisation of clauses 7, 7A and 7B, Apprenticeship.
(d) The elimination from clause 15, Holidays and Sunday work, of holidays which occurred many years ago.
(e) The redrafting of clause 21, Annual Leave, to state the present position only.
(f) The elimination of section 4 of clause 32, Emergency Provisions.
(g) The elimination of clause 36, which is headed '24th April 1962'—S.A. only.
(h) An index for and rationalisation of the Appendix.
(i) Part II to become a separate award.

All these suggestions seems to us to be reasonable and as at present advised we are prepared to authorise him to make them. Any party wishing to oppose them would be entitled to make submissions to the Industrial Registrar on the settlement of the minutes, a process which will be subject to reference to a member of this bench. This announcement is not intended to prevent the parties from making other proposals about the form of the award either to us or preferably to the Industrial Registrar on settlement of the minutes.

The hearing of the matters continued until 17 November 1967, when decision was reserved.

On 11 December 1967 Gallagher *J.* made the following announcement and Moore *J.* read the last paragraph of his reasons for decision.[1]

In this Inquiry Mr Commissioner Winter and I would determine that:

(1) Wage increases where granted for adult male employees working under clause 4 of the Metal Trades Award 1952 (as varied) should be awarded on a work value basis, not otherwise, and should be those as set out in the schedule marked A which is now handed down.
(2) Wage increases where granted for adult female employees should be 75 per cent of the appropriate increases for adult males with a flat rate for employees at the third class machinist level or below.
(3) The claim for retrospectivity should be refused.
(4) The appropriate variation should come into operation from the beginning of the first pay period to commence on or after 22 January 1968 and should remain in force for three years thereafter with liberty to apply to the Commissioner in the metal trades industry reserved to the parties.

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[1] *Infra* at p. 756

[*Gallagher J.*

Upon reference to the schedule marked A, it will be seen that it has been found practicable to determine rates for classifications generally, that is to say for 320 classifications. Of these it will be seen that for 18 classifications there would be no increase in wage rates, that for 178 classifications there would be an increase of $1.00 per week, that for 9 classifications there would be an increase of $1.30 per week, that for 27 classifications there would be an increase of $2.75 per week, that for 16 classifications there would be an increase of $3.75 per week, that for 47 tradesman classifications there would be an increase of $7.40 per week and that for the remaining 25 classifications there would be increases of varying amounts ranging between 10 cents and $10.05 per week.

The schedule because of particular features applying to them will show that certain classifications have received special treatment. These classifications and the increases which we would grant are—

Number	Classification	Increase per week
		$
185	Duster	0.10
186	Duster's assistant	0.10
283	Process worker (all divisions)	1.60
253	Assistant furnaceman	1.55
268	Furnaceman (electric)	2.50
269	Furnaceman (other)	2.80
270	Furnaceman on heavy angle iron or heavy plate	3.75
71	Furnaceman—other (foundry)	2.80
70	Furnaceman—electric (foundry)	3.75
69	Furnaceman—cupola (foundry)	3.75
263	Dresser and grinder (other)	1.60
262	Dresser and grinder (when using portable machine)	1.85
66	Dresser and grinder—when using portable machine (foundry)	1.85
67	Dresser and grinder—other (foundry)	1.75
68 (b)	Dresser, shot blast and sand blast, other (foundry)	1.85
150	Dyesetter, machine setter and/or leading press hand	4.05
130	Dyesetter press operator working from blueprints or plans	3.75
261	Dogman and or crane chaser	2.70
76E	Dogman (foundry)	2.85
132	Guillotine operator (as defined)	4.10
58	Welder (special class)	8.05
25	Scientific instrument maker	10.05
26	Toolmaker	10.05
20	Patternmaker	8.95
9	Inspector	9.60

We explain that the rates shown in schedule A are those appropriate for Victoria—elsewhere. The equivalent award rates for the principal localities named below are to be ascertained by adjusting the Victoria—elsewhere rates as follows—

		$
Sydney	add	0.80
Brisbane	deduct	1.70
Adelaide	deduct	0.40
Hobart	add	0.70

With regard to over award payments we direct particular attention to the reasons of Mr Commissioner Winter commencing at page 215 and to my reasons commencing at page 94. We emphasise that the increases which we would grant would apply to existing award wages and it should not be assumed by employees that over award payments cannot or will not be offset against them. We also emphasise that this is not a case in which increases in wage rates for the metal trades sets a pattern for wages in other industries. The increases which we would grant reached as they have been on a work value basis relate solely to employees working under clause 4 of the Metal Trades Award and do not constitute a reason for awarding wage increases to employees covered by other awards or working in other industries.

On the same day the following reasons for decision were issued by the Commission:

REASONS FOR DECISION OF GALLAGHER *J.*

This inquiry into wage rates for employees working under the Metal Trades Award 1952 (as varied) first proceeded by way of detailed inspections made at factory workshop and training school level and then followed the course of a formal hearing at which there were taken the sworn evidence and submissions called or made on behalf of the respective parties and interveners.

There is set out as an appendix a comprehensive review which besides dealing with introductory matters, procedure, range of inspections, systems of work, conditions of work and general conclusions contains by way of separate schedules short particulars of each inspection and detailed particulars relating to certain classifications.

On the assumption that the review with the schedules thereto will be read first, it is proposed to proceed to concise consideration or examination of matters relevant to the issue for determination, which is what, if any, changes including alteration of wage rates should be made on a work value basis for employees falling under the award.

HISTORY

So far as the metal trades are concerned, the first Federal examination of duties of employees made on a work value basis was undertaken in 1920-21. On 4 May 1921, Higgins *J.* handed down a judgment[1] in which he stated, in detail, findings or observations relating to members of the Amalgamated Society of Engineers engaged in the working of metals and employed 'not only in engineering undertakings but in undertakings as diverse as those of biscuit manufacturers and quarry owners, gold mining and brick manufacturing, cement manufacturing, electrical works, general providers, and the great steel works of New South Wales'. The decision is easy of access and although important does not require a meticulous analysis. 'The case,' said the learned President, 'presents many and formidable difficulties.' It was observed, *inter alia*, that skilled employees were entitled to a reasonable rate of pay; that the then existing wages did not amount to 'fair play' and were unlikely to 'induce lads to undertake the burden of learning a craft'; that if the Court were to yield to a practice of picking out the easiest features of a trade and allowing their performance

(1) 15 C.A.R. 297

by unskilled men it would 'be encouraging the manufacture of imperfect tradesmen'; that in relation to machinists 'perhaps the fairest course is to treat machine work as part of the fitters or turners craft and to prescribe the craft rate'; that the Court was precluded from the adoption of this course by the nature of the log which asked for lower wages in the case of the driller, the screwer, the bolt maker and others; that 'most employers admit that it is not fair to apprentice a boy to one or two or three machines; the apprenticeship should be to fitting or turning, but the boy should learn the machines as part of his trade.' Immediately preceding the last quoted statement, His Honour had said: 'There is much to be said for the craft rate all round. The work to be done by the machine is work which, but for the machine, would have to be done by the craftsman with the old tools, the hammer, chisel, vice, etc., and it is admitted by the employers that every fitter ought to be able to work the machines as part of his trade.' At a later stage he said further, 'the best way to discourage the manufacture of imperfect tradesmen and to prevent slavery to the machine, is to prescribe for them the same minimum rate as for the full tradesman.' However, consistently with his earlier reference to the log of claims he concluded: 'But the nature of the log in this case does not call for a final solution of this difficult problem. For the Union under the pressure of existing practice asks for lower minimum rates for drillers, screwers, etc., than for fitters and other tradesmen; and even if the suggestions which I have put forward are sound, I cannot act on them; I cannot exceed the claim. The division of the machinists into three grades, which will be found in the award is based upon the consent of the Union.' One further particular comment should be made. Just as he had been critical of attempts by employers 'to increase classifications downwards', so was Higgins *J.* unreceptive to claims by the Unions 'to increase classifications upwards.' 'Blacksmiths are scarce just now,' he said, 'but scarcity is no ground for prescribing a higher *minimum* rate. There is no such difference in the qualities required of the blacksmith and of the fitter as to justify the Court in prescribing an extra 6d per day for the blacksmith, or in treating him as higher than a full tradesman.'

He prescribed the following rates of wages:

	Per week s
General labourers	84
Tradesmen's helpers	90
Casting dressers	96
Third class machinists Motor attendant	102
Second class machinists Switchboard attendants	108
Electrical wiremen or linesmen Furnacemen (iron or brass)	111
Tradesmen First class machinists Scientific instrument maker	120
Oxy-acetylene operators Electrical welders	126
Patternmakers	129
Forgers Faggoters	138
Shift engineers	144
Roll-turners	150

	Per week
Leading hands—if in charge of three or more employees whether apprentices or not	6s more
But if two or more adult tradesmen be in charge of the leading hand	12s more

The 1921 award of Higgins *J.* for the metal trades provided *inter alia:*

(a) wage rates as above set out.

(b) 44 hours per week as the maximum ordinary hours for engineering employees.

(c) eight holidays per annum.

(d) time off for apprentices 'to enable them to attend technical schools etc.'

(e) wages for apprentices 'such as will enable poor parents to give their boys a place in these crafts.'

(f) 'journeyman's overtime rates for apprentices who are called on to work overtime.'

The learned President refused *inter alia:*

(1) annual leave and full pay.

(2) additional payment for dirt, for height, for heat, for danger etc.

Finally, the judgment included the following observation:

'The tradesmen's crafts are subject to the needs of the community; the community must not be subject to the wishes of the crafts; but it is the duty of the Court not to sanction a system which tends to eliminate from industry complete and competent tradesmen, and to create a class of man fit for little else than a particular machine, and monotonous repetition.'

The second general examination of the metal trades industry was made in 1929 and resulted in the judgment of Sir George Beeby handed down on 18 December of that year.[1]

In the consideration of this learned comprehensive and illuminating decision it is, of course, necessary to bear in mind that it was delivered at the outset of a period of grave economic depression in which there were widespread industrial stagnation and unemployment. 'Witness after witness presented by the unions,' said Beeby *J.*, 'admitted that the whole industry is at a low ebb. Since 1926 unemployment has greatly increased. Contracts for important machinery and constructional material have gone abroad because of the great difference between local and foreign prices.' Later in the judgment there appeared a passage couched partly in these words:

'In making awards it (the Court) must consider broad economic facts. It cannot act on the assumption that the Commonwealth is isolated from the rest of the world and can set up standards regardless of those of other countries. . . . The Court can only deal with circumstances as they exist; it cannot forget that our industries operate in a world of competition and must pay proper regard to the methods of competitors.'

The statement above cited illustrated the thinking of the learned Judge and his approach to the issues which he was called upon to determine. The inquiry was exhaustive but it was not directed to claims for increased wage rates. Whatever the purpose at the beginning it developed into an investigation of economic problems of industry and of claims relating to the operation of machines, it being contended on the one hand by the employers that semi-skilled or non-skilled labour could properly be engaged and on the other hand by the unions that the work belonged to tradesmen and should continue to be performed by them. For

(1) 28 C.A.R. 923

reasons which were explained in detail, Beeby *J.* substantially accepted the submissions of the employers. He brought down an award which conceded the principle of their claim for a reclassification of occupations and which gave effect to it by prescribing margins for 'skilled workmen not called on to exercise tradesmen's skill and knowledge and for process workers, and by fixing a separate wage schedule for unapprenticed junior labour.'

It was made clear in the judgment that the rates fixed by the court were minima and that there was express recognition of direct bargaining and of providing for payment by results. 'A tribunal in fixing a wage' it was said 'does not fix a quantity of work for which the wage is to be paid, except by way of piecework. It permits an individual to bargain for a wage higher than a prescribed minimum and to agree to a fixed relationship between wage and output. While our system of regulation is a check on individualism, it permits and encourages individualism within prescribed limits. So long as workmen are paid minimum wages for the recognised hours of employment and conform to auxiliary regulations, they are left free.'

The short review of the '1929 inquiry' is closed by setting out the following passage:

'The increases in margins asked for by the unions were not seriously pressed by the various advocates. All parties tacitly conceded that the group of industries concerned could not, in their present position, carry any serious increases in nominal wages. If the industry since 1926 had displayed the buoyancy which characterised it during the preceding years, I would not have hesitated to increase margins in some directions in order to restore the ratio of allowance for skill of pre-war days.'

The passage above set out leaves no doubt that Beeby *J.* would have at least to some extent increased margins had the economic conditions of the day so permitted.

In 1935[1] Beeby *J.* again considered marginal rates and after discussion of relevant questions reached a conclusion which he expressed in manner following:

'I am satisfied that as a matter of industrial justice the margins to skilled tradesmen should be increased and that in present circumstances the metal trades industries can stand some increase. I think that a general marginal increase to skilled tradesmen of three shillings per week is within the margin of safety. I have not proposed to disturb the margins of the bulk of labour employed'.

Having heard the parties on the settlement of the minutes His Honour very substantially adhered to the conclusion above set out. He explained:

'The Court did not come to the conclusion that the general improvement of the industry was sufficient to justify an all-round increase in wage rates. It did, however, think that there had been sufficient recovery to justify the long postponed re-adjustment of margins for skill. If this relief had involved the industry in heavy increase of wage costs, it would have been further postponed. The increased margins were the maximum addition to costs which in present economic circumstances could be entertained'.

That the '1929 inquiry' was wholly decided upon economic grounds and the 1935 review although resulting in some wages increases was substantially so decided is self evident.

On 23 February 1937[2] marginal rates for the metal trades were further considered by Beeby *J.* and after having stated that '. . . the facts submitted overwhelmingly establish that the group of industries involved is, on the whole, much more prosperous than when the 1930 award was made' and that he felt

(1) 34 C.A.R. 449 (2) 37 C.A.R. 176

'free to adjudicate on the merits of the applications without, as in the past, being **oppressed with the fear of imposing an extra wage cost that may materially reduce** manufacture and opportunities for employment' His Honour concluded:

> 'I have never questioned Mr Justice Higgins' fixation of a 36s. margin on a base rate of 84s. in metal trade industries but so far have refrained from restoring this standard for reasons previously stated. Circumstances now, I think, justify increasing margins to 30s. in the general engineering trades during the period of the interim order now made.
>
> . . . the original application in October 1935 for a 3s. increase in the margins of semi-skilled and unskilled workers was postponed . . . I then thought that the increases should be granted but was not satisfied that the industry had sufficiently recovered to carry the additional wage cost involved. Now I think circumstances justify the increases then asked'.

The increases flowing from the decision of 23 February were awarded by way of interim order pending reconsideration of the basic wage, and after the Full Court on 23 June 1937[1] had provided for a basic wage increase of 3s. in July and a further increase of 3s. in October, Beeby *J.* had to decide whether or not the interim increases in metal trades margins should be allowed to continue.

In his judgment which was delivered on 10 August 1937[2] Beeby *J.*, speaking of his earlier decision said that: 'With the exception of one or two items which may require reconsideration at a future date, I still regard the margins fixed as proper to the industries' and after further stating that 'there had been no check to the increasing prosperity since the Full Court made its order and that for the time being the wage rates previously awarded were not oppressive' His Honour decided to continue the increased marginal rates and incorporate them in the award.

The most recent examination of work in the metal trades industry, was that completed by Mr Conciliation Commissioner Galvin in 1952[3].

Without reflecting in any way upon its importance or upon the reasons stated by the Commissioner for his conclusions, it is not considered necessary to examine the decision in detail. Admittedly there were a very long hearing and inspections but the determination was reached upon considerations other than work values. 'In the light of all the material placed before me', said the Commissioner, 'I have come to the conclusion that, in the public interest, I should reject all claims for general increases in margins at this time'. And he closed his discussion on margins **with the following observation: 'I am now making a new award, and as I have** set out elsewhere herein, it is being made in the light of today's circumstances. **The tenor of the new award is the retention of existing rates, and although I** have decided to include the loadings in the margins, the resultant rates are not to be regarded as assessments based on work values. Doubtless in other times and in other circumstances, differing conditions may prevail, in which event whoever is called upon to arbitrate should not be hampered in their approach to the problem by the argument that precedent has been established by this decision in regard to marginal relativity. The broad issues were not fought on any basis of increased skill, relative skill or responsibility'.

The Claims

In the course of discussion which preceded the calling of evidence by unions, Mr Hawke undertook to furnish particulars of claims for wage increases and pursuant to the undertaking subsequently tendered a document (Exhibit M12) which read:

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(1) 37 C.A.R. 583 (2) 38 C.A.R. 328 (3) 73 C.A.R. 325

'Metal Trades Award

Claim for all classifications is for the restoration of the inter-marginal relativities that existed in 1947 (59 CAR 1278) and is based on a claim of $19.70 for classification No. 87 Electrical Fitter and/or Armature Winder.

$19.70 amounts to a 279% increase in the margin of $5.20 payable in 1947 for the above mentioned classification.

Claim for the classifications selected by Mr Commissioner Winter for examination in his decision on 5 April 1967 (118 C.A.R. 31) is—

Classified number	Classification	Claim
		$
283	Process Worker (all divisions)	8.35
15	Machinist 3rd Class	10.60
268	Furnaceman Electric	13.65
14	Machinist 2nd Class	14.00
5	Fitter	19.70
13	Machinist 1st Class	19.70
87	Electrical Fitter and/or Armature Winder	19.70
58	Welder Special Class	21.40
26	Tool Maker	24.65
20	Pattern Maker	24.65

Note. Classification No. 287 Storeman and/or Packer not included as this was deferred on 21.9.67 (P5365 of transcript)'.

Upon the tender of the above particulars or at later stages of the hearing the position in relation to claims was further particularised or clarified in manner following:

(1) The unions conceded that the amounts arithmetically discoverable from Exhibit M.12 constitute the maximum sums in respect of 'clause 4 classifications' which it would be open for the Commission to award upon work value assessment made as the result of the inquiry.

(2) The claims of the unions flowing from Exhibit M.12 did 'not deal with the supply authority' it being contended that there was no application concerning such authorities.

(3) The State of Victoria and its instrumentalities contended 'that the classification order and the money amounts of clause 4 of the award appropriately express the work value' of their employees.

(4) The Hydro Electric Commission of Tasmania contended that no increases should flow to its employees as a result of the inquiry.

(5) The private employers contended that:

  (a) primarily existing wage rates adequately reflect a proper assessment of the work value of various classifications.

  (b) 'increases can only be granted where clear cut definitive reasons exist for upward movements on work value considerations in each classification concerned'.

  (c) 'the Commission must be satisfied classification by classification that some clearly definable reason exists why an alteration should be made to the existing award'.

  (d) 'if classifications are found to have changed in their work value demands in an upward direction, then those classifications should move and no others should move because they have moved'.

(6) It was 'no part of the case of the private employers that wages should go down'.

As the case proceeded the claims were further considered and the additional details are discussed later.

Evidence For The Unions

The unions called a number of witnesses whose evidence taken as a whole although directed to the classifications of process worker, electrical fitter, fitter, welder (special class), patternmaker, tool maker and furnaceman (electric) extended to the metal trades industry generally particularly in relation to the training of apprentices, technological changes, modernisation of machinery, mass production and the position or role of tradesmen in present day industry.

With one exception, the witnesses fell into two groups, constituted as to the first by persons who could be regarded as experts and as to the second by union officials with a wide practical knowledge of particular classifications and of industrial features or conditions. The exception was an employee who gave direct evidence of the work and duties of furnacemen, he having performed such work and carried out such duties over a long period of years.

Taking the witnesses in the order in which they were called, Mr Ramon Evans by qualification an electrical fitter (radio) who has completed two years of a diploma course in radio engineering and by occupation an organiser employed by the Electrical Trades Union gave evidence that he had been a leading hand tradesman in charge of process workers, that he had observed their work over a period of 17 years, that there had been significant changes, that the work had altered in conformity with new machines, that responsibilities had increased, that the last mentioned feature had been brought about by reason of the fact that process workers are 'now expected or encouraged to check their own work'; that for purposes of inspection process workers are required frequently to use visual methods including use of the microscope, 'go—no go' gauges . . . spring gauges and metres, that changes in production methods call for a greater amount of team work; that during the period of 17 years he had noticed a marked decrease, generally speaking, in the size of commodities produced by process workers; that the miniaturisation of radio valves with the subsequent production of transistors had made miniature radio equipment possible; that these factors have in turn 'demanded smaller components such as capacitors both fixed and variable, resistors, loud speakers, switches . . . transformers made of thinner wire, inter-connecting wire with less installation'; that with these smaller products with consequent smaller tolerances 'the job of manufacture has demanded diligence, manual and digital dexterity together with nimbleness previously unnecessary in this type of work'; that a high degree of cleanliness of products is required of many process workers which was not required in the past; that the majority of process workers now require much greater concentration; that the work now requires greater co-ordination; that 'on the job training' is now much more in evidence; that the majority of process workers are females; that he 'would go so far as to say that the vast majority of the process workers' work' he was familiar with 'could not be done quickly by males (no matter what their classification) because of the dexterity required.'

Speaking particularly concerning greater concentration Mr Evans said:

'The effect of production engineering and methods engineering is to so organise the work that the process worker is working all the time, any lack of attention to duty for even a very small period could mean faulty work or halting of the production flow line.'

Speaking particularly concerning changes in production methods he said:

'Some operators are required to work on what is generally referred to as moving pallets. This method has a moving belt with fixed positions on which the job moves past each successive operator. It is expected of each operator that they complete their task in the period that the job is within reach. This type of work calls for a great amount of team work, as an operator away from his or her position, even for a short period, would completely hold up production unless they were replaced.'

'. . . process workers to be such must work in harmony with their neighbours. These methods also put subtle pressures on the process workers as nobody wants to be the slowest worker to whom the speed of the whole process is regulated.'

Mr Evans made reference to 'bonus payments' for process workers. He stated that they were wide spread and went on to say:

'The time to train process workers to the threshold of bonus earnings would be for the average process worker in the electrical industry approximately two to four weeks. The same average process worker would not receive the average bonus payment until after approximately six months of experience in the industry.'

In cross examination it was put to Mr Evans that in general process work required little or no skill; that reasonable proficiency was acquired in a matter of a week or two; that bonus payments provided a reason for attention to work; that in practice employees qualified for a full bonus in a much shorter period than six months; that in material respects the work had not increased in difficulty; that in fact to a measurable extent it had been made easier.

Mr Clifford Ormond Dolan, the General Secretary of the Electrical Trades Union and who is himself a qualified electrical tradesman, divided the work of electrical fitters roughly into three classes, manufacturing, maintenance and jobbing.

As to manufacturing, Mr Dolan stated that the fitter is part of a team; that he is required to perform his duties in a way which will assist to maintain a production schedule; that while drawings may be prepared by professional engineers and drawn by draughtsmen, 'it is the fitter who is required to practically apply the engineering theory to the job; that changes are occurring in equipment from year to year; that it has been necessary for the fitter to acquaint himself with new metals or materials; that he is required to work to closer tolerances; that a pronounced trend towards the development of high horsepower with much smaller motors has called for greater care in insulation; that with the introduction of quantity production many jobs formerly performed by electrical fitters are now carried out by process workers; that this development has relieved the fitter from routine or repetitive work and has made him available for more highly skilled work.

As to maintenance, Mr Dolan stressed the wide diversity of industries in which the work is carried out, stating that they range from general engineering plants, food processing factories, tobacco processing, tyre making, aluminium rolling and fabricating, textile manufacturing and processing to oil refining, pulp and paper making and printing. Mr Dolan stated that the maintenance fitter is required to have a thorough knowledge of electrical equipment. 'In many cases,' he said, 'it is not only necessary for the fitter to understand the electrical operation but also to be knowledgeable of the particular process concerned. This enables him more quickly to determine what may have caused the electrical fault.' Speaking generally on this aspect of the work he said:

'The maintenance work performed by the electrical fitter is of the utmost importance to the continuous operation of the plant. Where machine usage is a determining factor, his skill and knowledge in overcoming breakdowns has a great bearing on production. Most maintenance work cannot be supervised and it is therefore dependent on the integrity of the electrical fitter as to whether the equipment goes back into service in a satisfactory condition.

He is therefore under pressure to repair faulty equipment in the shortest possible time as a holdup in one section can upset a whole process line.'

In connection with jobbing shop work there are set out verbatim the following statements made by Mr Dolan:

'Work performed by electrical fitters in a jobbing shop covers the whole range of duties within the classification. It covers winding, machining, switchgear manufacture and repair in the workshop, and installation and maintenance in the field.

Many employers of this type have maintenance contracts in various industrial establishments where the full-time employment of a fitter is not justified. This requires the fitter who is sent out to these clients' premises to acquire a knowledge of the processes carried out in many types of industry.

He is called upon to carry out armature winding and repair of all types of motors and finally test them upon completion. In order to perform this work, he may be required to manufacture parts which are not procurable as spares.

He may be called upon to manufacture machines or jigs or formers for the winding of coils which are of unusual shape or form, and to set up special test equipment for final testing.'

With regard to installation work, he explained that due to licensing requirements this is mainly performed by electrical mechanics as distinct from electrical fitters. He stated, however, that the fitter does in practice carry out installations particularly in large construction projects. 'With the continual building of new power stations in all States,' he said, 'many fitters are employed. This work covers an extensive range both on high tension and low tension.' He gave as an illustration work performed on the Munmorah Power Station and he later went on to say that 'fitters working on installation are required to be knowledgeable of the Australian Standard Rules for the Electrical Equipment of Buildings Structures and Premises,' Commonly known as the S.A.A. Wiring Rules.

Mr Dolan dealt in some detail with the training of an electrical fitter, stating that in general he serves an apprenticeship of 4 or 5 years duration; that the usual requirement for entry into apprenticeship is at least three years secondary schooling with passes in Mathematics, Physics and Chemistry; that while in certain circumstances this standard may be relaxed experience has shown that unless it has been achieved, 'serious difficulty is experienced by the apprentice in coping with the course.' Upon being shown a syllabus prepared by the N.S.W. Technical College and tendered as an exhibit, Mr Dolan stated that in general it was the same as that for most of the other States of the Commonwealth and that it was arranged under the following subject headings:

Applied Electricity Theory
Laboratory
Trade Drawing
Workshop Theory and Practice
Wiring Theory and Practice
Winding Theory and Practice

There are now set out verbatim further details of the evidence relating to training:

'The subject content, particularly under the headings of Applied Electricity and Laboratory, are altered from time to time, and in recent times much more electronic theory has been or is being introduced.

The syllabus for electrical fitters now includes in the final stage, theoretical training and laboratory experiments on semi-conductor rectifiers, germanium and silicon diodes, transistors, and electronic relays.

On Job Training:

Technical College training is important but is only ancillary to on-the-job training and the training and experience gained on the job is most important.

Many employers are realising this today and are taking measures to improve on-the-job training. Special apprentice schools are being set up within the employers' establishment in which apprentices are grouped together and given instruction by selected instructors. Officers, such as Masters of Apprentices, are being appointed to oversee the training of the apprentice through the complete period of apprenticeship.

In the larger establishments, training is scheduled on a time basis through the various departments or sections so that the apprentices receive experience in the various aspects of the trade. In this way, they are able to receive extensive training in machine shop practice, fitting, winding, welding, maintenance and fault finding, and installation work on construction.

In the smaller jobbing shops where, because of lack of space, training centres have not been established, the matter is overcome by closeness of supervision that can be exercised. A greater variety of work is usually undertaken in this type of shop and, therefore, a full range of training can be given. This type of business also involves work outside the shop in other industrial establishments and the apprentice benefits from this varied experience.

Tradesman Training:

After successfully completing his apprenticeship, an electrical fitter finds that to be able to take his place completely in industry, he is required to continue with further training.

This may be by way of on-the-job training or further courses at an educational establishment, or both.

On-the-job training may take the form of familiarisation with his employer's establishment, in the case of a change of employment. This can mean the need to learn particular techniques used by his new employer and upon which he has not received any training during his apprenticeship either in his former employment or at the Technical College.

It may be through study of technical manuals supplied by his employer or manufacturers of equipment upon which he is required to work.

Courses of study, such as the post trade courses provided by technical education authorities, are another source of post apprenticeship training.

Many fitters are finding that with the extensive introduction of electronics into industry, it is almost a necessity to undertake a course, such as industrial electronics, as provided by the N.S.W. Technical Education Department.

Other post trade courses, such as those provided in N.S.W. in advanced trade drawing, electrical post trade, transistors, illumination, telephony and telecommunication principles, air conditioning and refrigeration, may also be undertaken according to the particular employment of the individual.'

Before leaving Mr Dolan's evidence in chief, reference is made to one further aspect. His attention was directed to evidence previously given in connection with over-award payments and he was asked by Mr McBride: 'Have you any reason to believe that there is any substantial difference in the over-award payments now being paid to those in the survey figures?' To this question he replied, 'Not a substantial difference but the information I have is that there have in fact been increases in over-award payments from that time'.

Proceeding now to certain aspects of the cross-examination of Mr Dolan, he agreed with Mr Woodward, Q.C., that consistently with legal requirements in particular States 'it is necessary to pass examinations in order to obtain a licence and so become an electrical mechanic but it is not necessary to pass examinations to become an electrical fitter'. He added, however, that in the manner explained by him 'many electrical fitters in New South Wales do in fact obtain what is known as the electricians licence'. In this way they are enabled to work as electrical mechanics or as licensed electrical fitters. He also agreed that provided he completes his apprenticeship, and the Apprenticeship Authority certifies to that effect, an employee may be regarded as an electrical fitter although he had failed to pass the whole of his examinations at Technical College. He asserted, however, that this procedure was exceptional.

In answer to Mr Cullen, Mr Dolan stated that there was no difference in the requirements for entry to either the electrical fitter or electrical mechanic course. There are set out extracts from Mr Cullen's cross examination.

'I think you have made the statement that a weakness in maths leads to failure in apprenticeship?—Yes.

Has that been identified as the substantial reason for apprentices failing to complete their course at technical college?—I would say yes where it is a case of them just not being able to cope with the course. There are other reasons why they do not satisfactorily complete their technical course.

There would be many reasons other than a weakness in maths which could cause failure to complete a course, would there not?—I would not say many.'

'Then you say such things as fitters are required to practically apply engineering theory to the job. What do you mean by that, that they take engineering theory and draw the diagrams and circuits?—No, I am not suggesting that. When I refer to engineering theory it may be an electrical circuit contains contactors, resistors, various types of switches, relays and so forth. The engineer may have determined what was necessary to make this operate. He would give the fitter a rough sketch and the fitter would be required to wire that perhaps in the first instance in a very rough way, just simply wire it up to see if it did in fact operate as it should do according to the engineering theory . . . It might be simply a written note rather than a diagram.

But surely that would be sufficient would it not for an electrical tradesman?—Yes, because he is an electrical tradesman.

He is trained to be able to wire up on instructions like that during his apprenticeship?—That is correct, that is my evidence.

That has always been the case?—Yes.'

'Would you agree with me there has been a marked improvement in wiring diagrams in giving more point to point detail than occurred at the time when you were working as an electrical fitter?—I was not working as an electrical fitter but I think I said a few minutes ago I do not recall the actual position in regard to these types of things. I do know of fairly recent experience that fitters complain that they do get what are supposed to be complete wiring diagrams. I think I made this point that despite the fact that the draughtsmen have a particular role and so does the engineer, mistakes do occur and the fitter if he in fact followed the wiring diagram that he is given the job would not operate so he is often asked to make alterations to what is an engineering drawing.'

'Do you really believe a tradesman is not being supervised unless the supervisor is standing over him all the time?—I do not put it that way but the way I make the point is: to give an example; the fan there may stop, the supervisor gets a complaint, sends the fitter out and tells him to get it going again. The fitter gets it going again, it may be a broken wire and so on, the fitter simply repairs it and goes back and tells the supervisor he has completed the job. I think this is the area of supervision you are talking about and I would expect that to be so but that fitter, on the other hand, while he told the foreman the fan is going again, he could have left that wire in such a condition that the next person who touched it dropped dead from electric shock.

In your opinion has there been any change in supervision since 1952?—No, probably not in that regard.'

'So far as the jobbing is concerned, would you agree that the work in a jobbing shop is basically the same as in 1952?—No—again because there have been these changes. A chap in a jobbing shop sort of covers manufacture, repair, maintenance, and maintenance outside of the shop itself. So he probably carries out all the functions of the three facets: manufacturing, installation and maintenance.

Didn't he do that in 1952?—Yes, he did that, but again because of the changes in industry, he has needed to keep himself up to date.'

'Don't you think the availability of standard components, for example, makes his work a bit easier in the jobbing shop area?—No. While there are some standard components, this is a feature of the jobbing shop fitter: that very often there are not the standard replacement components and he in fact does manufacture a component to replace something that has completely broken down in some piece of equipment.'

Mr Richard Paul Hansen who has been employed by Vickers Ruwolt for a period of 41 years past as an assistant furnaceman, next as a cupola furnaceman and then over the last 20 years of service as a furnaceman (electric) gave detailed evidence, the relevant portion of which reads:

'1. When I commenced work at Vickers Ruwolt there was only one cupola furnace, with a capacity of five tons per hour furnace rating. The Company's activities at the time were mainly jobbing work and included such items as fishplates for the Victorian Railways.

2. The first electric furnace, designated S55, with a capacity of six tons was introduced in 1927. It was an electric arc furnace.

3. The second electric furnace, known as Demag, with a capacity of 25 cwt was brought into operation in approximately 1937 and was also an electric arc furnace.

4. About twenty-seven years ago the third electric arc furnace, known as Birlic, began operation with a capacity of three tons.

5. Then the "Birlic major" began operation in 1958 the capacity of this furnace is 18 ton.

6. (a) Work is performed on three furnaces, S55, Demag and Birlic.

(b) After the furnace has been poured we look into the furnace and then if there are any gaps in the wall and on the floor we replace them with moistened, ground magnesite. This is thrown in by a shovel. This procedure is continued through the week and on Friday night the roof of the furnace has to be taken off. Then on the Sunday night the night shift does the necessary repairs and, if not completed, are finalised by the day shift. This work is done by the furnaceman. (Demag and Birlic use ganister and S55 uses magnesite.)

(c) Charging of furnaces commences on Monday morning when the roof of the furnace is off. The head metal is placed on the bottom, by use of the crane, and then the light metal is tipped into the furnace out of the skips. When the charge is completed the roof is replaced and electrodes put in position by the furnaceman. The time is then ready to "cut-in" the electricity. When the electrodes are arcing care must be taken by the furnaceman to see that they are correctly arcing. When charging the furnace you select your charge materials in the following way:

(i) Pick out the heaviest clean material and place under electrodes because they will not arc on dirty scraps.

(ii) You select the dirty scrap and put it around the walls away from the electrodes. When all the heavy scrap is put in the remainder of the charge in the skips is tipped on top by the crane. You have to charge the furnace in this way in order to protect the electrodes and enable quick melting.

(d) During the remainder of the week a different method of charging takes place. This requires a method known as "peeling" where the furnaceman and his assistants manually charge the furnace using what is known as a "peel" (this is a length of steel ten feet long with a handle on the end). The clean scrap is placed on the end of the "peel" and shoved into the furnace under the electrode. The dirty heavy scrap is placed around the walls through the charging door by the furnaceman. The light scrap is placed between these materials and on top of it.

(e) During the running of the furnace the furnaceman is responsible for the proper running of the furnace. At this time he supervises the selection of the material for the next charge ensuring that the proper materials and correct weights of the charge are used.

(f) When the metal has melted a sample is taken by the "pin" method and sent up to the laboratory where, after analysis, the furnaceman is informed, after discussion with the metallurgist, of any changes required in the melt.

(g) When the furnace is ready to be poured the furnaceman enters the control room of the furnace and operates switches which turn the furnace to enable metal to be poured.

7. When the furnace has been in use for about 12 months it is necessary for the refractory brick lining to be demolished and re-built.

(i) Demolishing involves the removal of all the refractory brick by the use of hammer and chisel, this involves the furnaceman working inside the furnace and the work is very dirty and dusty.

(ii) The re-lining involves the building up of the bottom of the furnace with magnesite bricks.

The walls of the furnace are so built so as to create a step and stair pattern to enable the magnesite refractory lining to hold on to the walls. In re-lining the furnace the furnaceman plans and programmes his laying of bricks and if necessary cuts the bricks to create the lining pattern.

During the re-building of the furnace allowances have to be made to ensure the proper clearances for the charging door, slagging door and the arch over the pouring spout.

(iii) To demolish and re-line furnace S55 would take about a week, Demag furnace 2 days, the Birlic furnace about 4 days and the Birlic Major up to 2 weeks.'

In amplification or clarification of the evidence above set out Mr Hansen described the procedure for taking off the roof of the furnace in manner following:

'All the bolts and hooks that are attached from the roof to the furnace proper are loosened, all the water pipe that goes up round the electrodes; the crane is then drawn up and a hook put into the furnace and the electrodes and the three of them are then lifted out. The crane comes along with three hooks on it and the top of the furnace is lifted off.'

In connection with the removal of clinker he said:

'The clinker is very brittle and you put a coat and hat on and cover yourself up from the heat and strike upwards from underneath with a jarring motion and the clinker flies both ways. After that is done and it does not work again then, of course, it must be that there is some obstruction down in the hole made by the electrode. That means there is some new clean scrap that has got to fill up that hole again and you turn round and carry on.

You would select clean scrap and place it in the hole of the furnace?—Yes.

Is this done by the use of a crane?—No, it is done by hand.

Commissioner Winter: Mr Hansen, when you insert this new scrap by hand how close do you approach to the furnace?—The furnace; how close do we approach it?

Yes?—Within two or three feet.'

One feature of the work observed at an inspection was the emission of sparks from the furnace and in connection with this Mr Hansen gave the following evidence:

'When you first charge it in, when it first comes in contact; and again when we are pouring when the metal comes out of the chute into the cold air. That is when the sparks fly.'

First in reply to Mr Heagney and then in cross-examination by Mr Cullen, Mr Hansen gave the following evidence:

'MR HEAGNEY: Have there been any changes over the years in the type of bricks for lining? —Only the steel clad bricks. Previous to those they were all silica bricks.

GALLAGHER, J: Do these silica bricks create dust?—Yes they do.

MR CULLEN: For what period of time were you a furnaceman in charge of the furnace?—Say about two years.

How long ago was that?—It would be four years ago—three years ago now.

Have you someone to assist you in that work?—Yes.

Who was that?—He was a New Australian.

What was he classed as? Assistant furnaceman?—Yes.

What were his duties?—To get in the scrap and bring it in for the next charge.

It was not your duty then to bring in scrap and weigh scrap?—No. I had to look after the furnace and if the furnace was going all right I would go out and give him a hand if possible.

Did that happen?—Yes, it happens very frequently.

Has the S55 furnace been changed since it was introduced in 1927?—No. The methods have been just the same right throughout the years.

The charges fed into the furnace have been somewhat similar throughout the whole period? —Yes.

Would the carbon electrodes used be the same size and the same type?—Yes, it would be.

Would the method of operation be the same?—Exactly.

And would the staffing have been the same?—Staffing?

Of one electric furnaceman and one assistant furnaceman?—Yes.

Each one of those furnacemen is assigned a furnace?—In charge of them?

Yes?—Yes.

He is under the supervision of metallurgists?—Yes, that is true.

It has made the work easier, doing away with the wheelbarrow?—Yes; oh yes, naturally.

There is also used in the yard, to shift scrap, a mobile crane and fork lift?—Yes.

How many charges in a week would you need to carry out the procedure you have indicated on page 2 of your statement? How many charges a week would it be necessary to go through this procedure of putting clean scrap under the electrodes because it did not arc?—That, of course, would depend on the sort of scrap we were having. I suppose it might be two or three times a week—no more, I don't think.

Out of how many charges?—About ten charges.

Ten charges a week on the S55?—I suppose we are doing two heats a day—ten charges.

And you say two times out of the ten it is necessary to lift the electrodes and replace the load?—I think it would be about that.

I want to put this to you, that your responsibility is to charge the furnace with the charge details given to you by the metallurgist?—True.

The furnaceman operates the controls under the direction of the metallurgist?—Yes.

You say it is more difficult now than when you first started?—No, I would not say that.

I think you would agree it is easier now with these aids?—I would say it was, yes.

You would agree with me it does not require great physical strength?—Yes, it does not, that is true'.

Later in his evidence Mr Hansen said:

'You said it is very seldom the metallurgist would come near an experienced furnaceman?—That is only natural. He leaves quite a lot to him.

As he gets confidence in you?—Yes.

You told us the assistant furnaceman is shifting all the time. I think you implied they do not stay very long in the job. Is that the position?—Yes. We have had quite a number of men who have been there a while and have moved on.

What is the reason for that; are you able to tell the Commission?—Ambition.

They take jobs elsewhere?—Yes.

As furnacemen?—No—fish shop proprietors!

It is not quite as hot?—That is right.

You told us because of the use of fork lifts and the use of other assistance provided the work requires less physical effort than was the case years ago when you started as a furnaceman?—True.

Does the fact these assistant furnacemen do not stay very long and do not acquire experience throw more responsibility on the furnaceman himself?—Yes, he has got to get another one and train another one.

Things tend to balance out; you have gained in one way and you have lost in another?—Yes, true'.

Mr Anthony Mark Lawless, teacher of welding, at Sydney Technical College, who was himself a special class welder and who holds high technical qualifications in his subject, described in detail the intricacies of welding when performed at the first class or special class level. 'Welding is a field', he said, 'in which the specialist operator has to have exceptional skill, ability, foresight and know-how in order to produce welds of the high standards required in this class of work by industry today'. He went on:

'I would like to give an outline of these vital points of consideration. Firstly, there is an ever-increasing extension in the range of metals or alloys which require welding. These include such metals as special alloy steels, nickel and chromium alloys, copper alloys, aluminium alloys and non-metals in the form of plastics.

Secondly, this involves improvement and extension of existing processes and the introduction of newer processes, such as inert gas arc welding, inert gas metal arc welding, semi and fully automatic submerged arc welding, M.I.G., CO2, Lasser and Electro beam welding and Electro Slag welding.

These processes have controls and operational factors which are highly critical and involve accurate adjustments and settings which can only be made by an operator who has a great deal of experience, skill and exercises a great deal of responsibility.

Thirdly, to comply with these new materials and processes, new standards of quality and weld testing are being enforced, involving radiography, tensile impact and other tests. It is the responsibility and skill of the operator which produces and maintains these high standards.

Fourthly, for use on conventional metallic arc welding applications, a greater range of electrodes have been developed which require various machine voltage requirements and variations in manipulation and control in the depositing of the metal from these electrodes in all possible welding positions, again calling for greater demands on the welders' trade knowledge and experience. Furthermore, the strength and physical properties of these weld deposits range from minimum metal strengths to 120,000 lbs square inch tensile and beyond.

The onus is on the operator to select the appropriate electrode to do the job and to know when the electrode in use is not producing the result that is required.

Fifthly, it must be understood that welding is not just a hobby or a tool of most metal trades which is used only sometimes. Commercial advertising of 240v. hobby type arc welding machines may imply that welding can be learnt by anyone in a few hours. To be able to strike an arc and deposit a run may take a person some short time to achieve, but to know what to do, where to do it and how to do it in all instances of welding that is required by industry, takes many years of training, experience in the intricate skills and know-how of the trade.

It is frustrating to many operators and other skilled persons to find that the general public, persons in high administration offices and even engineers, are ignorant of the complexity of welding and the skills required to weld a great variety of metals with ultimate success to meet the most minute variations and requirements.

Sixthly, welding of the special class category can and should be regarded not just as a trade or tool, but as a science which it actually is. It involves metallurgy, physics and chemistry, requiring the welding operator to have a vast knowledge and experience in the following:

(a) Expansion, contraction and distortion in various metals and the control of same.

(b) The alloy compositions of metals and the effects of these alloys on mechanical and physical properties.

(c) The effects of welding heat on metals and alloys in metals and the resulting effects, namely, hardenability, weldability, grain growth, cracking, porosity and reduction of mechanical and physical properties.

(d) The ability to select suitable processes, electrodes, filler metals and procedures, so as to maintain the properties required in the parent metals.

(e) After welding heat treatment—i.e., annealing, normalising, stress relieving.

(f) The necessary preheat required for some metals.

(g) After weld treatment of special metals by chemical pickling and when this action is required.

(h) Many more factors relative to special metals, materials and processes'.

Mr Lawless dealt with the training of apprentices. 'I make regular visits to all classes of industries', he said, 'to inspect new processes and various other types of construction. We take the students on visits to these and other places including various metal manufacturing works, such as steel works. I teach the apprentices the practice and theory of all welding processes which includes the welding of all types of joints in all positions on all metals in addition to trade calculations costing and estimating; also testing and inspecting of welds'.

Later he said further:

'. . . it is important to stress the attitudes of educational authorities in regard to industrial needs and advancement in welding.

The University of Sydney and New South Wales have recently extended their engineering courses to take in more practical and trade level education in engineering fields at Sydney Technical College; some time of this course is devoted to welding.

The welding trades apprenticeship course of 4 years has been revised to take in more specialised work and semi and fully automatic processes. The total time of training in this course is 864 hours over the 4-year period and takes the student to D.L.I. standard.

The following courses have welding instruction supplementary to their general trade instruction:

Boilermaking—72 hours
Automotive Mechanics—36 hours
Sheetmetal Workers—72 hours
Panelbeating—72 hours
Blacksmiths—153 hours

This will be extended next year to cover the fitting trades. Because of the demands of industry for more highly trained welders in the automatic field, the College will be starting next year a post-trade course for highly experienced welders, covering practice and theory, and application of argon arc welding, argonaut welding, semi and fully-automatic submerged arc and M.I.G. CO_2 welding. The College already has a waiting list of suitable applicants well above a class loading. Suitable applicants are those who have reached D.L.I. standard, or an acceptable equivalent.

The special welding course for journeymen and those in allied trades is 576 hours in welding over a period of 2 years.

The Department of Labour and Industry, being conscious of the demands placed on welding supervisors in industry today, has increased the scope of the examination for certification of welding supervisors and the Department of Technical Education has followed this increase in standard and scope by extending its supervisory welding course to 120 hours.

This added responsibility for the supervisor is brought about by the increased standards and scope of work which welders have to perform, but the onus is still on the welder to actually carry out the welding operation. It must be borne in mind that it is one thing to tell a person what is required and another thing for him to successfully fulfil these requirements.

It is a setback, however, to the welding industry to find that many firms whose employees are engaged continuously in welding fabrication do not train apprentices in the welding field and seem particularly unaware of the existence of the benefits, both to the welding industry and the individual welder, that this can provide.

It is necessary to promote these increased standards of welding throughout the industry and this can be done by recognising the vital importance of the welder, his role and responsibilities and encouraging him by a regard of a salary margin, which is fitting to the highly skilled work which he performs.'

There are set out extracts from the cross-examination of the witness by Mr Cullen:

'Do you know of any company or industry in Australia in which people, welders, who are qualified in the same way as you indicate in your evidence, are employed?—I would not be able to give you the names or figures in this respect but I know all apprentices are being trained to this level.

From what you say the welder seems to bear all responsibility. What part, if any, does the supervisor play?—The supervisor in these cases may know very little of welding. Where you have a section—I am not referring to the welding supervisor, I am referring to a general supervisor; they have very little experience in welding.

And all he has to do is to follow that welding procedure using his trade skill of welding?—He has to follow that procedure so long as that procedure is bringing the desired results. He has got to be aware at any particular time when anything goes wrong with his actual welding in the carrying out of this procedure. This procedure is only a piece of paper that cannot possibly determine that the operator has a change in voltage supply to the machine; it cannot indicate the variations in one electrode as compared with another in a packet; it cannot give a whole host of things because it is only a piece of paper. It is left to his initiative and skill to be able to watch out all the time and know what is going wrong in the work. The supervisor cannot watch it because this is a localised area which is involving physical and chemical reaction all the time the welding is going on.

You are saying the supervisor plays no role in the actual welding operation?—The welding operator is the one who is guiding the process while the weld is going on. The supervisor cannot control the welder's hand, he cannot control the welder's mind, he can only direct him to carry out a certain function. It is left to the ability and skill of the welder to do this.

What do you think would be the scope of operation of the first class welder, from your experience?—The first class welder would be required to do electric arc, gas welding, cutting and general assembly type of work on fabrication.

Finally do you agree that your statement is a lot of generalisations of which you have not given one concrete example to support it; three companies you nominate in fact go against the case you have given us—Babcock & Wilcox, CIG and Cockatoo.

GALLAGHER J.: His answer is that he disagrees with the question.

THE WITNESS: Yes, I disagree.'

Upon being asked from the bench whether the use of welding has become more extensive over recent years, Mr Lawless said:

'Welding is being used more and more every day. Years ago it was unthinkable to hear of welded ships for example. If you look around even in your home at some of the metal objects you have there you will find more and more things that are fabricated by some type of welding application. For example, we now find that in the same boat industry—pleasure craft and that type of thing—these are being fabricated out of aluminium by a welding process. To see a metal boat some years ago, other than large and intermediate size vessels, this would have been an impossibility.

Has it displaced rivetting?—I would say yes.'

Mr Herbert Selinger a professional engineer with considerable experience **both in practical and academic fields gave evidence in which he dealt in general with modern industry technological changes and other factors and in particular with process workers, third class machinists, second class machinists and tradesmen. There are set out extracts from his evidence directed to these classifications:**

'A process worker today carries a work load with a work value correspondence to a higher rung in the differentiation of categories of labour with its adjunct of wage structure, by virtue of greater responsibility for his work, greater responsibility for defects affecting subsequent operations, and a specialised training which all lead to greater value to his

employer. His present set of duties would result in greater stress through an increase of mental processes connected with his work and the greater responsibility which he carries in regards to product equipment and quality policies, and one could add that the work deterrent would be increased by greater mental fatigue and a loss of mobility.

Let us look now on what is called the machinist 2nd and 3rd class in awards who in the past were different from process workers in respect of the use of power machines, incurring a somewhat higher responsibility. From the foregoing it can be concluded that this status in fact is now almost reached by the process worker and that the 3rd class machinist is disappearing from industry leaving a gap in the wage structure.

Development in machinery is always directed towards simplification of handling besides improvement of production characteristics. Those have reached a stage where the general machinist now has to supervise rather than to operate his machine. Frequently, this supervision extends to a set of work stations or bank of machine tools.

Supervision of the machine comprises not only loading, unloading and routine operations like oiling and cleaning but very often includes now a check of the quality characteristics of the output in order to check settings for readjustments and stoppage of the machine if necessary. Cases are not uncommon where the machinist is requested to participate in a system of statistical quality control simple as it might be. Quality deterioration is commonly preceded by a change of the mode of the machine operation and this is very often detectable by ear or other senses. It is peculiar to most of these indications that they are relevant only to one type of machine and sometimes to one specific machine tool. The machinist is now generally expected to be sensitive to impending quality deteriorations and this necessitates a lengthy familiarity with the job and a thorough understanding of his machine, good senses of hearing, colour distinction, etc., quick reaction time and, last but not least, the capacity to take responsibility for quality.

Because of the higher mental stress in these duties he will fatigue more quickly than he would have in his previous work.

All the grades of operators discussed so far are not required to undergo an apprenticeship training and therefore are not qualified as tradesmen. A tradesman can be said to have a capacity to master a complete field of technology to such an extent that—after a period of experience—he can handle any job, processes, machine or material in the area for which he has been trained with a minimum of direction by a foreman. Apart from having the skill or dexterity, he can be said to be proficient in his job. Included in his training is not only the aim at mastering the technology with which his training is concerned but includes some aspects of design and the interpretation of designs from drawings. Because of the orientation of his training both in industry and at the technical colleges towards technical education rather than training for a job, the tradesman should be equipped to keep abreast with technological developmnts during his industrial life. However, in the last decade or so, an explosion of technological knowledge, particularly in the metal working industries, has taken place which places demands on the tradesmen's proficiency where formerly it could only be met by what may be called a technician. While the tradesman has sometimes vacated fields like setting or inspection or jobs concerned with 1st class machining in favour of the new process worker, he has found new outlets for his versatility and basic training where design means a check with reality through the building of prototypes, where new and intricate machine tools have to be set up, maintained and controlled for quality, and delicate precision instruments are used for control of set up and process or product characteristic. In addition, highly mechanised transfer or assembly lines have to be maintained and new materials, tools and specifications have to be understood and brought to economic viability.

One could say with confidence that the tradesman, trained say 10 or 15 years ago, could only use a portion of the knowledge obtained in his apprenticeship days in today's manufacture. The balance being gained by intensive self-study or by organised training in special courses at technical colleges or other institutions some of which I have given myself. This is in contrast to the now obsolete concept of a tradesman being prepared for his full working life by his apprenticeship and concomitant course at the technical colleges and gaining in status by experience in depth over the years.

Today, with new cutting tools, materials and complex instruments of electronic nature appearing with increasing speed, a great amount of constant study away from work is necessary for the tradesman so as to keep his job against the competition of the machinists.

While he works as a tool setter he is required to attend to machines which change their characteristics and working methods frequently from model to model, and this relearning process extends to the mastering of new machines all the time.

In this context it is interesting to compare the depreciation periods conceded by the Taxation Department for traditional machines extending up to 20 years for a centre lathe, with the policies of some companies who expect a write-off of modern machine tools within a period

of 5 years (3 years in U.S.A.) because of obsolescence. Because 'fits' are now standardised by way of part allowance and tolerances, true 'fitting' does take place in modern industry only in exceptional places.

In order to maintain his position to keep his job, the former traditional fitter has now begun to act as a maintenance technician with an extensive background of mechanical and even electronic knowledge so as to enable him to look after batteries of complicated machinery, breakdown of which has great economic consequence both to quality and quantity of production.

If unpreventable breakdowns should occur, enormous pressure associated with great emotional stress is connected with the work of remedy because of the cost of idleness of the machines and subsequent operations. In some companies, fitters act also as members of a flying squad and are ready to take over any job at a short notice when a well-trained operator is temporarily away from work.

Summing up, the proficiency of the skilled tradesman is continuously eroded through rapid technological developments in the fields of machines materials and precision of manufacture. This necessitates constant study to stay abreast of the demands of the job.

The former production fitter now drafts into the maintenance field where he is loaded with more responsibility in regard to quick diagnosis and remedy of breakdowns if constant vigilance is thwarted by the unavoidable accidents of production.

Both of these developments are new to the trade and have added to the responsibilities and stresses of their callings.'

There are set out the following extracts from the cross examination of the witness by Mr Cullen:

'Your concept of process worker is the academic one, is it not?—No, my concept of process worker is a realistic one, because I would say a modern industrial process is not just breaking up a bit of burr or something simple like that, it is something complex. The simple process worker to whom I have referred belongs to a period which has gone although, it still lingers on of course. I am fully aware that some of the machine tools in Australia are 25 years old and are still being operated but that does not blur the picture. I think the general picture is, wherever I have gone in factories, I may see someone in a corner doing perhaps a rather simple job and perhaps you could call him a process worker but he is not significant in my opinion in connection with the product. He is a left over. He is an admission of inability by management to give him better tools. I would not call him a significant factor in Australian industry any more. Whereas, it has been my impression, 20 years ago you found more and more of these people using a hammer and chisel, working on fittings, that has now gone.

For the process worker I have defined skill in the form of dexterity and I agree in many cases less dexterity is needed but because less dexterity is needed other responsibilities and other work contents come in.

. . . It is very difficult for any factory which comes in on an incentive scheme to restrict a man's speed.

Is it your belief that bonus rewards are the general rule in the metal trades industry in Australia?—As far as I know they are quite common.

Is your evidence based upon your walking through the number of places you mention?—No. I told you for a number of years I had my own factory.

Are you not really calling process work any type of assembly work regardless of the skill required?—If it is in a particular process of operation which is learned by simple instruction where no particular skill has been learned or where no complex machinery is used, I think it could be a process worker. I think I tried to prove that the very simple operations are dying out.

Would you say that the skilled tradesman who did not carry out constant study at home and at technical college would have had his skill or proficiency eroded?—No, I think he would have his mobility reduced. He might be still quite useful at the particular place of manufacture which does not move with the times. There are of course a number of enterprises which do not move with the times. I think you would find he works quite well there but if he wants to stay abreast of the job and if he wants to be going from place to place and be mobile he has to study.

Would you agree with me a very small percentage of fitters do post trade courses?—I have no statistics to prove or disprove that.

If a tradesman fitter is used for that work where true fitting does not take place, except in exceptional cases, would you not say that the trade skill has declined?—No, not that the skill has declined. It has not been utilised.

Would you agree that it is not necessary to have any previous experience to become a process worker?—In certain industries, yes, but I don't know these industries.

GALLAGHER, J: Does that mean you agree with Mr Cullen in respect of certain industries? Is that your answer?—I cannot imagine it would be in the metal working field.

MR CULLEN: If I put to you that the type of training given to a process worker is short and very narrow and it would be very unlikely that it would be of interest to any other employer except in the same field and in very much the same type of work, would you agree with me that that is the type of training a process worker gets?—I would disagree with you.

In fact your whole statement on machinists is conjecture?—I would not say that. You said that.'

Mr John Richard William Danks gave evidence which included the following particulars or details:

'I am a Chartered Engineer and Associate member of the Institution of Production Engineers. I served my apprenticeship at the Clyde Engineering Company as a fitter and turner between 1914 and 1919. Subsequently, I was employed as a fitter with the same firm on the manufacture of locomotives. Later I was employed as a fitter at the Colonial Sugar Refining Company followed by a period of three years at sea as a marine engineer on the "Niagara". I later returned to Colonial Sugar Refining Company as a fitter and turner. On 21 February 1927 I commenced employment as a teacher of fitting and machining at Broken Hill Technical College and was also recognised as the Boiler Inspector for that district. I continued as a teacher of fitting and machining at Wollongong Technical College and as head teacher of fitting and machining at Newcastle Technical College. I was also sub-principal of West Sydney Technical College, principal of the Canberra Technical College, Supervisor of Engineering Trades at Sydney Technical College, State supervisor of Engineering Trades, N.S.W. from 1 July 1954 until my retirement from the Department of Technical Education, N.S.W. in January 1964.

2. My responsibilities included the keeping of all the syllabi of Engineering Trades up-to-date; selection of technical school teachers from all the Engineering Trades; setting of examinations in fitting and machining and general engineering: the constant survey of industry to ascertain the level of existing courses and the introduction of new courses. Top machine shops were selected and we were able to observe the changes that had taken place; workshops were selected by paying close attention to apprentices from various industries as they passed through the Technical College. Changes took place four years ago in the syllabus by a Special Committee appointed to inspect the industry as a whole.

In respect to the syllabus, recently further changes had come about and the new syllabus has been widened accordingly. Advanced machine shop methods have been widened considerably in the new syllabus; the skills of tradesmen are more numerous and varied than they were ten or fifteen years ago. The tradesman today must have a good knowledge of his own trade and a good working knowledge of allied trades.

3. Design of Machine Tools: Machine Tools include those listed in the definition of machinist—first class in the Federal Metal Trades Award; these are: Lathes, boring machines, milling machines, planing machines, shaping machines, slotting machines, precision grinding machines, drilling machines and newer machines such as Pantograph and Big Borers. Machines today are generally designed for greater ruggedness to enable them to cope with the speeds and feeds at the increased rate required for metal removal. Speeds from these modern machine tools have risen from between 450 and 1500 revs per minute to at least 4000 revs per minute upwards. Within the last ten years, cutting tools have advanced to comply with the highest speeds required on modern machines.

Multiple cutting tools are used more extensively than years ago to cope with the higher speeds and greater production required of these machines. With the increase of speeds and feeds and the use of raw and multiple cutting tools, the care, attention and responsibility of the tradesman have been increased.

4. Fitter: From my own personal experience it is my view that a fitter must be able to read and interpret drawings and be able to determine what the component part actually does. He must have a good practical knowledge of the use of hand tools and measuring instruments to enable him to mark off and lay out for installation of machines and plant. He must possess a knowledge of Servo systems, machine tool movement, hydraulics, steam and other engines, also diesel and motor. He must be able to improvise continuously and be versatile on the service and maintenance of machines, plant and equipment.

5. Machinist First Class is a tradesman required generally to work a variety of power machines and to read and interpret drawings and blueprints. The machinist tradesman today must be quick in action and thought to enable him to cope with the highest speeds and

feeds of modern machines, for example; the machinist first class operating a milling machine must have a good knowledge of mathematics to work out the differential indexing, angular indexing and linear indexing, using the dividing head. He should have a knowledge of helical milling and the calculations as applied to the various operations. To cope with the higher speeds required today, up to six and eight gangs of cutters are used for quick production method in roughing down cuts to be followed by the finishing operations. Generally the machinist, first class is called upon to work to much closer tolerances than some years ago and is consequently turning out a higher standard of work.

6. Patternmaker: The patternmaker must have a good design knowledge. He must understand the timbers that he uses and their moisture content to allow for shrinkages. He must have more than an average knowledge of allied engineering trades such as machining and foundry practices. He must have a knowledge of drawing, mathematics and design to enable him to build patterns to suit the requirements of the draughtsmen, moulder and other engineering tradesmen. In the course of his work he uses all wood working power tools and a wide variety of personal hand tools.

7. Toolmaker: The toolmaker must possess all combined engineering knowledge of the fitter and machinist tradesman and must have an expert knowledge of manufacturing processes. He must understand the work of a blacksmith particularly when manufacturing drop forging dies. The toolmaker when called upon to design a tool for a component is constantly looking for speed and easier handling of component parts produced from the tools and dies and designs them to ensure the highest quality of the product with maximum production figures. He must work to close tolerances up to one tenth per thousandth inch wherever necessary. His attention to design procedures has been greatly increased over the last ten or fifteen years by the introduction of various types of new metals. He is expected to have a working knowledge of the metallurgical qualities of these new metals and heat treatment processes. In more recent years the tools jigs and fixtures manufactured in Australia have greatly increased the production rate of the products manufactured.

To sum up—the engineering tradesman generally is now producing a higher standard of work. This has been brought about by the introduction of new processes, new methods and a tendency to better standards of products generally. Engineering processes are demanding a faster rate of metal removal by modern machines resulting in a greater need for concentration and skill by the tradesman. In this 'push-button' age design and control by mechanical movements are covering a wider field and require a greater understanding and vision by the tradesman of today.'

There are set out extracts from the cross examination of the witness by Mr Cullen:

'Your background and training was as a fitter, was it?—Fitter and turner.

Did you have any other trade training apart from fitter and turner?—No, no other trade training. But I had short courses of most of the engineering trades, but none of any great magnitude.

I have been called upon by many employers throughout the metropolitan area and country areas to assist them and to help them with some trouble-shooting, some design of a jig or a fixture or a die.

Have you been carrying out any active work in the engineering trades?—Not since 1964—only advising Mums and Dads of the qualifications of the various trades and engineering, and also upon the school work. I teach mathematics now, every Saturday morning.

Could I put it to you that you have not been inside a factory in the last four years?—Yes. I have been in one factory in the last four years, just one. They had a bit of trouble manufacturing a die; the die was splitting each time the pressure was put on it and I was called in on a metallurgical problem.

You are aware of changes in the syllabus at Sydney Technical College?—Yes. In late 1963, 1964, the Director of Technical Education decided, on my advice, that we should look at these trades again, that it was time for a major overhaul.

Are you aware that tradesmen now tend to work in a narrower field rather than a broad field?—I am not aware of that, I am aware today the skills of a tradesman have increased and deepened to what they were ten years ago.

But are you not aware, even amongst fitters, that some become maintenance fitters and some production fitters?—Yes. Some become maintenance fitters and they are a highly skilled body of men. With these modern machines in this push-button age he has to have a very good knowledge of maintenance because if he is a maintenance fittter he has to repair parts.

Did you read the 1964 survey?—Yes.

You are aware the survey showed there was a serious shortage of tradesmen who were capable of moving from one area of specialisation to another?—My word, there always has and always will be.

COMMISSIONER WINTER: Do you draw any distinction between a fitter and a machinist first class?—No, the fitter and the machinist first class are on a level; they are both top men.

MR CULLEN: As to the fitter, I put it to you directly that it would be physically impossible for any one fitter to fulfil the description which you have given in your statement. Do you know of a single fitter who would?—Not just one man because there are too many skills and allied trades called upon. He could adapt himself.

I want you to tell me what the average fitter does in his day to day job?—That depends in what shop he is working but he has to have the basic skills to be able to read a drawing and rule, to file flat and square, file on a shoulder without damage; he has to be able to mark off and to have a good knowledge of machine tool movements for any repair of machine tools.

Let us take the fitter with whom you are familiar at Nuttalls. What were his duties. Take the production fitter?—The production fitter there has to put together the component parts he gets from the machine shop to build the lathe and make any adjustments or alterations that may become necessary while building that machine.

GALLAGHER J.: What range of tools would he use?—He would use the micrometer, perhaps the Vernier, and also be able to use an oilstone if he has got to rub down a movement on a shaft on which he cannot put a file for fear of disturbing the surface. He has got to be able to use all his instruments, his dial indicator for putting them together and also to be able to check and test his lathe when he is finished. The instruments which I think most of us are used to are spanners and screwdrivers. He has to use them but I have not mentioned them. They are all in the basic tools because there is a right and wrong way to use a spanner.

MR CULLEN: You have worked in industry—My word I have worked in industry. I served my apprenticeship at the Clyde Engineering Company. I worked as a fitter for C.S.R. and then I worked at Overall McCray's as a fitter for a short period and then I went to sea for about three years and I was engineer on the "Niagara". I got what I wanted there, control of power plant and then I came back ashore and went back to the Colonial Sugar Company and I was offered the position as lecturer in mechanical engineering by the Department of Technical Education and I took it.

Your concept of a fitter is still the same is it not?—No, it is not still the same. I thought I made it very clear that the skills of a fitter are greater today than they were when I served my apprenticeship. He has to have wider knowledge, wider vision.

For your students at the technical college do you attach importance to mathematics?—Yes, my word.

GALLAGHER J.: What standard do you expect?—We like to put a boy into the trade with intermediate standard. But many employers, to attract the boy, have reduced this to second year school standard. We give them two years of mathematics, but the mathematics are so laid out that the good boy is not kept behind. The good boy is on skill 10 and the plodder might be on 3 or 4. The teacher moves around. We try to do away with the standing in front of a class teaching methods, teaching from the blackboard. It is the personal touch now with the students. The teacher moves around his class; he might have 15 students, 5 or 6 who are really good type men. You can choose them—and you can pick out the top machine shops when you see the apprentices. Others are plodders, good lads who came into the trade because Dad knows the manufacturer or the owner. They will become good bread and butter fitters, but will always have to work under directions.

MR CULLEN: When you talk about the first class machinists working to close tolerances, wouldn't you agree this has been brought about by the improvements in the equipment, that there are now better machines, better tooling?—Yes.

Is there any necessity, in your view, for a tradesman to take post-apprenticeship courses? —None at all, unless he is looking for some higher service. He might be wanting to come along to the production engineering field where the old emphasis was on getting the job done quickly and cheaply. Then he can take the production engineering certificate course; if he wants to become a technician.

Would you agree that these post trade courses are usually taken by tradesmen who want to advance to a supervisory position?—Yes.'

There are set out the following extracts from the cross examination of the witness by Mr Douglas:

'Would it be true to say that when an apprentice finishes his time on a fitting and machine course he is qualified to follow on as a fitter to first class machinist?—When he has completed the third year of his trade course he is given the opportunity to do a fourth year—a

final year in the tool room or on some more advanced machine work, which includes automatic gear cutting. We have about 120 of them in the tool room in Sydney who prefer to do the tool room course. They want to advance from general engineering to the tool room.

Would you say that the apprentice who finishes his course, having concentrated in his final year on machinist, would be capable of working as a fitter in some plant?—Yes, he should be able to.

Of course, tradesmen do change from one classification to another over the period of their working life?—Yes.

You have told me that the fitter can move into the first class machinist field?—He should be able to if he has served his time in a good shop—and there are many good shops.

Is there anything else the first class machinist must have apart from a knowledge of machine movements?—No.

What new skills must the patternmaker have?—Today he has a machine which will make the pattern for him. In the early days we used the adontograph, which was a layout machine. The patternmaker has to be able to use the pattern-making machine today, and he also has to have a knowledge of machine movements because he may have to provide for a single point or multiple point cutting tool. In laying out a propeller he has to know the pitch of the screw—whether it is right hand or left hand—the amount of water it will displace and then be able to lay it out.

I am talking about additional skills he has had to acquire over the last 10 or 15 years?—A knowledge of how to use the various new metals which have been introduced. The contraction is different on all metals, as you know.

Of course, the patternmaker's kit has always been comprehensive?—Yes.

In fact, he requires less hand tools in his kit now than he did years ago?—No, he requires a greater variety of hand tools because when he is making a wooden or metal pattern he may have to do some very complex details. If he is going to deal with curves or other designs he must have a good knowledge of timber to reduce the size. Sometimes when he is working in metal he will go to the blacksmith and ask him to bend something.

What extra skills does the toolmaker have which he has received over the last 10 tor 15 years?—He has gone further in design processes also in the manufacture of dies. Today they will put a die in and press it. In the early years we used to cut it out with a pantograph. The way he does it today involves new skill.

What extra skill is involved in that?—He has to have a fair knowledge of the shrinkage of metals. He has to have a combination of comprehension and knowledge.

Would you agree these days there is better production planning?—My word.

And better engineering supervision than there was in the past?—Yes, the tradesman is on a great pedestal today more so than he was 10 or 15 years ago.

GALLAGHER J.: Would you elaborate on that?—With his skill and his knowledge he is respected in industry today. The general public respect a fitter and turner today more than they used to do. We are trying to get a better class of boy. Mum and Dad think if he is in a bank or serves at David Jones he is a better boy than the boy who comes home dirty and studies at night-time. Now that is all going by the board. Many mothers have said "My boy is to be a tradesman". I had one of the great surgeons in this country come to me once to design for him a scalpel for brain surgery which he wanted made out of stainless steel. When I made it up he rang me and said, "John, if I had my way I would make every surgeon do a course in something with his hands, hand tools". You never take the skill away from the tradesman'.

EVIDENCE FOR THE COMMONWEALTH

In opening the case for the Commonwealth which intervened in the public interest, Mr Woodward, Q.C., said: 'We will be concerned to make general submissions as to principles applying to work value cases such as this. We will make submissions and call evidence designed to assist the Commission to tidy the award, and to establish a new structure with up-to-date relativities. We will make no submissions as to the appropriate rate fixation in money terms for any classification'. Mr Woodward then proceeded to call Mr Richard Harrington Bullows, a senior engineer in the Commonwealth Public Service, who is designated as 'head of the Machine Shop Group and Apprentice Training at Commonwealth Ordnance Factory, Bendigo'. Mr Bullows gave his qualifications and experience

in detail and it is beyond dispute that his knowledge of engineering trades or occupations is comprehensive and well based. On 21 September 1966 he was seconded to the Department of Labour and National Service as a technical adviser to assist the Commonwealth in this inquiry and pursuant to the assignment he attended each of the 89 inspections made by the Commission whether as constituted by Mr Commissioner Winter or the Full Bench. Upon the information gained at the inspections and in the light of his background knowledge he made classification ratings, expressed certain opinions and in effect recommended certain changes.

Mr Bullows produced inspection check sheets which were completed by him following each inspection and which recorded findings reached upon consideration of factors described as basic educational requirements; experience and training demand; mental demand; physical demand; initiative and ingenuity; responsibility for equipment and tools; responsibility for material or product; responsibility for work of others and work features. 'I found the check sheet well suited for the purpose for which it was designed,' he said. 'One small departure from the procedure originally planned was that I found it necessary to use shaded areas against several of the work value elements in recording assessments for particular jobs inspected.'

Ratings based on tradesman factors as set out in Exhibit W.9 were these:

TRADESMAN FACTORS

Basic Education Requirement

High	High/Medium	Medium
Patternmaker	Boilermaker	Smith
Toolmaker	Welder Special	Welder 1st Class
Electrical Fitter/Mechanic	Boilermaker M.O.	Moulder
Machinist 1st Class	Sheet Metal Worker	
	Turner	
	Fitter	

Experience and Training

Very High	Very High/High	High	High/Medium
Patternmaker	Toolmaker	Welder Special	Boilermaker
		Electrical Fitter/Mechanic	Smith
		Boilermaker M.O.	Welder 1st Class
		Machinist 1st Class	Moulder
			Sheet Metal Worker
			Turner
			Fitter

Mental Demand

Very High/High	High	High/Medium	Medium
Patternmaker	Welder Special	Boilermaker	Moulder
Toolmaker	Electrical Fitter/Mechanic	Smith	
	Boilermaker M.O.	Sheet Metal Worker	
	Welder 1st Class	Fitter	
	Machinist 1st Class		
	Turner		

Physical Demand

Medium	Medium/Inter	Intermediate	Inter/Low	Low
Boilermaker	Moulder	Patternmaker	Welder Special	Electrical
Smith		Boilermaker M.O.	Welder 1st Class	Fitter/Mechanic
		Fitter		Toolmaker
				Sheet Metal Worker
				Machinist 1st Class
				Turner

Initiative and Ingenuity

Very High/High	High	High/Medium	Medium
Patternmaker	Boilermaker M.O.	Electrical Fitter/Mechanic	Boilermaker
Toolmaker			Smith
			Welder Special
			Welder 1st Class
			Moulder
			Sheet Metal Worker
			Machinist 1st Class
			Turner
			Fitter

Responsibility for Equipment or Tools

High	High-Medium	Medium	Medium/Intermediate
Toolmaker	Boilermaker	Patternmaker	Welder Special
Machinist 1st Class		Electrical Fitter/Mechanic	Welder 1st Class
Turner		Boilermaker M.O.	Moulder
			Sheet Metal Worker
			Smith
			Fitter

Responsibility for Material or Product

High	High/Medium	Medium
Toolmaker	Patternmaker	Boilermaker
Welder Special	Electrical/Fitter Mechanic	Boilermaker M.O.
		Smith
		Welder 1st Class
		Moulder
		Sheet Metal Worker
		Machinist 1st Class
		Turner
		Fitter

Responsibility for Work of Others

High/Medium	Medium
Patternmaker	Toolmaker
Electrical Fitter/Mechanic	Boilermaker
Boilermaker M.O.	Smith
	Welder Special
	Welder 1st Class
	Moulder
	Sheet Metal Worker
	Machinist 1st Class
	Turner
	Fitter

Work Features

High/Medium	Medium	Intermediate	Low
Smith	Boilermaker	Boilermaker M.O.	Patternmaker
	Welder Special	Sheet Metal Worker	Toolmaker
	Welder 1st Class	Fitter	Electrical Fitter/Mechanic
	Moulder		Machinist 1st Class
			Turner

Gallagher J.]

Ratings based on non-tradesman factors as set out in Exhibit W.15 were these:

NON-TRADESMAN FACTORS

Basic Education Requirement

Medium/Intermediate	Intermediate	Intermediate/Low
Die Setter (plans)	Duster	Machinist 3rd Class
Dogman/Crane Chaser	Radio Tester	Press Operator (light)
	Machinist 2nd Class	Process Worker
	Furnaceman Electric	
	Die Setter (L.P. Hand)	Dress/Grinder

Experience and Training Demand

Medium	Med/Intermediate	Intermediate
Duster	Radio Tester	Dresser/Grinder
Die Setter (plans)	Furnaceman Electric	Press Operator (light)
Machinist 2nd Class	Machinist 3rd Class	Process Worker
	Die Setter (L.P. Hand)	
	Dogman/Crane Chaser	

Mental Demand

High/Medium	Medium	Med/Intermediate	Intermediate
Duster	Machinist 2nd Class	Dogman/Crane Chaser	Furnaceman Electric
Radio Tester	Machinist 3rd Class	Dresser/Grinder	
Die Setter (Plans)	Press Operator Light		
Die Setter (L.P. Hand)	Process Worker		

Physical Demand

Medium	Med/Intermediate	Low
Furnaceman Electric	Duster	Radio Tester
Dresser/Grinder	Dogman/Crane Chaser	Die Setter (plans)
		Machinist 2nd Class
		Machinist 3rd Class
		Die Setter (L.P. Hand)
		Press Operator (light)
		Process Worker

Initiative and Ingenuity

Medium	Med/Intermediate	Intermediate	Intermediate/Low	Low
Die Setter (Plans)	Die Setter (L.P. Hand)	Radio Tester	Duster	Machinist 3rd Class
Dogman/Crane Chaser		Machinist 2nd Class		Dresser/Grinder
		Furnaceman Electric		Press Operator (light)
				Process Worker

Responsibility for Equipment or Tools

Med/Intermediate	Intermediate	Intermediate/Low	Low
Radio Tester	Furnaceman Electric	Duster	Process Worker
Die Setter (Plans)	Dogman/Crane Chaser		
Machinist 2nd Class	Dresser/Grinder		
Machinist 3rd Class			
Die Setter (L.P. Hand)			
Press Operator (Light)			

Responsibility for Material or Product

Medium	Med/Intermediate	Intermediate	Low
Duster	Die Setter (Plans)	Furaceman Electric	Press Operator (light)
Radio Tester	Machinist 3rd Class	Dresser/Grinder	
Machinist 2nd Class	Die Setter (L.P. Hand)	Process Worker	
	Dogman/Crane Chaser		

Responsibility for Work of Others

Medium	Med/Intermediate	Intermediate	Intermediate/Low
Die Setter (L.P. Hand)	Duster Furnaceman Electric Dogman/Crane Chaser	Radio Tester Die Setter (Plans) Machinist 2nd Class Machinist 3rd Class Process Worker	Dresser/Grinder Press Operator (light)

Work Features

Very High/High	High	Medium	Inter/Med	Intermediate	Inter/Low	Low
Duster	Furnaceman Electric	Dresser/Grinder	Dogman/Crane Chaser	Die Setter (Plans) Die Setter (L.P. Hand)	Press Operator	Radio Tester Machinist 2nd Class Machinist 1st Class Process Worker

Turning to other features of Mr Bullow's evidence, he expressed concurrence with submissions by the Commonwealth which were in favour of the introduction of new classifications, the elimination of classifications which have become redundant or unnecessary, the combination of others under new titles which would group like work and hence bring about an overall reduction in the total number of classifications remaining in the award. It is not proposed at this stage to discuss in detail the submissions with which Mr Bullows concurred, the comprehensive explanations given by him in the course of evidence, or the questions directed to him in the course of lengthy cross-examination and the answers which he gave thereto. With regard to the Commonwealth submissions, however, it is pointed out that emphasis was placed upon the desirability of using tradesmen upon work which properly fell within their range of skill and refraining from using them upon work which could reasonably be executed by non-tradesmen. The suggestions made included these:

1. the classifications B47 toolsmith, B46 tilter, 0285 B rigger's assistant (Morts Dock Engineering Co. Limited) and B37 faggoter be regarded as having become redundant.
2. for the reasons stated, consideration concerning possible redundancy be also given to the classifications A10 key seating machinist, A12 machine setter, H129 die setter and H150 die setter and/or machine setter and/or leading press hand.
3. consideration be given to re-arrangement of classifications.
4. for the reasons stated the classification 'fitter' be re-designated as 'mechanical fitter'.
5. there be created a new classification designated 'mechanical assembler fitter' which would cover routine types of fitting work not calling for trade skill.
6. there be created a new classification designated 'electrical fitter mechanic —special class' covering the work which calls for the combined skills of the two existing classifications where special responsibility is evident; and 'to include also the work of the electrician in charge of plant or installation and the shift electrician, who have responsibility of a similar order'.
7. consideration be given to the amalgamation of the classifications electrical fitter and electrical mechanic.
8. the designation 'boilermaker' be changed to 'metal fabricator'.

9. there should be created a new classification designated 'metal fabricator, special class' which would absorb the classification, boilermaker marker off. The new classification would cover highly skilled and responsible work which would distinguish it from the classification 'metal fabricator'.
10. further consideration be given to the classification 'smith (other)'.
11. there be recognised two grades of process workers, one covering those engaged on traditional process work 'i.e. work involving simple, repetitive tasks, normally occupying a brief time cycle' and the other covering process workers in the electrical trade 'engaged in intricate assembly and connecting operations, such as the more complex radio valves and certain transistor manufacturing operations, the viewing and setting of intricate sub-assemblies to specified limits and the wiring of electrical equipment from charts or diagrams when the cycle time is long'.

It has already been indicated that it is not proposed to analyse the evidence of Mr Bullows given in cross-examination. His impartiality and integrity were not challenged and it is fair to add that although it was sought to cut down the weight of his evidence on some matters particularly those relating to electrical trades he emerged as a witness of ability who had shown a tremendous capacity for work and whose efforts had produced valuable conclusions calling for the close attention of the Commission.

STATE OF VICTORIA AND INSTRUMENTALITIES

Mr Aird, Q.C., called as a witness Mr Frederick Dudley Snell, a professional engineer with a diploma in electrical engineering and who holds the appointment of Methods Engineer in the Melbourne and Metropolitan Tramways Board, an instrumentality which for the purposes of its transport activities employs 5000 persons working under Federal awards. Mr Snell gave detailed particulars of his qualifications and experience and with his background together with knowledge gained from attendance at inspections gave expert evidence upon various matters relevant to the inquiry. This evidence fell into a number of compartments. It covered, *inter alia,* technological changes in industry, comprehensive explanations on problems relating to the electrical sphere and to electrical tradesmen, discussion relating to tradesmen generally, discussion relating to particular tradesmen and discussion based upon the comparative position of employees in governmental undertakings with those engaged in outside industry.

Mr Snell acknowledged that over recent years there have been significant changes in mechanisation but he asserted that the exercise of skill or responsibilities of tradesmen have decreased rather than increased. Taking by way of example his comments on electrical tradesmen he said: 'It is my opinion that the changes which have occurred in the electrical industry over the last twenty years have not increased the demands on the trade skill of the typical tradesman and in fact there are areas where these demands have been reduced'. As his evidence progressed Mr Snell extended his comments to tradesmen in other fields and he sought to emphasise that modern planning methods which include the availability of detailed drawings and of ready access to explanatory data have made easier the tasks of tradesmen. He dealt at some length with mechanisation and claimed in relation to the mechanical tradesman that 'the development of new machines does not place a higher demand on his trade skills although it may be necessary for him to become familiar with the maintenance requirements of the new machines'.

Mr Snell advanced reasons for making certain classification changes: 'This overlapping which exists between the work of the existing classifications of electrical fitter and electrical mechanic suggests that these two classifications should be combined under the one title of "electrician" or "electrical tradesman".' He continued: 'Such a change in the award would not, in my view, bring about any significant alteration in work methods in industry or cause employers to modify their present policies concerning the allocation of labour resources. Nor would such a change require the electrical tradesman in practice to exercise any different degree of skill, knowledge and responsibility in the performance of his work than that demonstrated on inspection and which appears to be the established pattern in industry.

Mr Snell contended that a close relationship exists between the classification of fitter and that of machinist, first class. He gave his reasons for this contention and then suggested that the classifications could be combined for award purposes under one classification with the title of 'mechanical tradesman'. He put forward an appropriate definition.

Mr Snell also applied his mind to welding and for the reasons which he advanced suggested that the present definitions of welder-special class and welder, first class, be replaced by new definitions.

In relation to process work, Mr Snell contended that 'it is very difficult for the inexperienced observer to determine whether one process worker engaged on assembly work is in fact working at a higher level of skill than a neighbour who is engaged on a somewhat similar task'. 'It may be that it would be better', he said, 'to leave the present classification and definition of process worker unaltered'.

Since his evidence on the point is germane to the case presented on behalf of the State of Victoria and the instrumentalities, there is set out in full the evidence of Mr Snell relating to work comparisons.

'The inspections have shown that the work performed by a typical employee in any one classification is the same whether that employee works for private industry or one of the State Instrumentalities. For example it will be seen from the transcript of the inspections that some of the work performed in private industry by an electrical tradesman such as Mr Gadsby at Alcan (3126) apparently places a higher demand on his trade skills in that employment than the work of another tradesman in private industry such as Mr Fitzpatrick at McColl Electric (4404). Mr Gadsby was engaged in the maintenance and overhaul of electrical equipment and was faced with the task of fault location and restoration of supply whereas Mr Fitzpatrick's work was described as the assembly of motor generator sets and the manufacture of switchboards and control cabinets in accordance with drawings. Similar situations can be found in the inspections of the Instrumentalities. The work carried out by the electrical fitter engaged in substation maintenance in the Tramway's substation at Coburg (5053)—an employee who could be required to work on oil circuit breakers (as he was on the day of the inspection) and on transformers, rotary convertors, rectifiers or DC switchgear—appears to place a greater demand on his trade skills than the work of the electrical fitter engaged on the overhaul of tram line breakers at Preston tramway workshops (5020). The transcript of inspections of the S.E.C.V. also shows this range of demand on trade skills when the work of an electrical fitter engaged on the maintenance of equipment at the Hazelwood Power Station (5171) is compared with the work of the electrical fitter engaged on the manufacture of switchgear in the Yarraville workshops (5069).

It is probable that any of the three tradesmen engaged on work which appears to be of a lower standard could, after a period of familiarisation, undertake the work of any of the three jobs which are more highly rated and the comments on the apparent lower skill are not meant as a criticism of any of the tradesmen but simply to indicate that there is a range of work in a particular trade classification throughout industry.

In the mechanical trades it is also apparent that a toolmaker engaged in the manufacture of a punch and die set at the Yarraville workshops of the S.E.C.V. (5080) could expect to carry out very similar work if he was employed in private industry by companies such as the Sunbeam Corporation (4835) or Sovereign Appliances (3232).

There is no difference in the work of a machinist 1st class—working say a horizontal boring machine—whether he is carrying out his work at the Yallourn or Yarraville workshops of the S.E.C.V., the Preston workshops of the M.M.T.B. or the Yarraville plant of the Goetz Manufacturing Company. The basic trade skills are the same and it would be possible for these men to move from place to place without the need for other than a period of adjustment to the requirements of the different establishments.

The same situation appears to apply for all of the classifications which are common to the supply authority Divisions and to Clause 4. I could not imagine that a motor mechanic engaged on servicing a motor vehicle of a particular make and model would perform work in a higher skill range if he was employed by an electricity supply undertaking than he would if he was employed in private industry'.

HYDRO ELECTRIC COMMISSION OF TASMANIA

Mr Keith Marks of counsel called as a witness Mr Norman Maxwell Murray, Power Station and Sub-station Construction Engineer in the Service of the Hydro Electric Commission of Tasmania. Mr Murray having outlined in detail his qualifications and considerable experience as a professional engineer proceeded to give evidence substantially directed at establishing that work performed by 'metal trades' employees of the Commission has a close similarity with that carried out in other governmental undertakings and in outside industry. 'As a result of my experience of the past years', he said, 'I have formed the view that the call made upon metal tradesmen employed by the H.E.C. in the carrying out of their functions does not differ from that required of metal tradesmen in private industrial concerns'. He continued: 'This view has been reinforced both during my recent inspections with the Arbitration Commission, a perusal of the transcripts and during recent visits I have made to both electrical and engineering workshops of private industrial concerns and of maintenance work carried out in the electrical and mechanical fields in those concerned.' Earlier in his evidence Mr Murray had given particulars of comparisons. He spoke of visits to heavy engineering works such as Vickers Ruwolt, of electrical installations in outside establishments, of the work of electrical tradesmen employed by the Melbourne and Metropolitan Tramways Board or by Cadburys at their factory in Hobart. He also spoke of apprenticeship courses and in this connection stated, in effect, that apprentices in the electrical, mechanical and boilermaking-welding fields employed by H.E.C. receive training identical to that received by apprentices from outside industry. Mr Murray contended that, given proper training at technical college and by his employer, a lad emerges from his apprenticeship with a basic training which enables him after a short period of experience to perform the duties of a skilled tradesman. 'I feel', he said, 'that a man who has completed his apprenticeship has in fact the basic training on which he should build up with experience'. Elsewhere in his evidence he said: 'We have found that employees who come to us with basic tradesmen's training i.e. indentured apprenticeship either in the electrical or mechanical field are with the supervision available able to carry out the work required of them without any difficulty'. In cross-examination, Mr Murray's attention was directed to a statement made at the H.E.C. inspection by another supervisory officer. This officer had been asked: 'So it would take two years, in your view, to train a skilled electrical tradesman to the standard you would require' and to this question he had replied: 'To the standard in this particular shop, yes.' Mr Murray, who claimed to be 'at least as competent as the other officer' stated: 'I entirely disagree with this, in my experience of this type of work.'

There is set out verbatim the following further evidence given in cross-examination:

'Mr Murray in your evidence you are not saying that the tradesman, be they electrical or mechanical, are not skilled men, are you?—Not at all.

You would agree with me that they are very skilled men?—I would say that a tradesman is a skilled man, yes.

Would you agree with me that they are valuable employees to the H.E.C.?—Certainly.

Very valuable employees?—I think they must be termed very valuable employees, because without tradesmen we could not build power stations or sub-stations.'

PRIVATE EMPLOYERS

In opening his case, Mr Robinson stated he would call evidence directed to a work value examination of classifications in the Metal Trades Award. He did so and in the time allocated to him succeeded in adducing testimony from 19 witnesses, each of whom held a managerial or executive position with a company actively engaged in industry and who in the main sought to describe the commercial enterprise with which he was connected, the nature of its business, the work force, classifications, qualifications, training duties and experience, the way in which work was carried out, methods regulating the flow or performance of work, system of work—past and present, technological changes and other relevant features. For the purpose of specific evidence directed to the work of metal trades employees each witness following a common pattern, apparently arranged after discussion with the Metal Trades Association, had prepared or caused to be prepared a statement which, in relation to each classification considered, gave, as far as was practicable, particulars for the years 1952 and 1967 of work conditions, work methods, materials used, instruction period, physical effort, mental effort, skill content and responsibilities. At the close of evidence Mr Robinson tendered documents which consolidated the particulars so given and it may properly be said as a generalisation that if the summarised information is accepted as factual and if the inferences correctly to be drawn therefrom are those put forward by the employers the position in 1967 as compared with 1952 is one of improved working conditions, improved work methods, reduced physical effort, reduced mental effort, reduced exercise of skill and reduced responsibilities.

Time and space do not permit of discussion of details given by each witness but the situation may fairly be met by a selection which will take in a variety of establishments and which will permit of attention being given to features of the union cases considered by the employers to call for specific reply.

Mr J. G. Amedee, General Manager—Manufacturing—Borg Warner (Australia) Limited, a company engaged in the production of automotive manual transmissions, automatic transmissions, axle assemblies and industrial transmissions with a work force of 1,474 employees, 1,140 of whom work under the Metal Trades Award, stated that a combination of circumstances, which included a shortage of skilled labour, an increase in volume required for original equipment, 'the need to maintain close cost control in order to compete with overseas manufacturers who have vastly larger markets than Australian industry,' and the need for a higher standard of quality in original equipment, caused the company from 1957 onwards 'to embark on a programme of introducing single operations with adequate tooling and gauging and to provide wherever possible automatic machine tools to perform the operations.' Mr Amedee stated further that because of the system of mechanisation thus introduced it has become possible to use semi-skilled employees on the bulk of the work and he went on to say that 'in this regard it is noteworthy that of the 177 people employed by the company and classified as machinists, 1st class, there is less than 10 per cent who are qualified tradesmen by indenture or tradesmen's rights recognition.' Describing in greater detail the organisation of the plant, Mr Amedee deposed that in order to obtain optimum utilisation of the available work force as well as to meet the demands of the competitive market it has been necessary for the company to

organise the plant on a production flow line basis instead of the 'colony' type production organisation which previously applied. He continued: 'Today more than 70 per cent of the plant is arranged in this manner, the flow lines being controlled by leading hand tool setters and operated by either machinists, 1st class, machinists, 2nd class, machinists, 3rd class, or female process workers. This type of organisation has involved the company in a great deal of capital expenditure for building, plant and equipment. Capital invested increased from $6.4m in 1957 to $17m in 1967 and has in fact doubled since 1963.'

There are now set out in summarised form further material features of Mr Amedee's evidence.

1. There is a Work Study and Plant Layout Section, which in conjunction with the Methods and Tools Design Section, prepares all machine tool layouts as well as provides detailed drawings for all services such as electricity, power and water.
2. There is a Maintenance Department which is responsible for the maintenance of all machines and the repairs to all plant and equipment within the company.
3. Maintenance fitters are responsible to their foreman for machine maintenance, fitting work, 'disassemble' repair, replace, re-assemble and adjust. They are also responsible for fabrication of machine guards, stops, brackets, cleaning of pumps, filters, valves, pipes and adjustments. They are required to report obvious deterioration of machines or machine parts to their leading hand or foreman.
4. Electricians are responsible for the installation of the electrical components of new machines, plant and buildings. They locate a fault and carry out repairs to electrical equipment. They determine whether electrical controls, devices and circuits are satisfactory and safe to operate. They are responsible to the leading hand or foreman.
5. The maintenance and rebuilding of present-day machines and equipment requires skilled people in specialist trades.
6. Modern machines can be divided into four categories, namely, hydraulics, pneumatics, electrical and mechanical or a combination of them and no man could possibly be skilled enough to handle all functions.
7. Very different was the position, say, 10 years ago, when it was quite common for one man completely to overhaul a machine, performing all incidental functions in the process.
8. Work methods have improved. Whereas in 1952 machinists were provided with very little written information, today they are furnished forms of assistance.
9. Better quality raw materials, modern measuring equipment and im- with a finished component drawing, operational sketches and other provements in machine tools enable work to be performed with the exercise of less skill.
10. 1st class machinists are required to set and operate individual machines and receive their instructions from leading hand tool setters who guide and assist them in performing their work. All information is contained in Operations Sheets giving full instructions as to the operation to be performed, the tools to be used and the gauging sequence.

1st class machinists complete their own set-up, change their own tools and are responsible for ensuring that their work is machined to the tolerances shown in the Operations Sheets.

11. 2nd class machinists are engaged on operating machines or groups of machines and are responsible to the leading hand tool setter. They are required to assist leading hand tool setters to make running tool changes that are checked with gauges supplied as listed on the Operations Sheets. The work is checked with gauges in accordance with the instructions set out in the Operations Sheet.

12. 3rd class machinists perform work similar to that performed by 2nd class machinists but are not required to assist the leading hand tool setter in the setting up of the machine and the making of running tool changes.

13. Process workers perform the repetitive work of loading and unloading machines and checking the work as required by the leading hand tool setter on fixed gauges. They inform the leading hand tool setter when the parts do not fit the gauge. All set-ups, tool changes and tool adjustments are performed by the leading hand tool setter and he is responsible for the work of his group.

14. Forklift drivers are engaged on the transfer of material including processed parts within the factory.

15. The company employs 45 inspectors in the Quality Control Division who with two exceptions are qualified tradesmen.

16. The experience of Borg Warners is consistent with the general conclusion that compared with 1952 metal trades employees are in a more favourable position whether as regards conditions of work, the nature of the work, intricacies of work or responsibilities.

There is now summarised evidence given by Mr Amedee in cross-examination:

(a) The distinction between a 1st class machinist and a 2nd class machinist is that the first named employee is required to work to finer tolerances.

(b) 'I do not think there is any difference between a process worker and a 3rd class machinist. This statement applies to industry generally.'

(c) These employees are treated as machinists, 3rd class, at Borg Warners and our female process workers are on the same work.

(d) A machinist or tradesman as he gets experience must definitely improve his skill; the more jobs he works on, the variety of work he works on must improve his skill and own knowledge.

(e) 'A 2nd class machinist today under our flow line method of production would be looking after a number of machines.'

(f) The flow line production system as followed at Borg Warners is not typical of the metal trades industry. There are more and more companies moving to this area but there are still many small shops who do not operate on this basis.

(g) 'I agree that I am not very capable to talk about electrical tradesmen.'

(h) Over-award payments are made in order to attract labour. 'We could be paying the market rate for Fairfield but whether it is the market rate generally for Sydney, I would not know.'

Gallagher J.]

Mr A. Marks who is employed by Electronic Industries Limited as Personnel Manager and who is a director of Radio Corporation Pty Limited, a subsidiary of the first named company stated that he has had thirty years experience in the radio electrical and electronic trade; that he has held various official appointments including one as a member of the Radio Trades Committee of the Apprenticeship Commission of Victoria; that his evidence had particular application to the activities of Radio Corporation Pty Limited; that the principal products manufactured by the company are in television sets, radiograms, radio, sophisticated electronic equipment and component parts; that although since 1952 the basic character of the work undertaken by the company has not changed it has expanded tremendously; that the company being in a most competitive field was forced to become as efficient as possible in research development and production techniques; that drawings, tools, jigs, materials and clear and adequate working instructions are available when and where needed for production to proceed; that through planning, the best use of labour and plant is achieved; that by means of industrial engineering techniques which may be considered in two parts—methods study and work measurement—direct labour although not required to work harder is more effectively used; that in assembly operations on which the largest number of the employees are engaged as process workers 'the accent is on work simplification'; that this is achieved by methods engineers breaking down a particular job into segments, which contain a small number of like operations; that the aim of this is to organise the job in such a way that mental, physical and training times are reduced as much as possible; and that over the last fifteen years not only have the number of aids to operation increased but their effectiveness has increased.

Mr Marks in elaboration of his explanation of techniques dealt particularly with process workers and toolmakers. He contended that very little skill is required by the process worker and went on to say that employees in that category —'whom one must remember in many cases have no previous industrial experience and indeed may not even speak English'—are not reasonably to be expected to carry any degree of responsibility in the performance of their tasks. He added: 'Indeed where responsibility is part of a job we have made sure that the job is simplified or re-organised to remove this responsibility.'

Concerning the toolmaker Mr Marks said 'that the way in which the work is broken up relieves the tradesman of a great deal of the responsibility which previously fell upon him. He is now required to exhibit a narrower range of skills than ten to fifteen years ago by virtue of the fact that the manufacture of the tool is now detailed into separate processes.' But while stating that 'the toolmaker is under close supervision from foreman and leading hand' he went on to say that 'being a qualified and skilled tradesman it is reasonable to expect that this supervision would need only to be a minimum.'

There is now summarised evidence given by Mr Marks in cross-examination:

(a) 'The waiting list for radio apprentices is as long as my arm but I cannot get people to take up electroplating', the reason for the lack of attraction being that the industry has an image that it is a dirty or a dangerous trade.

(b) inaccuracies sometimes occur in drawings handed to tradesmen.

(c) although the tradesman is not held responsible if he allows the inaccuracy to pass: he is a responsible person; he has had training and it would therefore be the wish of the company that he report it.

(d) having detailed drawings and dividing the work of the toolmaker ensures that the tool is available at a specific time which is most important in modern production—'you must hit the time because

production lines are waiting for the tool to come along'; amongst the requirements for a process worker are manual dexterity, ability to do repetitious work and ability to concentrate.

(e) the vast majority of components in company products are now smaller.

(f) it is the responsibility of the process worker to obey instructions and to pay attention to his or her work.

(g) industry must produce products and pass these on to the public at the best price it can.

(h) notwithstanding the above obligation the company makes incentive or over-award payments in some cases of $12 per week.

Mr H. H. Palmer, Works Director, Perry Engineering Company Limited, South Australia, stated that his company, founded in 1897, is essentially a jobbing engineering works which obtains the majority of its work by tendering for structural and mechanical engineering contracts to designs forwarded by Australian and overseas engineering interests, government departments and authorities, architects and consulting engineers. 'In its operations', he said, 'the company uses a wide range of iron and steel alloy, aluminium and copper alloys, as well as paints, timber, welding materials and gases, electrical cables and wiring, fuels and other raw or processed materials'. After giving details of work flow, planning system of working, technical changes particularly in the foundry, specialisation in the work of welders, boilermakers, machinists and fitters, Mr Palmer sought to sum up the position in manner following:

'The progress in the industrial world today is due to the application of the technological development that requires an expansion and deeper appreciation of the sciences which in turn has spread the know-how to higher levels of supervision than the competent tradesman. This has resulted in the transfer of some of the collective skills which were grouped within tradesmen's knowledge and the development and application of those skills in another manner.

The application of new techniques has been through graduate engineers, trained supervision and personnel. Method study has resulted in a simplification of work practice, increasing the effective operation and productivity of the operator without increasing the physical effort.

Industrial Management has provided the means by which, through effective systems, information and instructions can be issued to the operator, relieving him of much of the mental effort to acquire relevant information and supplying a system which routes and directs material through production.

The introduction of many new machines and processes in the different departments requires that the tradesmen of today have to specialise in fewer machines or functions of their trade, that they can develop their skills to that portion of the trade they select to follow and the overall control of any work or project becomes the responsibility of supervision and engineers.

By the application of the above methods, we have been able to meet the demands of the increased volume of work, while maintaining quality, and meeting deliveries in the very competitive world of today.'

There is set out in summarised form evidence given in cross-examination:

(a) While there is a tendency with tradesmen to become specialists in a smaller or narrower range of activities there definitely is still great scope for skilled tradesmen in a wide range of trade duties;

(b) it cannot be denied that the productivity of the tradesman has increased 'and it has increased simply through the fact that we supply machines with cranes, jib cranes and other lifting machines in which a man does not have to exert physical effort in picking up and handling things like a machine. Time saved by the tradesmen in this way is spent on more skilled work';

(c) the moulder still needs skill to be able to apply himself to new conditions;

(d) the patternmaker is required to develop a new type of technique and skill to be able to answer the moulder's conditions;

(e) productivity has increased 'because we have been able to relieve the harder laborious work off the moulder and he has been able to employ his skills for a greater or more effective time of the day'—this means the man spends more time in the finishing off which is an important part of the work of a jobbing moulder;

(f) the time of an employee producing cores is more effective now 'because instead of having to support and bank and stove cores he can now make the whole core'—increase in production 'would be somewhere about three times I suppose';

(g) the function of a machine moulder is as described: 'He makes the bottom box. All he does is lift the box on to the machine, pull the sand down, press the button and the machine does the work. Then he runs it on the conveyor. Another man takes over, drops in the plates and cores and they assemble the box. A crane assists in that operation and runs it down and the other moulder takes it. They are responsible for manufacturing the box and running it down on the conveyor ready for casting. They take it in turns amongst themselves';

(h) the machines (moulding) are more up to date and have called for a bigger capital outlay by the company;

(i) this means the man operating these machines is responsible not only for a more valuable product but for the care of a more valuable machine;

(j) 'So from 1952 to 1967', this man, 'is a more valuable employee because his return is greater—his productivity is greater . . . I do not think he works as hard as he did in 1952, but his productivity is better';

(k) an over-award payment is made to the boilermaker partly because labour is difficult to get and additionally because of the demand of the boilermaker himself and also additionally because of the work that they do.

Mr W. Nuttall, Joint General Manager of Nuttall Engineering Pty Limited stated that he had served an apprenticeship with the company to the trade of fitting and turning and had been employed at its Sydney works from the age of 16 years onwards. He stated further that having had several years experience in charge of various departments he installed production control systems throughout the factory, that he was production manager for several years, then works manager, which position he held until 1952 when he obtained his present appointment. Outlining the activities of the company Mr Nuttall said that equipment produced covered the following items:

Transmission equipment
Material handling equipment
Diesel engines
Paper box making and paper corrugating machines
Printing and flexible packaging machines—including rotogravure printing
Machine tools

He continued: 'In 1952 the company manufactured centre lathes, paper box machinery and transmission equipment and in 1956 it commenced the manufacture of printing machinery. At the present time half of the company's production

is concerned with centre lathes, the balance covering printing machinery, paper box machinery and transmission equipment.' An impression of the plant used by the company in the manufacture of its products is to be had from Mr Nuttall's description given in evidence which is set out:

'Machine tools used in this section (machine shop) consist of capstan lathes, turret lathes, centre lathes from 6½ inch to 10½ inch height of centres, vertical and horizontal milling machines, plane milling machines, internal, external and surface grinding machines, slotting and broaching machines, horizontal boring and precision boring machines including a Devleig Jig Mill, slideways grinding machine, gear shaping machines, gear hobbing machines, tooth rounding machine, shaping and planing machines, a Reishauer gear tooth grinder, pillar drills, sensitive drills, radial drills and a graduating machine.

The quantities of parts which are machined on all of the above machines vary from one off to an average of eighty off. Parts in most cases are turned, milled or bored.'

With reference to changes in production methods, planning and simplification of the work of employees, Mr Nuttall's evidence was consistent with that of other employer witnesses. He stated that 'with increasing competition especially from overseas imports the need arose during recent years for Australian manufacturers of machinery to obtain higher quality production and at the same time produce a better quality product in order to compete favourably on the market.' 'However,' he continued, 'the ability to increase production and produce higher quality products was seriously restricted because sufficient employees with adequate skill were not available. Accordingly the company was faced with a dilemma and the only solution was to introduce higher quality machine tools, use jigs and fixtures more extensively and engage draughting and production planning employees.' Mr Nuttall then went on to state:

'The higher quality machines and tools used today enable a less skilled operator to produce good quality work at a reasonably high rate of production as it is the machine itself which produces the work. In comparison, the older type of machines were less accurate and the operator had to constantly check the job and adjust the machine settings—this is not now required to the same extent.

Further, the more extensive use of jigs and fixtures enables production to continue at a fairly rapid rate with better results than previously, the various jigs and fixtures now providing the operator with a pre-determined pattern to work to.

The above two innovations have already represented a substantial cost to this Company in capital expenditure, and in the last three years approximately $100,000 has been spent on such equipment as a jig mill, tooth grinding machine, gear testing machine, radial drilling machine, heavy duty production milling machine and drilling machine with optical measuring devices.

As far as draughtsmen are concerned, they are now used to prepare simplified layout drawings of parts which eliminate all information other than what the machinist will require to perform his function. Of course, such drawings are easier to follow than the drawings previously made available to machinists. The production office has the responsibility for planning the sequence of operations, processes and methods to be used in production instead of leaving it to the machinist. Also any equipment such as jigs or fixtures, which would make the job easier to machine are provided by the production office.

The increased use of draughting and planning staff since 1953 is demonstrated by the fact that from June, 1953 to June, 1967, such staff increased from 8 per cent to 14 per cent of the production employees.'

There is set out verbatim evidence concerning apprentices given by Mr Nuttall either in course of cross-examination or in response to questions directed to him from the Bench:

'When you say "apprenticeships", what type of apprenticeships do you mean?—Apprentices to fitting and machining. I feel there is a necessity for more apprentices to be trained than are being trained now.

The second part of Mr Horsburgh's question as to whether the employers were doing their part in training apprentices?—I think a lot of employers would like to do so, but there is a problem at the present time, and that is the reluctance of a lot of young people to come into the engineering trades and serve an apprenticeship. We find it most difficult to get sufficient young boys to take it on, so much so that we find we cannot be quite so selective

in our choice of apprentices as we used to be. We will not take on any young man, but we find that our standards have had to be lowered considerably and that this has had rather a detrimental effect on the quality of the apprentices we are training. We still get a number of good boys but there is quite a percentage of them who are not of as good a quality as we would like.

What standard would you like to attain?—It is difficult to really explain. When you interview a boy you can see whether he has any mechanical aptitude or not, or whether he looks the type that would apply himself to study or whether he is disinterested and just looking for a job. Some do not want to do any additional courses. They even do not want to attend tech. We have had to cancel indentures at odd times because a boy refuses to go to tech. We have little control over the boys these days. We cannot exercise any degree of discipline. All we can do is tell them that if they do not toe the line we will cancel their indentures. We are most reluctant to do this and it has only been in extreme cases that we have done it.

What general educational standard do you think is necessary?—At the age when they are apprentices they cannot get too far, but we like to have them complete training up to the end of primary school. There is little chances of getting them with the Intermediate standard in the time. If we can get boys of that kind, usually they are the ones who would get selective training—methods engineering or in the drawing office.

Do you agree that their training should be comprehensive?—Yes, I consider that it should be comprehensive for an apprentice, because it gives him a wider background and broadens his mind. I remember when I did my own studying. I studied a lot of things which I have never used from the time I completed my courses of study. I have had no occasion whatever to use differential and integral calculus since completing my studies, but that is one of the subjects I learned. I have forgotten it.

But you know where to look?—Yes, Your Honour; and I feel that apprentices today should get an overall training and that in the last 12 to 18 months they can pick the line they wish to specialise in, because it is generally accepted in industry today that the majority of employees confine their efforts in one direction, whether it is the operation of milling machines or grinders or lathes or becoming a fitter. It is the desire both of the man and the employer that their efforts be concentrated in one direction.

Then you think that when the apprentice is going through the workshops his training should be as wide as reasonably possible?—Yes, for fully indentured apprentices I feel that this is the case. I also feel that there is an opening in industry for a course of study or training, which should be confined to no more than six months, by which an adult—not necessarily a young boy, but someone from 20 upwards—could be given training in the operation of a specific machine. That man could then be classed as a first class machinist (milling) or first class machinist (grinding) or first class machinist (turning); and there is a decided opening in industry for that type of tradesman—not really an overall tradesman, but a tradesman in that one particular little sphere.

You spoke of certain features associated with the reluctance of certain boys that you interviewed to enter an apprenticeship training course. You mentioned their disinclination to attend study courses, and so on. Were any other such features mentioned to you apart from that disinclination to attend study courses as reasons why they did not want to embark upon an apprenticeship?—What emerges from different people that I have interviewed—young people with their mothers and fathers—is this: Nowadays there are a number of jobs for juniors where they can get fairly high rates of pay—higher than an apprentice gets—and the feeling is this: 'I do not want to serve an apprenticeship. I can get these higher rates of pay, it gives me a little bit of mechanical background and I can be a process worker on a high rate of pay and later on, if I get into an engineering shop, it does not take very long to pick up the use of a milling machine or drilling, and so forth, and after a period of time I can get almost the same money as a tradesman; so, why serve an apprenticeship?'

Of those who do embark on an apprenticeship course within your establishment do you find that there is any particular preference for any particular trades, or does it depend upon the lad's natural inclination?—It finishes up, I think, with their inclination, but I think that their inclination is guided by their aptitude in any partcular field. Some boys find that they like fitting and they are interested in it and adaptable to it and do it quite well. They therefore feel that that is their field and they prefer to confine the latter part of their training and their future to that field. Others like turning and will stick to that and are not much good as fitters. We train them and some turn out fairly well and some are really good and some are all-rounders—but that is the exception rather than the rule. A number of apprentices have come out and gone on to be foremen, supervisors, jig and tool draughtsmen, design engineers, and some have gone further, but they have been the better boys.

You stated that you are requiring a higher standard from boys seeking apprenticeships today than previously?—No, we would like to maintain the standards we had previously. We have had to reduce our standards.

There is quite a range of machines in the machine shop and the apprentices move progressively from one type to another, so that they would get experience on slotting, broaching, milling—horizontal and vertical—turning, grinding and gear cutting?—Our programme is to move them progressively through the range of machines to give them a wide training, yes.

They would normally become quite good tradesmen, would they?—That is right.

After these boys complete their apprenticeship, do the majority of them leave you, or stay with you?—Worse luck, yes, because both our machine superintendent and our assembly superintendent have reported that they think it is much better to retain our apprentices rather than try to get labour from outside, because they feel that we can get better results from our apprentices that have just completed their time.

And they would have no difficulty in obtaining work at their trade in other establishments?—No. We find it very difficult to hold them. We have to immediately pay them a little over the award the day they come out of their time, in order to retain their services.

What would you say would be the position so far as welder 1st class or special?—I would say an apprenticeship would be required.'

There are set out further extracts relating to other aspects of cross-examination:

'Have any of your fitters engaged today had experience in machining as well as fitting before they came to your establishment?—In many cases, yes.

If you turn to page 29, employees with not less than three months experience in the metal trades industry, you say: "These employees are engaged in general labouring duties around the works. Their duties involve removal of metal turnings and swarf from under and around the machines, sweeping and cleaning factory floors, assisting turners, machinists and fitters to move and lift heavy parts, moving work-in-progress to and from the Inspection Department and machines, unloading and loading trucks, cleaning parts, etc." On page 30 you say: "There has been little change in this work except that workshop conditions are better and more and better equipment is provided for material handling." What type of equipment is provided for material handling?—We have little bin trucks. Materials are put into containers that are about 18 inches square and about 20 inches high. They are very easily picked up on a little truck with two wheels that runs around, you pull the handle down and you have them mobile, and it is very quick and easy to move.

Is this a hand truck or motor?—Hand.

Any other equipment?—Specialised types of trucks on four wheels where parts can be loaded on them and it is just a matter of pulling them around, again by hand, to whatever location they may be required.

Did they exist in 1952?—Very little of it in that time.

In connection with that classification 291—that is, an employee with not less than three months experience—do you ever use classification 292, or do you always treat them as having three months experience when they start?—We always treat them as having had three months experience.

In the modern context of 1967 is the fitter a more valuable employee, or less, or just the same?—I would say that naturally every man you employ is of value to you, but so far as his work value is concerned, I would say that it certainly is no better than previously, if anything I think his position has slipped a little.

We have heard from other witnesses about first class machinists who become such, or at least are alleged to become such, by first of all being third class and then second class machinists and gradually acquiring the necessary skill to take on first class machining work, perhaps on an individual machine. Is this the position at your factory?—Yes. I will not say we start off at third class machinists. That is more process work type of thing. We start off with second class machinists and after a period of time if the man has any aptitude we put him on a better class machine and after a little training he becomes a first class machinist.

I gather you have about 14 tradesmen. How many leading hands have you got?—Probably about four.

Others may be paid as leading hands without being classified as such?—No. We cannot classify half of our men as leading hands and the other half as just normal employees. As you know, there are so many gradings in employees that they do not all warrant the same merit money.'

Mr I. A. Smith a graduate in engineering within the University of Tasmania and who is the General Manager of Luke Muras Limited, a company engaged in the fabrication of structural steel for buildings, bridges and other structures, added to the weight of other employer evidence given as to improvements in

methods, greater supervision, reduction in exercise of skill and simplification of work. He stated that apart from the improvements brought about by the reorganisation of the work flow, other improvements have resulted in the installation of modern plant and equipment. He then proceeded to give the following examples:

'Column Assembly Machine—installed at an approximate cost of $20,000 is used for the assembly of columns as used in multi-storey buildings from steel plate. The machine is an hydraulic press which clamps plates together prior to welding. This clamping was previously done by a Marker Off using clamps, wedges and other manual means.

Automatic Welding Machines—two machines installed at a cost of $4,000 each enable submerged arc type welding to be done on long weld runs in place of hand welding. Conversion from hand to automatic welding can be achieved in about eight hours of instruction.

CO2 Welding Machines—four machines installed at a cost of $2,000 each are used in place of hand welding where large volumes of weld metal are required. These machines obviate the need to deslag the weld as was the case in hand welding. A welder can be trained to operate these machines in about four to eight hours.

Column End Facing Machine—purchased in 1959 at a cost of $20,000 is operated by an ironworker classified by the Company as a Machinist, 1st Class (Classification No. 54). It machines the abutting faces of columns and other structural members to fine tolerances to ensure uniform load bearing on the column. This work was previously done on a milling machine which was slower and could not produce such fine tolerances. The same skills are used in operating the newer machine as were used on the milling machine.

Straightening Presses—two hydraulic presses installed at a cost of $10,000 each are operated by boilermakers to straighten material which may be warped or distorted by welding. This work was previously done on a vertical press which was considerably more difficult to operate from the materials handling point of view.

Plate Stripping Machines—two multi-head oxy cutting machines installed in 1960 at a cost of $8,000 each have replaced hand torches and single head oxy cutting machines as the means of stripping plate. The boilermakers who operate these machines are each assisted by an ironworker.

Overhead Cranes—four new installations within the last seven years have cost a total of $100,000. They have considerably facilitated the handling of material within the works.

Mobile Crane—this equipment was purchased second hand eighteen months ago for $4,000 and is used to facilitate materials handling.

Electrical Switchgear—the introduction of extra machinery in the plant meant that the electrical switchgear was inadequate to cope with the demands made upon it. Three years ago it was necessary to install new switchgear at a cost of $40,000.

The capital invested in the Company has increased from $1,373,000 in 1959 to just under $3,000,000 at the end of 1966.'

With particular reference to welding developments, Mr Smith said:

'In the last ten years considerable improvement has been made in welding electrodes, and the modern electrode is far easier to run, faster, and easier to de-slag. Increasing use is likely to be made of the long (3 ft) electrode held in a stand and self running, requiring an operator to start and finish the run only. In discussions with the Union it has been agreed that one operator can work two of these electrodes, although it is possible in certain circumstances for one operator to manage four as is done in Japanese shipyards. The skill required in the actual operation of these is negligible once the power settings have been determined.'

Also in connection with welding, Mr Robinson directed the attention of Mr Smith to evidence which had been given by Mr Lawless, a teacher in welding at Sydney Technical College, who had been called by Mr Scott representing the Boilermakers' Union. Upon being asked whether he had any general comment to make concerning this evidence Mr Smith replied:

'In a general way. I thought it was obvious that he had not worked in industry; I think his remarks applied entirely to the Technical College. There were certain statements he made about things required of welders in the way of selection of electrodes, pre-heating, stress relieving, metallurgical problems which are quite wrong in industry.

In a general way I considered it was tending to usurp the functions of the metallurgist. With modern welding it is the metallurgist who is developing all these new procedures. Highly trained metallurgists are coping with the problem and when it gets to industry the problems are already solved and the actual operator has only to run the rod or the wire in accordance with instructions.'

Cross-examined by Mr Scott, Mr Smith gave the following evidence:

'THE WITNESS: I know very little about anything apart from structural steel work.

MR SCOTT: Very little. What did you tell Mr Robinson in regard to Mr Lawless's statement? —I am thinking of his in relation to, say, a place like ours.

Purely and simply in regard to the structural steel?—Yes.

You realise that the Metal Trades Award covers more than structural steel?—Yes—two hundred and something——

You realise that?—Yes.

Are you an expert on welding?—I do not know the definition of an expert but I would not set myself up as one, no.'

One further aspect of the evidence of Mr Smith calls for particular reference. He stated there had been a marked decrease in the use of structural steel in the building industry and in particular that part of the industry concerned with the erection of multi-storey buildings. In explanation of this development he went on to say that many of the multi-storey buildings now being erected in Sydney use concrete to a far greater extent than was previously the case. Mr Smith deposed that the development has resulted in a loss of trade which the company has endeavoured to offset by obtaining export markets but which nevertheless has resulted in a decline in the workforce, the figures for the metal trades being in the vicinity of 225 for the period 1960-66 and 157 at the present time. Mr Smith's evidence in chief on this point concluded with the following statement: '. . . the export trade as far as steel fabrication is concerned cannot be considered a long term trading factor and we must seek the majority of our work on the local market. Locally, the outlook is not good and we can foresee little improvement in the immediate future.'

Mr E. A. Pye, Works Metallurgist employed by T-S Malleable Pty Limited gave evidence which was of particular application to foundry work or operation. After describing in detail various features he made the following statement under the heading, general comment.

'It will be noted from the above history that the company has introduced new and modern machinery during the years to enable a higher productivity rate so that the company could compete on the market, especially from overseas imports. The overall effect on the work of foundry employees with the introduction of modern equipment is to make the work less arduous and easier to perform. Generally speaking, the newer equipment has meant that less skill is now exercised by the employees, because the equipment itself has been designed to remove much of the previous discretion and decisions required of the employees.

Over the past ten years, the company has established two new foundries at St Peter's and Seven Hills. These foundries have taken over a high proportion of the work formerly carried out at Alexandria. There has been a gradual phasing out of operations in the older plant as demand increases and new capital equipment is installed. Some overlapping of operations naturally remains and in general terms, it may be said that the work of the various operations still carried out at Alexandria is basically the same as in 1952 but the conditions under which the work is performed have, wherever possible, been improved. Thus, the lighting has been improved, fork lifts have reduced considerably the manhandling which was formerly involved, pneumatic tools have been introduced, new processes for shearing and pressure grinding have reduced the muscular activity required in such operations, quality, supervision and instruction has been increased. In the case of the plate and machine moulder, the introduction of pneumatic machines and single-sided moulds at Alexandria has led to a definable reduction in skill and manual dexterity requirements. In summary, therefore, it can be said that where the operations are still carried out at Alexandria, they are either basically the same or there are less skilled demands on the employee. The conditions under which work is now performed have improved and there is a marked reduction in the heavy lifting and man-handling which was formerly required.'

There is set out in summarised form the following evidence given by Mr Pye in the course of cross-examination:

1. The company does not employ jobbing moulders.
2. Machine moulders work to an agreed darg which varies from job to job. At St Peters it is a fixed darg or tally on the single side machines of 500 moulds a day and on the double side plate 150 a day.
3. Lifting 60 lb of sand and box say every 50 seconds is certainly a manual effort but he would not agree that it is considerable.
4. The general run of work would be too heavy for one man to handle.
5. Whether an employee becomes more valuable by reason of the fact that he produces more depends upon what is meant by valuable:

   'I think if you take this in relation to skill I would not agree at all; I think he has become less valuable because we have put in capital equipment, new machinery, which has made his job I think easier and therefore less skilful. The technical side now do the planning of patterns etc. and he does not have to do any patching. He is less skilful. If you mean valuable in terms of the fact he is producing more one cannot deny that more is being produced off that machine with that man there. We have spent a lot more money on capital equipment to allow him to do this.'
6. Life of a furnace depends on the efficiency of ramming when it is down for repair.
7. If furnacemen do not erect the furnace properly damage could result which would cause the life of the furnace to be much less.
8. 'We have spent money to get more production and quality. There is a large amount of this money in quality only. It does not give us any more production.'

Mr H. E. Williams, Works Superintendent, employed by Melesco Manufacturing Co. Pty Limited, a company which specialises in the fabrication of low and high pressure carbon and alloy steel superheaters and pipe work for power stations, gave evidence which was of particular relevance to the work of boilermakers and welders. Mr Williams himself a first class welder gave details of his qualifications and experience and challenged the soundness of the evidence of Mr Lawless in so far as it was directed to employees other than specialists or welding supervisors. 'I would say,' he said, 'Mr Lawless' statement concerns only the specialised welder and the welding supervisor.'

In connection with the 'development of activities and work' Mr Williams said:

'Since 1954, the company has progressively obtained new items of equipment in order that it could meet the ever increasing production requirements and the need to operate efficiently and economically to meet such requirements.

Since 1955, the company has expended approximately $382,500 on plant and equipment. It is true that much of such plant and equipment has been necessary to meet production requirements, but it has also meant that the work generally has been made easier to handle and skill has either been reduced or kept constant.

For example, changes in welding work have been the introduction of automatic welding machines and processes, turnover jigs and rotators. The effect has been to take much of the skill from the welder by his use of CO_2 machines and rotators or welding positioners. As far as the work of boilermakers is concerned, new machines such as presses and bending machines make the work easier to handle.

Initially, the company was concerned with the fabrication of superheaters, but the activities were expanded to include high and low pressure power station pipe work in 1956, and, recently, header manufacture.

None of the welders or boilermakers are required to possess pressure welding certificates as I have the necessary qualifications to cover pressure work. In any case, the practical requirements to obtain this certificate from the Department of Labour and Industry have not

altered for about seventeen years. Generally, it takes about one week to train an average welder to do pressure work, but he would not be trained in all welding positions until he has had experience in the position he was first trained in.

Raw materials in the form of carbon and alloy tubes and pipes are obtained from overseas and the company fabricates such materials into completed superheaters and pipe work.

In the fabrication process there are a number of different classes of employee concerned including professional engineers, draughtsmen, metallurgists, production office staff, superintendents and foremen, boilermakers, welders, fitters and various other operatives in the semi-skilled occupations such as crane drivers, tradesmen's assistants and storemen.

Since about 1956 the work performed by the various classes of employee under Part 1 of the Metal Trades Award, particularly tradesmen, has been materially affected by the use of draughtsmen and production office staff. The practice of the company is to allocate work to an employee depending on his particular ability. The planning of methods and processes by the production office and the detailed functional drawings prepared by the drawing office from the main assembly drawing enable employees to specialise on work in accordance with their varying degrees of skill.'

In cross examination Mr Williams agreed that by reason of modern methods, 'production-wise' the welder had become a more valuable employee.

SUBMISSIONS FOR UNIONS

Mr Hawke

Mr Hawke made a relatively short submission on behalf of all unions.

After further explanation of the way in which the claims had been formulated he proceeded to state that work performed in the community having become more valuable the reward therefor should be increased. His submission continued: 'We say that as a matter of definition it is impossible to talk about work value without looking at the value of the work—without looking at the output associated with that work through time would be to engage in a meaningless exercise.' He proceeded:

'I submit that the employers, under this award, through time have been given an advantage by default. There has been the equivalent of a series of judgments saying that the value of the work, in terms of the output with which it is associated, has declined when, in fact, the figures reveal that the opposite is the truth. We submit that when you look at it in this way, in association with the inspections which the Commission has been privileged to conduct, the Commission will see a meshing of these submissions with the facts of your own eyes and that value of the work performed in this industry with which you are concerned at this moment has increased. It has been associated with an increase in the output of goods and services and it has happened in a way which would have demanded, as a matter of logic and of right, if you had given your decision in 1947 instead of 1967, the rates which we now claim.'

Mr Hawke made reference to over-award payments. He submitted that in a case of this type the Commission should 'utilise information relating to the level of over-award payments, because what is being paid—as revealed by over-award payments—is the most direct measure you are going to have available to you of what is the value of the work being performed.'

When closing his submissions, Mr Hawke was asked from the Bench whether, following an award fixation, over-award payments would continue. He replied:

'It would seem to me if you are in fact trying to ascertain what the reward should be in terms of the value of the work, if I may say without appearing to be disrespectful, then you have an obligation to fix the rate which you think is the rate. While you may have some apprehension about what may happen in the future, you as the Commission constituted perhaps differently may be called upon to deal with situations that then arise. It is at that point of time when you would have to come to the decision which you thought was appropriate in terms of the powers and obligations imposed upon you.'

Electrical Trades Union

Mr McBride

Mr McBride initially reviewed in detail the evidence and inspections in so far as they related to electrical tradesmen and at a later stage dealt with process workers.

He criticised the Commonwealth's approach to job evaluation but stated that he was not opposed in principle to its proposal for the creation of a 'special electrical tradesman' classification. He contended, however, that there was not enough information to warrant insertion of the 'electrical assembler' classification.

Mr McBride while stating it was not the contention of his union that electrical fitters in each of their occupations exercise the full range of skill, emphasised the importance of the work, its complexity and responsibility. He submitted that the evidence of Mr Dolan had not been broken down.

Turning to the evidence called on behalf of the private employers, Mr McBride argued that even if it were true it would not provide a sound answer to the union's claims. He contended however that the evidence was not only confined to a very small range of the electrical fitters work but was adduced from witnesses two of whom were not qualified to deal with electrical work, while the one who was qualified in fact supported the union's case. He concluded his submissions on electrical tradesmen in manner following:

'We hope by saying this that we have shown you a fair range of the electrical fitters work; some of the plants have been selected by the Commission; we showed you three technical colleges where electrical fitters are trained and we called the general secretary of the union whose evidence was virtually unchallenged. The employers looked at two plants but did not even go through the whole of the plants. At EMAIL they showed one electrical fitter where 65 were employed. At AEI they showed three in one section when there are 80 odd employed in the whole establishment.

They called three witnesses two of whom are not electrically qualified and who dealt with electrical fitters in an incidental way; they called one witness who we describe as their principal witness and had we called him ourselves we would have been very happy with his performance. But in any case he spoke about 40 of the 80 electrical fitters employed and his evidence was more directed as to what happened between 1952 and now rather than what is happening now.

On all the employers case, inspections and evidence we say they have been unable to weaken our case in any way and in view of the case we have presented and the inability of the employers to weaken it we do say the claims should be granted.'

Sheet Metal Workers Union

Mr Heffernan

Mr Heffernan contended that there was no evidence warranting alteration of the present relationship between various tradesmen. He therefore submitted that any alteration in the long standing relationship between tradsmen would be unjustified. He then proceeded to deal with sheetmetal workers, tendered evidence of the syllabus for apprentices to that trade and pointed out that the apprenticeship is of the same duration as for other trades. He submitted duty statements and emphasised intricacies of the work particularly in relation to stainless steel.

Turning to the classification of process worker, Mr Heffernan submitted that the role of this employee is vastly different to what it was when the classification was first inserted into the award. Whereas in 1929 the general impression of process work was that it could be performed by anyone without previous experience, now the position has changed. He said:

'Modern mass production methods are vastly different in a number of ways. The machinery that is used is more complicated and in many cases there is a need for intense concentration on the part of the process worker not only because he has to perform several functions

instead of one but also because of the high rate of production. Another new development is that the process workers in the metal industry are required to work as a team and not as individuals and as a consequence of this they are required to become more versatile, they have to learn to perform many tasks or functions instead of one.

They are often required to inspect and examine the commodities they produce and this is a requirement which is in fact a form of participation in quality control and imposes additional responsibility and stress on workers involved in the mass production of the various articles produced by process workers. There has also been a marked change in the type and variety of tools used by process workers. They now use hand tools not listed in the present definition and in many cases hand tools powered by either air or electricity. In some factories process workers are required to use equipment for record keeping and inspection purposes. Generally speaking as the result of the changes that have taken place in many sections of the metal industry process workers are no longer unskilled workers, they are in fact semi-skilled and play an important part in the production of commodities for the home and overseas markets.'

In support of his submissions Mr Heffernan made detailed references to the inspections and directed attention to features material to process work. Dealing in particular with canister factories he said:

'These factories have very high productivity and complicated machinery. Briefly the body-making machine in the canister industry rolls a flat sheet into the form of a can, then seams the form body; the gas-heating system pre-heats the can which passes through solder flux, then through molten solder, then through another section of the machine which wipes off excess solder. There are other operations on the machine but on this end the operator must watch at least seven functions to be fully in charge of the equipment. P. 3457 shows that on inspection of the body-making machine, Mr Haywood, company manager, said operators were responsible for (1) continuity of production; (2) certain quality features such as formation of the can and to ensure there were no scratches either inside or outside. Thus they are not simply feeding the machine, carrying out an automatic process, but must ensure proper continuity of production and must exercise some control over the quality of the can; and, recalling the rate of production, it is understandable that the concentration required is considerable.'

Dealing with another description of factory work Mr Heffernan said:

'During the inspection at Mullers we saw evidence of the work of process workers. Mr Page took us through the factory and showed us every one of the jobs he had carried out during his period of employment. He said that he carried out assembly work requiring the use of hand tools and power driven tools in addition to assembling sheet metal parts and he cut sheets of foam rubber and fibreglass to size and also assembled electrical switch boxes which is a fair variety of work. In addition to that he described a number of other jobs. Amongst these he described an operation which was part of the assembly of an air-conditioning unit. This is seen clearly with reference to photo No. 144. It is a section showing the early part of the assembly of one of these units. In photograph No. 145 you will see another job process workers do after the initial assembly; they cut fibreglass insulation sections and glue them into position. They cut with a knife two holes in the fibreglass end to allow copper tubing to project beyond the end of the cabinet.

In addition to this Mr Page demonstrated how he attached a fan deck with imposed electric motor and attached rotors to the spindles of the electric motor by grub screws. On page 3808 Mr Commissioner Winter asked him a series of questions. Mr Page said process workers were interchangeable with one another, they did every or any job in the department. When the Commissioner invited representatives of the management to correct this statement if they felt it necessary it is significant that the representatives of the company did not disagree with Mr Page's description of the interchangeability of the process workers.'

Later he continued:

'Mr Page described the tools that he had used during his employment as a process worker at Mullers. He referred to the following tools: a rubber mallet, sizing punch, pinning pliers, wire brush, electric gun, air gun, screwdrivers, steel hammer, set spanners, ring spanners, electric drill, knife, wire cutters, wire strippers, rule, gluing brush, marking chalk and power saw.'

Concluding his review of what he described as the main evidence on process workers, Mr Heffernan said:

'We want to indicate at this stage it is quite significant there has not been rebuttal evidence from any of the employers from any of factories where we inspected members of this organisation at their work. None of the statements that our members made during the inspections have been contradicted per medium of rebuttal evidence, and in particular from the can-making

industry there has not been one witness called by the employers which indicates to us anyhow that the statements made and the evidence obtained as a result of the inspections have not been challenged.'

Mr Heffernan, dealing with the classification of 'duster' tendered the 1964 report of the Workers Compensation Silicosis Committee of New South Wales and in connection therewith said:

'The significance of the supplementary exhibit is that it indicates that there is more in the work of dusting than the award classification or the inspection may have shown. On page 13 of that report, which is the report of the Silicosis Committee to the Minister, or to the Minister for Labour at the time, it shows on the bottom of the page the work of a duster, duster's assistant, gripper, gripper/sprayer, millhand and mixer, all people employed in the enamelling industry, who are exposed to the dangers of silicosis.'

Mr Heffernan stated that in addition to the danger of silicosis, there is a lead content in the material used by dusters which creates a risk of lead poisoning. He submitted that the relativity between a duster and a tradesman was reasonable and should be continued.

Before dealing specifically with other classifications, Mr Heffernan referred to the evidence given by employer witnesses concerning simplification of work and ways and means of its achievement. He argued that this development, to the extent which it has occurred has resulted in more effective use of the employee's skill and has enabled greater productivity. He then proceeded to illustrate his point by references to evidence and inspections.

Mr Heffernan dealt with press operators, guillotine operators, electroplaters, first class. He stressed evidence of over-award payment which he said indicated the real value of the employees to their employer. He stated that the progressive use of stainless steel and aluminium has brought about great changes into sections of the sheet metal industry where those materials are used and which has meant that the employees concerned have been required to learn new techniques. Finally Mr Heffernan dealt with welding in so far as it affects sheet metal workers. He stated that the availability of modern machines had eliminated grinding and in this way had made it possible for an employee to devote more time to actual welding. He said further: '. . . in recent years the new welding equipment certainly has extended the scope of welders working in the sheet metal industry. The new machines are not only more versatile but they are also more complicated, requiring many more adjustments than was previously the case. A better quality article is produced and the rate of production measured in welding time has been increased. To make effective use of the new machines the welders have to exercise judgment to an even greater extent than they had before, and they can only do this effectively by applying their knowledge of the characteristics of metals, including metals which had not been welded prior to the introduction of the new machinery.'

Ironworkers Association

Mr Heagney

Mr Heagney tendered a written address which he read to the Commission and which he supplemented with oral submissions.

He sought to establish that the work of the process worker has never been looked at on a work value basis and for this purpose traced the award history from 1929 onwards. 'From the judgments and decisions that have been quoted,' he said, 'it seems that the main criteria to defining as to whether or not particular work fell into the classification of process worker was:

(a) If their judgment in the exercise of their duty could affect the quality and condition of the product then this would take them out of the processing workers field,

(b) some consideration apparently was given to the length of time taken to perform or learn a task.

'Generally in the history of the classification "process worker" one cannot find where the work was spelled out in a duty statement as compared with what may constitute the work of a process worker.' Later he went on to say:

'In relation to this classification I would say the classification of process worker was introduced right at the height of the depression and this affected the rate that was introduced at the time, as far as Mr Justice Beeby was concerned. The classification was introduced into only a limited area of the award, initially.

The work then carried out or then performed by the classification, when it was introduced, was not looked at in 1930, nor has it been looked at subsequently, to assess a proper marginal rate based on the value of the classification to the community and to the work performed and to the value of the classification to the employer. The work the classification was introduced to carry out was limited in scope and mainly based on the work that would be performed in the engineering industry, on single function and semi and automatic type machines.

The original definition was altered and when this was done it extended quite widely the scope of work that could be performed by the classification. Eventually the classification was extended into all divisions of the award and became almost a common usage classification for employers or parties to the Metal Trades Award. Decisions on the interpretation aspects in the early days tended to the view that quality was not the responsibility of the process worker but rather it was the speed by which the product was manufactured.

We submit the evidence shows that a process worker now is required to go through a period of training to be able to carry out the several functions generally required of him.

Now we find process workers are interchangeable; we find that the process worker has a responsibility for quality. We say also that the introduction of faster machines and higher feeds and speeds call on the process worker to have greater concentration, greater dexterity and greater skill; and as far as the introduction of production planning by employers generally is concerned, it also increases the tempo at which the process worker works, and has achieved greater output for the employers.

Also we submit that the evidence shows that today the assembly processes carried on by the process worker are far wider than when the classification was introduced, and also that today the operators operate much more valuable and more complex equipment. We feel, by the very nature of this inquiry, that this is the first time the Commission has been able to get a proper understanding of the work performed by this classification.

Also we submit the Commission may pay very serious attention to this classification as it is one of the most used classifications in the award; indeed you could say that possibly the classification is virtually the work force of all the classifications contained in the award.

For the reasons I have outlined, I would submit some adjustment should be made and that the claim which has been made on behalf of the process workers should be granted'.

Having completed his submission on process work Mr Heagney proceeded to other classifications. He referred the Commission to decisions of Mr Conciliation Commissioner Galvin[1] (as he then was) and Mr Commissioner Winter[2] and directed attention to a passage in the first mentioned judgment wherein it was said:

'The rigger at his best must have a natural aptitude for the work, needs a lengthy period of training in which to acquire skill in dangerous and difficult situations, and must possess personal qualities of appreciable order'.

Later in response to a request from the Bench he furnished particulars of his claim for the classification stating that the wage sought would be the same as that claimed for a fitter.

Mr Heagney tendered a publication issued by the Department of Labour and Industry, New South Wales, entitled 'A Guide for Riggers' and in particular directed attention to the foreword which he described as a very lucid statement of the attitude of the New South Wales Government and which read:

'NOTHING in this book shall be construed to waive or modify any obligation imposed pursuant to the Scaffolding and Lifts Act, 1912, as amended, or any regulation thereunder.

(1) 73 C.A.R. 324 (2) 114 C.A.R. 39

The book has been prepared to assist persons in industry to attain essential knowledge of rigging practice and procedure, but it is not possible to include in a single volume of such unpretentious size anything beyond the most basic elements of an exceedingly diverse trade or craft.

It is not intended that this book should in any way replace or reduce the need for adequate practical training of the rigger, but it is hoped that it may add some of the knowledge that has been acquired (often painfully) by others, to that which he himself can only obtain through lengthy experience.

Like the engineer with whom he so constantly associates, the rigger must come to an early appreciation of the fact that his store of knowledge is always incomplete and always inadequate.

He must continually seek information, advice and guidance from wherever it may lie, and from whomsoever may possess it.

An endeavour has been made to convey as much information as possible by means of drawings and sketches, but it has not been found practicable to make them to scale.

Acknowledgment is made to the N.S.W. Department of Railways for assistance in preparing practically the whole of these drawings and sketches. Also to the Standards Association of Australia for permission to use extracts from various standard codes.

Included in this publication are relevant extracts from the Act and Regulations, so that it should not be generally necessary for riggers to purchase these works.

Part XI of the Regulations which contains technical engineering design data is not suitable for inclusion, but must be referred to by persons designing, constructing or using cranes, hoists, lifts, scaffolding, plant or gear, or carrying out building demolition, excavations or compressed air works'.

After discussion of various relevant statutory provisions Mr Heagney submitted that the classification of rigger was improperly placed in the relevant award structure 'and should move up to the higher level of skilled classifications in the Metal Trades Award'. He then turned to the classification of dogman and/or crane chaser and after making reference to evidence, inspections, written statements and statutory provisions went on to submit that 'the work carried out by this classification calls for a high degree of responsibility to carry out his work safely and to avoid injury to others. Skill in the slinging and lifting of his loads, responsibility for the condition of slings and lifting gear, high physical demand, high mental demand and quite an amount of experience and training, and with the introduction of larger cranes with greater lifting capacity, heavy and more complex lifting requiring the use of a wider range of lifting gear'.

It was contended that this classification was also 'wrongly placed' and that for it there should be awarded a wage equivalent to that claimed for a machinist, 2nd class.

Mr Heagney next dealt with furnacemen. He traversed in detail the evidence of Mr Richard Hanson already discussed in this decision and also directed attention to details of inspection of the work at the foundries of T.S. Malleable Pty Limited, M. B. John and Hattersley and Vickers Ruwolt. He discussed fully the evidence of Mr Pye to which reference was made in the review of the employers' case and went on to make the following submission:

'The work of furnacemen electric or indeed any other furnaceman classification contained in the awards have not been previously assessed by this Commission, and we submit that the work described warrants a higher rate due to responsibility, care, and all the other associated features associated with the job and also the change in furnace methods leading to greater output and also larger furnaces'.

Mr Heagney addressed upon the classification of machinist, second class, and machinist, third class.

'If you look at the second class machinist', he said, 'and the third class machinist you will find that the second class machinist is an adult employee who is not engaged as a tradesman and who is required to do setting up, and then the

operating of the same type of machines as set out in the first class machinist classification. The third class machinist is not required to set up but to operate designated machines within the classification; in addition he has to operate the same machines shown for the machinist, first class'.

In the consideration of the work of non-tradesmen machinists Mr Heagney emphasised that it was important to pay close attention to the definitions in the award. He claimed that Borg Warners could not be taken as typical, stating, in effect, that employees classified by that company as third class machinists could properly fall into the definition of process worker. He went on to say:

'If you trace his history, Mr Amadee spent a lifetime in the automotive industry, and this is the highly developed American/English technical machine processing system. I do not feel the Commission can get much use really from the evidence he gave on the second and third class machinist in this field. They never fell into the categories on quite a number of occasions. It falls more towards the evidence that was given by Mr Selinger, towards the process work in some areas. But I submit they must look at the types of machines contained in the classifications. Firstly, they have to look at the machines set out in the first class machinist's definition, such as lathes, boring machines, milling machines, planing machines, shaping machines, slotting machines, precision grinding machines and drilling machines where the operator uses the same precision tools as fitters or turners'.

Mr Heagney stated that eliminating Borg Warners the number of machinists, third class, seen at inspections was insignificant. He said that they are found in 'ones and twos' in smaller factories, it being the position that 'larger shops are tending towards automatic machines, banks of machines and employment of process workers.' He made the following submissions:

'If we look at the work we see being carried out at Goetz's at Ballarat, and then McPhersons, you will see employees operating cold heading machines; Gordon Bros., Horscroft's, W. and T. Avery and the Melbourne and Metropolitan Tramway Board and the State Electricity Commission—here we saw machinists second and third class properly defined working machines which today have higher feeds and speeds than the more traditional type of machine which we saw at Borg Warner; and I think the Commission will have regard to this type of work in setting a rate for second and third class machinists; I submit you will not be lulled into accepting some of the evidence of Mr Ulbrick and Mr Amadee, and hearing what they as a firm, classify as a third or second class machinist, in making a comparison with the true third class machinists or the second class machinist of ten years ago employed by them. I think you must look at the work being performed by the machinist as being properly defined in the award.'

In connection with the classification 'Dresser and Grinder (when using portable machines)' Mr Heagney after making reference to inspections said:

'Here we find that the dresser and grinder has a responsibility for grinding manufactured castings to a degree that they will fit into the replacement part or socket of the earthmoving equipment on the job. We submit this is quite a feature today in the work of the dresser and grinder.'

After tendering the 1966 report of the Silicosis Committee (New South Wales), Mr Heagney directed attention to a reference to 'Metal Trades Dressers'. He also drew attention to references to foundry labourers, furnace bricklayers and moulders.

In connection with the classification of dresser and grinder he made the following submission:

'The work of this classification, as the evidence and inspections show, varies from foundry to foundry. The work at times requires the operator to work to fixed gauge tolerances, as at Bradford Kendall, Queensland; at times it only requires the dressing of a casting to a neat finish, as at T. S. Malleable, St Peters, and M. B. John and Hattersley, Ballarat; and at other times a perfect finish, as at McIlwraith Industries Pty Ltd.

We submit that the work does call for some skill and responsibility and that the margin now paid is too low.'

Gallagher J.]

Mr Heagney made submissions directed to job evaluation. He observed, *inter alia:*

'I would submit the techniques of job evaluation cannot be applied in a logical sense in the metal trades industry. The reason I make this submission is that when we look at the Metal Trades Award we cover a vast variety of types and styles of industry. We have the foundry industry, the structural steel industry, the engineering or manufacturing industry and if we go through all of the sections of the award we have many and varied types of activities covered by it.

Job evaluation and the techniques of job evaluation are generally found in collective bargaining societies. The areas where you find job evaluation used to any great extent is in the United States of America and West Germany. When you look at the contracts that are negotiated under job evaluation techniques you find always, and without exception, that there is industrial unionism existing within the areas where they are introduced.'

In connection with the proposal of the Commonwealth for the creation of a special classification of process workers, Mr Heagney said:

'I would submit if two classes of process worker are introduced we are going to create factory jealousies and quite an amount of difficulty for both management and union. The situation could be that today we have two people classified equally and occasionally interchanging and tomorrow we find one classification a little higher because she has something additional to do and no longer is there interchangeability but there is jealousy because this person has been promoted to a higher class. We most emphatically would oppose the classing of process workers.'

Finally Mr Heagney said:

'Just in conclusion, Your Honours and Mr Commissioner, in regard to the exhibits put in by the Metal Trades—or by Mr Robinson on Friday, the classifications covered in the private employers' evidence, the Metal Trades Employers' Association, the Metal Industries Association of Victoria, and also of South Australia, setting out somewhere in the vicinity of 80 classifications, I would submit that beyond the 26 classifications which I mentioned earlier this morning and possibly some others where there has been some more evidence given, it would be impossible for the Commission to separate, for example, the spray paint operator, because I feel that full evidence has not been given, because this again is a classification which is protected and has to adhere to rules laid down by State Acts and State Regulations, and these would have to be put to the Commission.

I do not think you have any evidence on mobile crane drivers whatsoever to assist you, nor do I indeed think you have evidence on forklift drivers.

The painter of iron work, using a spray—I am not aware of where this evidence came from. I have been unable to trace it other than from Mr Nuttall who agreed he paid his spray painter under the provisions of the sheet metal section.

So I submit quite seriously that you do not go very far beyond the limits of the 26 classifications contained in W22; and I would ask that the submissions I have made in support of my classifications be accepted.'

Amalgamated Engineering Union

Mr Horsburgh

Mr Horsburgh addressed in detail upon the classification of fitter, machinist, first class, machinist, second class, patternmaker and toolmaker.

Dealing first with the fitter he directed attention to demonstrations of work given at inspections, pointing out that at one establishment a fitter engaged in the dismantling of a machine remarked that 'it required a lot of pulling to pieces'; that at other establishments fitters were required to perform maintenance duties on a wide variety of machines; that at Cockatoo Dock it was stated by management that a tremendous amount of repair work is done on equipment from submarines and surface ships; that also at Cockatoo Dock 'a fitter explained and demonstrated his work while engaged on a complete overhaul of a self-rendering windless steam engine. According to management it would take the fitters one month to complete the overhaul of this steam engine, and most of the work was to close tolerances'; that 'at Standard Telephones and Cables it was stated the

duties of a fitter entailed maintenance and installation of machines, air compressors, boilers, water pumps, fabrication and welding pipelines for air, steam and water'; that at W. D. and H. O. Wills a fitter describing his work said, 'This caused a hollow in the cylinder. To overcome the trouble we had to completely dismantle the machine and take the cylinder out and get it reground again and brought back to parallel' and that at Cadburys 'work inspected involved that of fitters engaged on maintaining or servicing automatic wrapping machines and confectionery producing equipment, which included adjustments, renewals and repairs to most moving parts; maintenance of the pumps, pneumatic valves, cylinders and lines attached to plant or wrapping machines.'

Mr Horsburgh went on to say:

'To sum up, from inspections concerning what we were able to see of the work of a fitter, we submit that the fitter is generally a qualified tradesman having served an apprenticeship of five years at his trade, with the majority having received additional technical school training. He is engaged on maintentance and servicing of machines, plant and equipment over a wide range, as indicated during our inspections, and uses his trade knowledge and experience to keep the machines, plant and equipment, functioning correctly, with a minimum production loss through breakdown.

Fitters are also employed in building, assembling, erecting and installing new machines, plant and equipment in a very wide range of industry, in fact wherever machines are operating.

The trade of fitting requires a person trained to work from drawings and plans who can apply the manipulative skills of his trade and requires the use of a wide range of hand tools, and sound basic knowledge of mechanism and engineering principles to provide the background for the more manual aspects of this trade.

This combination of skills and a broad range of industrial knowledge gives the fitter a wide application in industry. For example fitters are expected to have the mobility to change from close tolerance bench work to situations involving large items of plant and equipment for the various types of maintenance required in general industry. Erection and installation work requires, in addition to the hand tool skills involving the use of saws, chisels, files and similar cutting tools and measuring tools, a knowledge of handling methods and ability to coordinate the various sub-unit assemblies into their correct arrangement. A fitter performing maintenance work needs to have a sound knowledge of machine movements and must be capable of tracing faults and solving any operational problems associated with plant and equipment on which he is working.

'A fitter is often required to do machine tool work in conjunction with his general fitting duties and to have a knowledge of welding, particularly if employed as a fitter/welder. Hydraulic and pneumatic control units are now being used more extensively than some years ago and a fitter must be capable of adjusting and servicing machines fitted with this type of control gear. The rapid advance of expensive and complex machines, plant and equipment over the last 15 years requires additional skills and accuracy by tradesmen fitters working on the installation, assembly, maintenance and service of these machines.'

Turning to machinists, first class, Mr Horsburgh referred to a number of inspections including one at Brisbane in respect of which he said:

'At English Electric in Brisbane the work of a first class machinist was inspected whilst he was engaged carrying out grinding operations on a rotor shaft. The first class machinist stated, "This is a rotor shaft for an electric motor. It is a precision ground part. It is tooled up to within a half a thou. or a thou. whichever is recorded on the drawing. This is a drawing of the whole of the shaft and the operations of the grind. Each dimension is tooled up to a thousandth of an inch with variations of half a thou. It is more a micro finish which is required." The job took four hours, to complete the grinding operation.'

Concerning another inspection it was stated:

'At Vickers Ruwolt, the Commissioner observed a first class machinist operating a Richards borer. The part being machined was for a mine winder being made for the Zinc Corporation. (Page 4550). The normal machining time was about 100 hours and the value of the job was estimated by management about $4,000 or $5,000. The machinist worked from drawings, set up his own work and decided the cutting tools he should use. Measurements were obtained from all types of micrometers, outside, inside, depth, and Vernier gauges. These measurements at times have a tolerance of only five thousandths of an inch on a diameter of 15 feet to 16 feet.'

Gallagher J.]

Mr Horsburgh proceeded:

'Summing up as a result of our inspections we submit the machinist first class is a tradesman who usually has served an apprenticeship and in the course of his work normally does his own setting up, works to close tolerances and can usually operate all the machines listed in the definition of machinist first class in the Metal Trades Award. His work is closely allied to the fitter for which trade he produces most of the machine components for assembly. In addition to the usual machines, the machinist first class is expected on many occasions to be able to adapt himself to the requirements for setting up and operating various types of special service machines such as centreless grinders, crankshaft grinders, honing, lapping and profiling machines.

The machinist tradesman must have the ability to plan work from blue prints and carry out the operations through the correct sequence of cutting and finishing on a variety of materials. The machinist tradesman often specialises as a tool setter and carries out the operations of setting fixtures and cutters for process work. On the more modern and expensive machines in operation today the machinist first class is called upon to work generally to closer tolerances with higher feeds and speeds with consequent higher production than say 15 years ago.'

Mr Horsburg's submission upon the classification of machinist, 2nd class, was brief. He pointed out that the examination of the classification during the inspections has been comparatively narrow and that in any event it had been covered by Mr Heagney. He referred to inspections at Westinghouse Brake and W. J. Goetz, stating that at the latter establishment the work of a second class machinist operating a No. 7 Ward capstan lathe had been observed; that the gauges used on this job included the micrometer, preset gauges and calipers; that the employee was using the micrometer as an adjustable gauge and that he was referring to a drawing for reference to size. He then continued:

'In post war years there has been a considerable development in the area of automatic machines which are often set up and operated by machinists second class. With the modern and more costly machines he is called upon to set up and operate them to closer tolerances than on the older types of machines and to work with higher feeds and speeds to produce components at a higher rate of production than some 15 years ago.

The examination of this classification of second class machinist was somewhat limited during the inspections in comparison with the inspection of other classifications but the union claims a general increase for this classification of second class machinist based on the 1947 relativity.'

Proceeding to the classification of patternmaker, Mr Horsburgh directed attention to three inspections where the work was demonstrated. When speaking of N. B. John, Ballarat, he stated the tools used by the patternmaker whether hand or power included the bandsaw, docking saw, rip saw, wood lathe, milling machines, buzzer, thicknesser, ordinary drill, disc sander and a bobbin sander. In connection with the heavy engineering company, Vickers Ruwolt he said:

'The patternmaker was making a pattern for an augur for a brick company and demonstrated how the parts fitted together. He had been working on this particular job for three months and he was using a variety of power tools. His personal hand tools were valued by him at $400. During this inspection the pattern store was visited and a very wide range of patterns was seen indicating the versatility required of a patternmaker tradesman.'

Mr Horsburgh concluded his submissions on the classification in manner following:

'Summing up the patternmaker, he is a tradesman who has served an apprenticeship, works from drawings and is usually the first tradesman who received the drawings from the draftsman when castings are required. The patternmaker when first confronted with a drawing must be able to visualise every part of the job, create a plan for shape to suit the moulder, engineer and draftsmen. Accurate views of the job are set out by him depending which view will be the greatest advantage in making the pattern. He must have a general knowledge of all machining practices. The allowances for machinists must be made in turn where necessary in accordance with the type of metal used in the casting. He must have a sound knowledge of moulding and foundry work. (a) properties of metal must be known with the allowances for contraction and stresses within the metal which might distort the final casting. (b) provision for runners, risers, heads and chills must be made in appropriate sections to allow for liquid shrinkage. (c) a general knowledge of sands must be understood for contraction and finish of the final casting. The patternmaker constructs the pattern in accordance with the number of castings off, size and most efficient way of moulding, that is whether solid boxed, legged, segmented, frame, strickled, made from wood, fibre glass, metal, plastic, or a combination of the lot.

Each individual part of the pattern is carved or machined and fitted together so as to arrive at an accurate and complete pattern. This incorporates the art and skill of using hand tools to a fine degree of accuracy. All pattern making hand tools are supplied by the patternmaker. In accordance with his work he is called upon to use all woodworking power machines such as wood lathes, thicknessers, sanders, saws, pattern millers besides on occasion mill lathes and millers to within fine limits.'

The last classification upon which Mr Horsburgh addressed was that of toolmaker. He referred to the complex tools seen on inspections, the high capital costs and the great skill involved in their manufacture. He emphasised the magnitude of productive capacity, stating by way of illustration that at Sovereign Appliances 'the Commission was advised that 50,000 pieces could be made from a finished die using a power press.' He went on to state:

'Toolmakers on this job do all their own machining, working from drawings; power machines used were surface grinder, centre lathe, drilling machine, shaping machine, milling machine, band saw and jig saw. The toolmaker also set up dies in the presses to try them out.'

Mr Horsburgh spoke of initiative. 'On inspection at Borg Warners,' he said, 'A question was asked about tool work, "Is it possible from time to time that a toolmaker tradesman may, during the course of his work, discover an idea which could lead to alteration of design which would be an advantage to the employer if he exercised that idea?" Mr Amadee, general manager, replied, "There I must say yes. Of course these people are toolmakers or tradesmen paid as toolmakers and they are bound to come up with ideas that will improve tools."'

After dealing with other inspections, Mr Horsburgh said:

'To sum up the toolmaker classification. The toolmaker is a highly qualified tradesman who has undergone an initial training in the basic skills of fitting and machining and who has then adapted these skills to the particular requirements of toolmaking. He is called upon to work from drawings and to do accurate precision work on a wide variety of press tools, moulds, jigs and fixtures used in the mass production of many components in a wide range of industries.

Apprentices who wish to become toolmakers are usually selected because they display evidence of having the aptitude and temperament for this exacting work. Toolmaking demands unusual patience on the part of the tradesman and ability to work to extremely close tolerances using power machine tools and hand tools similar to those used in fitting and machining.

The two main types of work performed by toolmakers are the manufacture and maintenance of metal cutting tools, gauges and/or templates, jigs and fixtures and the various forming tools such as cavity moulding dies, drop forging dies and press tools. The work entails the use of precision measuring equipment for controlling the accuracy and surface finish required for this class of work.

A toolmaker also requires a knowledge of materials, their reactions to the applications of drawing, bending, stamping and heat treatment processes. Toolmakers in the course of their work used specialised machines such as jig borers and duplicated type die sinking machines. With the rapid advances of manufacturing in Australia the toolmaker is a key classification in producing accurate tools, jigs, dies and fixtures so essential to this development.

In the past 15 years tools, jigs and fixtures manufactured in Australia have been improved in producing components of uniform standards and have greatly increased the production rates of the products. This has required more complex, complicated and accurate tooling from the toolmaker.'

Having covered specific classifications Mr Horsburgh made submissions which are summarised verbatim:

(1) 'One point used by the employers' witnesses was that the technological changes which have taken place since 1952 have in the main reduced the skill and responsibility required of their employees. While not denying that changes could have taken place, we submit that this fact is not of much assistance to the Commission in fixing appropriate

rates for the classifications we are dealing with in these submissions. This is because there is no knowing whether the rates fixed in 1952 were correct ones, for there was no work value assessment of any consequence at that time, or for that matter back to 1930.'

(2) 'It is our submission that the fixation in 1952 under valued the work, so we ask the Commission to set the true value on the work in this case by the granting of our claim, as we consider that it stresses the correct value of the work today.'

(3) 'Another point stressed by the employers' witnesses was that there is an increasing trend for tradesmen to be specialists in a particular machine or class of work.

We would make the following comments on this; the first is that what specialisation has taken place is to the advantage of the employer for it enables a tradesman to become more expert in a particular field, so what may be lost in the breadth of skill exercised is compensated for by the gain in depth.

The second comment is that although a tradesman may be specialising on a particular area of work, it has been brought out in questions that he covers a wide range of work in that area, according to the requirements of the particular employer. The tradesman is expected to adapt himself to the different requirements of the employers as a whole when he changes his employment, and the range of employers goes beyond the incidence clause of the Metal Trades Award.'

(4) 'A claim made by many employer witnesses was that the setting up of planning sections reduced what was required of employees by providing them with more detailed information as to their work. This development is an indication of the specialisation taking place in management, showing that specialisation is not something confined to tradesmen.

So far as tradesmen are concerned, this development enables a tradesman to spend more time exercising his trade skill, as he does not have to spend as much time as he did previously chasing information and improvising methods and equipment required.'

(5) 'Much has been made by the employers as to the supervision of tradesmen. It is the view of the AEU that in this field of supervision qualified tradesmen are still required to do their job satisfactorily. Many of those associated with supervision, such as foremen and leading hands, have much the same training and experience as the tradesmen they supervise.'

(6) 'With regard to the proposals as to the method to be adopted to establish a classification hierarchy, we are of the opinion that the Commonwealth has failed to think out the full implications of its application in practice.'

(7) 'It is our submission that there is no necessity for these two classifications, and that their inclusion in the award would only create additional problems for both the unions and the employers.'

Mr Horsburgn completed his address with the following statement:

'I now conclude this address with the general submission that the classifications I have dealt with are required by their training and experience to develop complex manual skills and knowledge of their trades which is of considerable value to the community particularly in this era of great industrial expansion and development in this country. The Amalgamated Engineering Union thinks this should be recognised in monetary terms by the Arbitration Commission granting our claim in full.'

Boilermakers Society

Mr Scott

Mr Scott after general observations upon the training of apprentices during which he made reference to the evidence of Mr Lawless and to technical college inspections proceeded to discuss the classification of boilermaker marker-off. He directed attention to specific inspections stating that at Cockatoo Dock, Mr Fraser was seen marking off the lay-out for the forced draught trunking intended for the supply of air to boilers on a frigate under construction and that in respect of completed work he had marked off funnels for the *Empress of Australia* and the *Stalwart*; the dam seals for the Snowy Mountains Authority, uptakes for ships and a condenser for A.N.I. Mr Scott reminded the Commission of a statement by Mr Fraser that he followed a number of jobs through to completion doing marking-off, cutting, welding, setting up fabrication and checking. In connection with the Babcock and Wilcox inspection, it was stated that the work of a boilermaker marker-off was explained by Mr Williams who demonstrated how drum ends were marked off and the allowances were calculated by the marker-off in the size of the material so as to provide for the stretching of the material during the pressing operation. Mr Scott continued:

'Mr Williams explained to the Commission that the marker-off had to calculate allowances which were not shown on the drawing for manholes (Page 3308), and in answer to a question by Mr Commissioner Winter on how he made these calculations for allowances, Mr Williams stated it was done by using trade experience.'

Mr Scott challenged the accuracy of employer evidence to the effect that employment of extra draughtsmen had taken the skill out of marking-off. 'Evidence has shown,' he said, 'that this is not the position because the marker-off is still required to use his judgment on making calculations and allowances and he knows by his practical experience when wrong measurements are given on the drawing and moves to make the necessary corrections during the course of his normal work.'

'I submit,' he continued, 'that this is the position throughout the metal trades industry and a great deal of trade knowledge, experience and acceptance of responsibility is expected of the boilermaker to re-check these drawings when he is carrying out his work as a boilermaker marker-off.'

Speaking of work performed by Mr J. Holroyd on No. 1 boiler Munmorah Power Station Mr Scott said:

'The Commission was informed that the tubes were of a mild steel construction and defects in them due to manufacturing, were being gouged out by using oxy-acetylene equipment. Whilst gouging, Mr Holroyd had to accurately determine whether the defect went into the inner surface of the tube, or was a sub-surface defect. He could tell the depth and extent of the defect by his practical experience and knowledge of the job and by closely observing the effect the flame process had on the molten metal, and whether as the metal was removed it revealed that there were slag inclusions.

He informed the Commission that slag inclusion appears in the metal as a small globular fragment and the oxide in the slag lights up to a brighter degree than the metal itself, this requires constant concentration to note the changes. Mr Holroyd explained to the Commission the dangers of flashbacks and backfires, and that a welder must be able to immediately correctly distinguish which is occurring and take quick and correct steps to safeguard equipment and personnel in the area.

The Commission was informed that a welder must know the maximum pressures and amount of acetylene that he can have in his hoses in its free state for safety, and he must be able to tell by looking at the welding flames, whether it is a carbonising, oxidising or neutral flame and know what type of flame to use for the different types of material that he is called upon to weld. He must also know the angle of the welding tip and the rod to the surface to be welded, it is very important for appearances and for depositing the correct amount of weld

metal into the weld preparation. Sometimes, because of the confined spaces that have to be worked in, it is impossible to achieve the proper angles of the weld tip and filler rod and it is only by the experience and trade knowledge of the welder that this problem can be overcome to carry out satisfactory, high pressure welding on boilers.

The welds on these boiler tubes must be normalised after completion, because the grain structure of the metal is increased in size due to the excessive heat. This normalising is done by applying heat with a gas heating torch to an area approximately twice the size of the thickness of the weld on each side of it to approximately 1,700° F. and held at this heat for two to three minutes. The tube is then wrapped in asbestos, allowing it to cool slowly, which allows the grain growth to diminish and return to its original structure.'

Turning to welding work, Mr Scott said:

'I draw Your Honours' attention to the inspections that Mr Commissioner Winter conducted on 5 July 1967 at Bernard Smith, Alexandria. (p. 3819)

The welders are required to work on low temperature steels, nickel, chromium, molybdenum and high tensile steels, using various applications such as semi-automatic, hand-welding and submerged arc. Some of these welds are carried out by the welders on work subject to be pre-heated to a temperature up to 300° C. which is maintained until the welding process is completed, subjecting the welder to severe and arduous working conditions.

The Commissioner inspected the work of Mr Carlaw, who was working on a nickel reactor. He had fitted a nickel feed ring and nozzle assembly onto the conical end of the reactor and was proceeding to weld these two parts together. The reactor was made of material 3/8" thick and the tubes or nozzles that were being welded to it were approximately 5/16" in diameter with 16-gauge walls. Mr Carlaw explained to the Commission the problems associated with welding two different thicknesses, where it was necessary to make sure that he had proper fusion of the two component parts and also to weld in such a sequence as to counteract distortion resulting from heat and metal movement during the actual process. The sequence of this particular job was arrived at by Mr Carlaw using his own particular knowledge and experience. He explained the peculiar running characteristics of the nickel electrode compared to ordinary mild steel electrodes. The nickel electrode causes more arc blow or a more mobile difficult to control arc and has a tendency to arc from side to side in similar positions to that which he was welding when inspected; also that a lower amperage had to be used, because if the rods became too hot, it affects the soundness of the metal and the electrode would collapse.

Mr Woods, works manager, informed the Commission that the maximum pressure withstood by vessels constructed at Bernard Smith's was 2,500 lbs per square inch.

In answer to a question from the Commission, the manager, Mr McCartney, stated that under various boiler codes, it was necesssary to be able to identify the welder who had performed the welding on the pressure vessels. I submit that the identifying of the welds and the welder doing the work places the responsibility of the proper welding procedures and the quality of the welds on to the welder.'

In connection with the classification of blacksmith Mr Scott said:

Mr Commissioner Winter observed the blacksmith, closely watching his furnace, and was informed that the furnace temperature at that time was approximately 900° centigrade. It was the trade skill and the experience of the blacksmith which was relied upon for the correct forging temperature before and during the forging operations. The Commission was informed that the blacksmith is supplied with a drawing, but he has to work out the size of the material out of which he would require to make a shackle. The Commission was further informed of some of the various jobs the blacksmith does and that he is required to make various tools to manufacture these jobs. Also any templates needed for measuring or as a guide to shaping the job, to checking the work, as he found necessary.'

On the training of apprentices Mr Scott referred to observations by Mr Cameron, head teacher of the metal trades section at Hobart Technical College who 'described to the Commission the wide variety of subjects taught to boilermaker apprentices including mathematics, which includes algebra, logarithms, technical drawing, the principles of job costing, welding theory and practice, oxy and gas cutting processes, calculations and formulas associated with the making of rivetted joints, boilers and pressure vessels and the physical properties of metals.'

After referring to the curriculum handed to the Commission by Mr Cameron, Mr Scott went on to say:

'Other State technical training authorities have developed similar curricula which, while differing on minor points, provide training for apprentices with the aim of producing a tradesman capable of carrying out all phases of a tradesman's work as required by the employers in the course of manufacture of a wide range of products for all sections of industry. These programmes are constantly under review by technical education authorities, and changes made necessary by new techniques or methods of production are being constantly added to as industry requires the additional work knowledge.'

The evidence of Mr Lawless, teacher of welding at Sydney Technical College, has already been reviewed and after discussing it in detail Mr Scott tendered a text book which he said was commonly used by boilermakers. In connection with this book he said:

'You will see this book covers a wide section of marking-off and the need for our members to fully understand how to develop particular jobs, and the requirements as called for by the employers are that our members must know how to develop each and every one of these particular jobs.'

After making reference to over-award payment which will be discussed separately, Mr Scott concluded:

'The existence of such over-award payments and the wide area in which they are paid demonstrates that the minimum wage levels set by the Commisison are far below the rates accepted in practice by the employers.

It is important to increase these minimum standards to protect the interests of those not receiving such over-award payments and to more correctly reflect the true value of the labour of the metal worker and tradesman in industry.

If the Commission proposes to increase margins then we submit that the granting of such increases should not alter the existing relativity of the tradesmen's classifications.

The evidence and submissions presented by the union confirms their claim that the value of a tradesman is not valued in the existing margins and that there has been a constant increase in the value of other work, that the investigations into work value support the submissions of the union and firmly establishes the correctness of the claims of the union for increased margins which should be granted in full by the Commission.'

Federated Moulders

Mr McLagan

Mr McLagan stated that his union has members working in the foundry division classifications of jobbing moulder and/or coremaker, plate and machine moulder and/or coremaker, shell moulding operative and female coremaker. Dealing first with jobbing moulder he tendered as evidence the moulding trade curriculum of the Sydney Technical College which covers a four year period and which provides for a variety of subjects considered necessary for those serving apprenticeships to the trade. Speaking with reference to the curriculum Mr McLagan said:

'On practical work instruction ranges from mixing of moulding sands to plate-moulding, open sand moulding to coremaking, covers dry and green sand cores, frame and strickle cores, loam cores, use of steel bars and grids as core strengtheners, the venting of cores using wax and rope vents, and the techniques for jointing and finishing cores using gauges and calipers to check core sizes, etc.

In loam moulding instruction is given on use of spiders, spindles and setting plates, the use of bricks and steel chill pieces to build up mould shape, the drying and finishing of loam surfaces.

Instruction is also given in sand control and preparation so the apprentice understands the control of properties of moulding sands for iron, steel and non-ferrous metals, permeability, moisture content, sand strength as well as sand milling. The apprentice receives training in operation of Cupola, electric, gas and oil fired furnaces and the maintenance of metal ladles; practical instruction in non-ferrous and steel foundry practice with attention given to the types of sands used, the cutting and placement of runners and feeder heads and the use of chills and in this foundry trade theory includes the history of moulding, its relationship to other trades, casting, tracing and annealing of castings, all types of patterns

and contractional and machining allowances, calculation of pressure of metals in moulds, the use of lifting tackle, beams, chains, slings and safe loadings for same. Instruction is given in pattern making to the limited period of two hours per week for twelve weeks. Trade science teaches the preparation of alloys, the problems of oxidation and reduction, the formation of metallic oxides and the solubility of gases and liquids. Theory and related calculations deals with the composition of furnace charges, the changes that take place in the melting cycle, composition of various non-ferrous metals and correct casting temperatures.

As will be seen from the curriculum a tradesman jobbing moulder and/or core maker must have a wonderful knowledge of foundry procedures in order to be fully conversant with the problems he must avoid to produce sound and dimensionally accurate castings'.

Mr McLagan described features of the work of jobbing moulders as seen at inspections and by way of example there is set out portion of his remarks concerning Commonwealth Steel and Goninans respectively. He said with reference to the first named company:

'At the Commonwealth Steel Co., Waratah, the Commission inspected a steel foundry producing the largest castings in Australia. The moulds inspected were a mill housing casting with a cast weight of 80 tons and a gear wheel mould made with the use of a spider and spindle. Mr Kibble, the union witness, described the work of jobbing moulders at these moulds and the company supplied a series of photographs showing several castings made by the firm in their heavy foundry.

The necessity for jobbing moulders to have knowledge of rigging and giving instructions when removing top boxes from rammed up moulds and the replacement of the top boxes is referred to at p. 3399 of the transcript and Mr Kibble said that the tops weigh 50 to 60 tons. He described the necessity to place extra weight on the tops at the lighter ends to ensure a level, even lift to avoid damage to sand joints and mould surfaces.

At p. 3405 Mr Commissioner Winter remarked on the use of hookers in the top section of the large mould and said, "Who decides where these hookers will be placed?" and Mr Kibble said, "The moulders". Mr Commissioner Winter asked, "Do you decide as to how many will be used?" and Mr Kibble said "Yes". The Commissioner again asked, "Would you be in doubt at any time?" and Mr Kibble said "No".

The danger element associated with foundry work was highlighted at p. 3408 when Mr Drake and Mr Kibble explained the reason for the delay in entering the light foundry section and what could occur should a stopper on the ladle not close and also the protective clothing worn by the ladle man and the moulder was referred to'.

Referring to Goninans, Mr McLagan said:

'The assistant manager, Mr Eddy, described the firm as general engineers manufacturing machinery for rubber, plastics, mining, steelmaking, locomotives and rolling stock. The foundry was described as a captive foundry capable of making castings up to 50 tons weight. The work inspected was a mould for a carbon di-sulphide retort. The casting was 12 ft 8 in in length, 4½ in outside diameter, 3 ft 8 in inside diameter with a 3 in wall thickness and was 9½ tons finished weight.

The union witness, Mr J. Goverd, explained the work to Mr Commissioner Winter. Mr Beath, the company's representative, stated at p. 3419, "Once the patternmaker has finished his work the moulder takes over. The patternmaker has his side of it to do. The moulder knows his job on receipt of the pattern and we expect him to complete the mould as was intended and the specification intended".

The difficulty experienced to ensure that the core of the mould is actually located on the top section of the mould to ensure that it will lower into the mould in such a position to guarantee an even thickness of metal between the core and the external wall was explained by Mr Goverd at p. 3419. Mr Commissioner Winter asked Mr Goverd about a drawing mentioned in his description of the moulding process, a drawing of scale ½ in to 1 ft was produced and Mr Beath at p. 3420 said, "On this occasion he would be required to have access to this drawing". The Commissioner asked, "But is it necessary on this occasion?" and Mr Beath replied "Yes" '.

After reviewing evidence of employer witnesses and making particular references to extracts therefrom which, he contended, supported his case, Mr McLagan went on to say:

'On the question of skill, the introduction of new materials and processes means the moulder has to adapt himself to meet the requirements of the new processes. The introduction of CO2 sands called for the moulder to acquire techniques of adequately gassing moulds: the

use of furane sands and their limited setting times of 20 to 40 minutes has meant the moulder has to work harder and faster to remove the patterns from the mould prior to the chemical curing being completed.

New materials have reduced some of the ramming up of moulds but they have also led to the moulder spending more time stripping, finishing off, coring out and closing moulds'.

'The fundamental responsibility', said Mr McLagan, 'is for the jobbing moulder to produce castings and this is expected of all employed moulders'. He continued:

'Foundry technicians are no doubt part of the foundry team; but examination of the curriculum of the technical college will indicate a course in foundry technology—and the majority of foundry technicians are tradesmen moulders employed as leading hand and foreman who have taken further studies in foundry technology and advanced trade metallurgy.'

Turning to the machine moulder, Mr McLagan made reference to the inspection of the work at Tullochs and after contending that the evidence of two of the three employer witnesses was not typical of foundry work in Australia, stated:

'Each foundry admits that a greater number of moulds are produced. Mr Pye judged the weight of mould halves at 60 lb, and a number of mould halves made each shift by each man is 500. So as the machine moulder works, he still has to lift the empty box on the machine and locate it on the pins, judge the amount of sand, turn the necessary levers and buttons to operate the machine to compact the sand, cut the runners through, vibrate the machine, and strip the box by lifting it; examine the mould to see that it has not burned in the stripping, turn around and place it on the conveyor—and this is done at least 62 times every hour. The aids to operations for machine moulders mentioned are overhead sand conveyors and hoppers, boxes delivered by conveyors. But it is stated by Mr Palmer that they had conveyors prior to 1952. The mechanisation is not designed to make the work easier but to increase productivity. The machine moulder still has to operate the machine but concentrate on his moulding function; and in the three foundries which the witnesses represented it was admitted that production had increased—and this means that the machine moulder spends more time actually moulding than before.

On the question of materials used, Mr Palmer indicated a change of materials used by machine moulders and referred to the use of CO_2 sands. This material meant that the machine moulder not only had to produce moulds as he had previously, but that he had to develop a further skill which he did not have in 1952; that of ensuring that the CO_2 gas was properly inoculating the sand mould to ensure complete gassing of the resultant chemical action.

All three witnesses in respect of physical effort claimed a reduction in muscular effort. But the increase in the number of moulds produced means the machine moulder lifts more empty flasks and more flasks filled with sand, which Mr Pye estimated weigh 60 lb. This is not so much a reduction in effort as an increase in effort, in doing the same lift constantly—lifting completed moulds.'

'The employers rely on his skill to produce good moulds', said Mr McLagan as his address proceeded, 'and this is his skill. Should the machine fail in its compacting of the sand he is expected to have sufficient skill to recognise defective moulds and to arrange to have any malfunction rectified'. He stated that the machine moulders seen at Tullochs 'were producing as part of a team effort to ensure production'.

In connection with the classification female coremaker, Mr McLagan said:

'The work carried out by female coremakers in the foundry industry are repetition cores usually small in size. In the establishment at T. S. Malleable the evidence indicates there are 19 females employed making cores using oil sand and making the cores by hand, by the use of core blowing machines, by the shell core machine using heated core plates and resin coated sands and using furane sands and heated core plates.

The machines used in the manufacture of these cores are the same machines that are operated by male machine coremakers in other foundry establishments. The fundamental difference being that the cores produced by the females are of a smaller size and in the case of T. S. Malleable cores produced are used for pipe and conduit fittings. Female coremakers are employed in very few foundries.'

First in relation to machine moulders and then in relation to jobbing moulders Mr McLagan gave the following award history:

'The classification of machine moulder first appeared in the Metal Trades Award made by Mr Justice Beeby on 18 December 1929 with a margin for skill of 9s. The present system of six monthly periods of experience first appeared in the award made by Mr Justice Beeby on 23 February in 1937, the rates at that time being for the first six months experience 9s, for the second six months experience 12s, for the third six months experience 15s and after two years 20s.

On machine moulding when making the award Mr Justice Beeby said,(1):

> "all my previous judgments relating to metal moulding . . . (reads) . . . I have awarded the following graduated scale."

which is the scale I mentioned at the start of the quotation. In the Metal Trades Award made by Mr Justice O'Mara on 5 December 1941, the after two years rate became the thereafter rate and a loading of 6s was applied to the graduated scale, the total margins being 15s for the first six months period; 18s for the second six months period; 21s for the third six months period and 26s for the thereafter period.

The award rates in 1947 provided for the following margins for the six monthly period of experience 28s; for the second six monthly period 31s; for the third six monthly period 34s; and thereafter 39s.

The 1954 two and a half times formula decision altered the relationships and the rates set out for the six monthly periods of experience and in 1954 the rates were: for the first six monthly period 28s; for the second six monthly period 31s; for the third six monthly period 37s 6d and thereafter 50s.

The margins from that period have been subject to all the decisions and variations of the Metal Trades Award and over the period the relationship of the machine moulder's thereafter rate to the jobbing moulder's rate has seen the machine moulder's rate decline by 6.7 per cent from 1947 to 1967.'

'The first Federal award, the jobbing moulders and/or core makers, was sought by the union and came before the Court by way of a compulsory conference on 11 March 1924. On 17 December 1924 Sir John Quick made an award applicable to jobbing moulders and jobbing core makers and the award gave a weekly wage in Sydney of £5 13s 6d which was made up of a basic wage of £4 4s 6d, a margin for skill of £1 4s 0d, and a payment of 5s per week in lieu of holidays and sick leave. The award applied in the States of New South Wales, Victoria, South Australia and Tasmania.

On 18 December 1929 Mr Justice Beeby made and issued the first Federal award, as we now know it. The margin for skill for jobbing moulder and/or core maker remained at 24s a week, but from this award onward the jobbing moulder and/or core maker margin was identical with the margin of the engineering tradesman or fitter, as we know him today.

In all the period from 1930 to today the margins of the majority of tradesmen in the Metal Trades Award have been identical, and it is the opinion of the Federated Moulders (Metals) Union that they should continue to be so.'

Mr McLagan concluded his address with the following submission:

'This union feels that it is quite proper for the Commonwealth government to give evidence to the Commission in respect to national economic factors. But the insistence with which the Commonwealth government advocates in this case have endeavoured from the commencement to impose upon the parties to the dispute their ideas as to how this case should have been conducted quite supersedes what we consider to be their rights.

We feel that more attention should have been given to the opinions of the major parties in this dispute—the unions and the employers. They are the people who have the greatest interest in the Metal Trades Award, and their opinions should weigh greater with the Commission than the theories of the Commonwealth government representative.

There have been suggestions for changing the titles at present used to describe certain tradesmen in the award, and also proposals to dispense with the present divisions in the award. The Moulders Union would oppose these proposals. The divisions in the award have been of great use to the unions in avoiding quite a lot of industrial disputes and demarcation issues, as they have in many cases defined the areas of the award in which a particular union or group of unions has influence, and while it is correct that the same classification may appear in several divisions of the award, it is also correct that persons in that classification may belong to several unions, the type depending which union had influence in that particular division.

(1) 28 C.A.R. 923

The proposal to change the titles of some classifications appears to us to be rather futile. For the past 30 years there has been no doubt as to what a fitter was or what is a boilermaker, and we feel the Commission should be wary of making changes for change's sake which may cause unnecessary confusion within the industry it is trying to regulate.

In respect to the wages that the Commission may set as a result of its investigations, the union feels that the inspections and evidence that have been given to the Commission have clearly established that there have been quite significant changes in the metal trades industry since 1952, but it is also apparent that technological changes that have occurred have demanded that the workers generally have had to adapt themselves to these changes, and that the workers have developed new skills and techniques which have meant that the trade skills of the tradesmen and other workers have improved under the demands of technological advances.

With regard to members of this union who are employed in the foundry industry, foundries are establishments in which there has always been a highly developed degree of team work. The jobbing moulders and/or coremakers and machine moulders and/or coremakers are the key personnel. The evidence has clearly shown that over the years there has been a remarkable increase in production figures and in some establishments some mechanisation to enable greater production to be attained.

Also the evidence shows that there have been technological advances, the most notable being in the realm of chemically cured sands. These developments created a challenge to the ability of our members to adapt themselves to the new techniques. The evidence clearly shows that jobbing moulders and/or coremakers and machine moulders and/or coremakers are now using their moulding skills much more consistently than they were in 1952. They have developed new skills to enable them to handle technological changes, that have been seen on inspections and spoken about in evidence.

The work of these people I represent in this dispute is of greater value to the employer now than in 1952. There is no doubt of this in Mr Palmer's mind that that is so and also in Mr John's mind. The moulders union submits that the value of the work of our members has increased and we ask the court to grant the claim as set out in the union's application.'

Electrical Trades Union

Further Submissions Re Process Workers

Mr McBride

The process worker classification having already been reviewed by Mr Heagney and Mr Heffernan, Mr McBride refrained from going over the same ground. He made additional submissions largely directed to work of process workers who are members of his union. In summarised form, his submissions included these:

(1) Large numbers are employed.

(2) The majority are females.

(3) Large concentrations are to be found in factories where electrical components are manufactured.

(4) It is in the electrical components and equipment factories that large volume production takes place.

(5) Components manufactured by process workers are constantly changing because of technological change and developments. A couple of examples are miniaturisation; printed circuits; transistors; and change in fashions or markets for the domestic appliances.

(6) The standard of equipment manufactured by process workers under the Metal Trades Award is equal to world standards and the cost of production enables companies such as Standard Telephones and Cables to compete on world markets.

(7) It is our submission that in this area between batch production and volume production the process worker plays a vital part. There must be in this field need for flexibility, need to do jobs which just cannot

economically be broken down; and we submit they get the worst of both worlds, that is the requirement to be able to work on batch production and also the requirement to work in some factories where there is fairly high volume production such as AWA, where they work on things referred to as pallet lines.

(8) We arranged our inspections so that the Commission could seek examples of comparatively high volume of production and what might be called batch production and we saw examples of both of those at TEI.

(9) We also arranged for the Commission to see components manufactured in a way which was not even thought of in 1952. An example would be the manufacture of transistors where we can say quite safely that the use of microscopes by process workers in the 1930s was absolutely unheard of.

(10) Mr Heffernan referred to the first Metal Trades Award decision where process workers were referred to as unskilled. We say we have shown a dramatic change from those old days of the 1930s where they were referred to as unskilled, to today where they are working with microscopes and working with wire one thousandth of an inch in diameter.

(11) The AWV inspection afforded convincing proof of the evidence of Mr Evans called on behalf of the ETU that the dexterity requirement for the job is such that the ordinary male could not do it.

(12) Mr Gibbs called by the employers endorsed practically every word of Mr Evans' evidence:

> 'He told us about the requirement of girls on stand-by to be flexible; he told us about process workers doing tests on starter motors; he told us about jobs requiring dexterity and concentration; he told us that some girls are paid extra because of flexibility requirements; he told us of the extra money paid to girls winding high tension coils because of the requirement of concentration, dexterity and good eyesight. He told us about the jobs, lining up flashers, taking between two and three months to learn and he told us about the training school, all of which virtually endorsed Mr Evans' evidence.'

(13) We say in some factories you could not work out a definition which would have a suitable and practical cut out point. The jobs overlap, production methods are changing, the articles being made are changing and the tools used to make the articles are changing. You either make a generalisation that applies to all industry, which we say is impossible, or you look at it on a factory basis.

(14) What we say is that there is room for classification on a factory or company basis for some of this work and we certainly would not oppose that. You may remember that before Mr Evans gave his evidence we pointed out some of the work we had seen was not covered by the evidence of Mr Evans. We say this is the only practicable way to deal with this, that you cannot have two grades of process worker defined to apply to the whole industry. It is an impossibility.

(15) We say this must be a matter to be worked out between the parties and failing this, arbitration.

(16) In view of the history of the process worker in the Metal Trades Award, in view of what we have seen on the inspections and in view of the evidence, we say if ever a classification cried out for proper assessment it is that of process worker.

(17) The history of the process workers has shown that they have never been properly considered, that their duties have vastly changed since the 1930s when the classification was introduced. We say in this case they must be given proper consideration.

(18) . . . females under the Metal Trades Award at the time we filed our application got 75 per cent of the male rate.

Since the filing of that application the Commission in the total wage decision has come out in favour of the principle of equal pay. It is not a positive pronouncement at this stage but there is certainly a hint and since this decision was made the ACTU interstate executive has met and has decided to take a test case on equal pay. It is obvious such a test case cannot be completed before the end of this work value case.

In view of this all we ask the Commission for at the moment is the granting of the application we filed in November 1965, without prejudice.

Australasian Society of Engineers

Mr Brodney

Although Mr Brodney addressed the Commission on behalf of Australasian Society of Engineers, he included in his submissions matters which as he put it, 'will be helpful and beneficial to all the unions.' He outlined his case in manner following:

'(1) The unions seek an increase in the margins in clause 4 of the award without any but minor alterations in the structure of the clause.

(2) The private employers oppose any increases. As a matter of practice they do not ask for any reductions even though they contend that their case would justify decreases.

(3) The ASE submits that there are no circumstances relevant to work value assessment which justify decreases but on the contrary there are many circumstances which justify substantial increases in all margins.

(4) The employers rest their case upon a narrow, traditional and out-moded view of work value. They think it is something to be measured only by a few factors such as skill, responsibility and onerousness.

(5) We will submit that work value must now be given a wider meaning than this. We will ask the Commission in the light of our submissions to re-state its views on assessment of work values. Such a re-statement will, we submit, justify a substantial increase in margins.

(6) The ASE will submit that the standards which the existing margins express are no less than 60 years old. The final act of judgment to be made by the Commission must, it will be submitted, reflect today's attitudes on industrial justice.

(7) No comprehensive assessment of work value has been made to the extent that any occasional assessment has been made. Such assessment is unsatisfactory because of the limited view of work value taken in making that assessment.

(8) The engineering industry is so extensive and diverse and in such a state of change that the same test of work value cannot apply equally to all classifications if industrial justice is to be done to all classifications.

(9) Subject to minor alterations the existing classifications and definitions should not be altered in this case. A case should be specially set up to alter the structure of clause 4.

That, of course, carries with it the broad thinking involved in the joint statement of Mr McBride and the employers presented to the court. This was written two days ago before I had seen the statement, but it amounted to the same thing.

(10) The Commission should declare that the job evaluation scheme proposed by the Commonwealth is inappropriate for the Commission's function of settling disputes about margins and will neither adopt the scheme in the present case nor commit itself to do so for the future.

(11) If the Commission finds that margins ought to be increased it will give effect to its findings notwithstanding the Commonwealth's submission as to capacity to pay.

(12) The submission for the Commonwealth was that the indications were that the economy would be in such a shape and the employers indicated an intention for such private spending on capital goods that there would be that development; but my submission is that, accepting that, there is firstly no need for any discounting or postponement in this case of a grant of increased margins.

If industry expects, as shown in paragraph IV of W23, to spend such sums, it is submitted that they can also spend money on doing industrial justice to their employees.

(13) Having regard to the requirement that the contemporary standards must be applied in assessing the value of work to be performed, the Commission should not be deterred from establishing higher standards on account of the contention made in W23, page 8, that because wage costs have been pushed up beyond any reasonable estimate of the growth of productivity over the period—I will elaborate that, as with the other matters, later.

(14) If the Commission seeks a point of reference in the history of the awards, the most satisfactory point will be the Second Mooney Variation. The calculations made on the basis of the 1947 fixation will provide a starting point on a reasoned basis. The form of the calculation made and presented by Mr Hawke last week is a form of calculation which has been found useful in other connections. Consequently there seems no reason why that type of mathematical thinking should not be applied in this case.'

Mr Brodney made a detailed analysis of award history in which he concentrated particularly on the 'Beeby' award of 1929-30 and on the 1954 margins decision of the court as it then functioned. His fundamental submissions flowing from the analysis were that because of the economic conditions then prevailing the 1929 inquiry did not result in a work value assessment while the 1954 case although affording a measure of wage justice for tradesmen did not make provision

for the lower paid worker. 'The process worker is a classic case,' he said, 'We agree that something should have been done in 1954 for the fittter but we cannot agree that it should have been done in such a way as to deny industrial justice to the lower paid people, and there was the vice of that decision.'

Mr Brodney examined in detail the case for the employers. 'They say firstly,' he said, 'that each employee is given more information, more advice, more and better direction, more and better control, more and better supervision; and from these three results less independent action, less skill for the actual work whether he is a tradesman or not.' He then went on to say:

'We are not denying the introduction into the engineering industry of the professional worker or the sub-professional, the production planner, the draftsman; we say they have come in, and this new managerial development has resulted in a reconstitution of the process of production in the factory. This has established the closer-knit unit of production, in the team, and that the value in the team of each worker is enhanced by the very fact that he is working in a team.

This is a cardinal point, in our submissions, for out of team work each man in the team becomes more valuable and that applies as much to the professional designing engineer as to the tradesman and to the button pusher, if he may be taken as the lowest rung; and instead of one having a conception of a hierarchy from top to bottom, we must have a conception in which there is a group of participants in the social process of production within the plant.

You have to keep in mind here that the technical developments in modern society have overcome, within the productive unit, the atomisation of society. We are all individuals but in a productive unit we become socialised.'

Later in further development of his 'team' argument he said:

'I do not quite like the expression team, but understood, as I think the Commission will understand it, it will not just be reduced in its mind to a mere group of three men or something like that. Having regard to the process of planning and organisation in modern plants, the team can extend to the whole factory. There is some evidence of that in the fact that it has been sworn in this case that there are factory bonuses; and members of the Commission of their own knowledge will know that factory bonuses are common; they tend to be given a non-productive personnel on the basis that one cannot measure, say, the output of plans which a draftsman prepares.'

Speaking of specialisation Mr Brodney expressed himself in manner following:

'Such specialist production, of course, is highly economic and the witnesses thought it would grow. When I say economic, I mean economic to two people: it is economic to the company which avails itself of the specialist services and it is economic to the company which specialises because it has a team of specialists. Those specialists are members of the engineering industry. They would be predominantly tradesmen, fitters, turners, first class machinists, no doubt toolmakers, and possibly patternmakers.

This is a tendency which points to the rising standards of skill, not the lowering of it because these specialist organisations must be able to deal not merely with the production of a particular piece of equipment but what is more important, its repair.'

Emphasing the obligations of this Commission Mr Brodney said that:

". . . it must look at the hard core of men and women who come in and work regularly, day after day, week after week and year after year—the apprentices who become tradesmen and stay with the industry; and many of them, as we know, progress from tradesman level, from the fitter and turner line, into the drawing shop, into the toolmaking and so on.'

He proceeded:

'. . . the work force in the engineering industry is predominantly a craft body of men and women—particularly men; and the craftsmanship throughout the engineering industry provides a common element which runs right through the utter diversity of the whole industry. So although we have a diverse industry we have the craftsmen, the tradesmen—the apprenticed man who can go into the industry and, if necessary, move from one job to another, using his apprenticeship knowledge and his job training, and after a familiarisation period, as it has been called in the evidence, move from job to job.'

After making a submission to the effect that increased wage rates, if granted, should operate retrospectively Mr Brodney said, 'the final result of all these considerations is that the usefulness and value of each member of the organisation whatever his occupation has increased . . . the capacities and work value of the employee in the factory, in the group, in the team steadily increases and that is why, in our submission, the Commission can make a positive finding that there has in fact over the period from 1952 to today been a positive increase in the value of work'.

Finally Mr Brodney said:

'I will conclude here by submitting to the Commission that in its totality the trades union case, the evidence, inspections and the argument, read in the light of the knowledge that the Commission has, amply justifies the claim made, which should be granted in its entirety, and as of the date I indicated before.'

SUBMISSIONS FOR THE COMMONWEALTH

Mr Woodward, Q.C.

Some of the submissions made for the Commonwealth have already been discussed in the review of evidence. In the course of further submissions Mr Woodward said:

'Standing out starkly in the foregoing statements is the clear line of thinking that for the future we have to adjust to two exclusive and independent types of wage case: on the one hand, economic reviews intended to have a broad-sweeping effect and on the other, work-value cases intended to have a limited effect, limited to each particular award.

In this present case we have a pure work-value case, a case entirely different from the 1954, 1959, 1963 and 1965 margins cases which essentially turned on pure economic grounds. In this current case, economic considerations provide no motivation for whatever decision is come to.

And because this is the first real work-value case presenting the opportunity to the Commission to lay down procedures and principles which will aid the hearing in future of other work-value cases, we wish to direct ourselves strongly to those matters.'

Accordingly Mr Woodward addressed the Commission upon relevant case law; principles for work value cases; principles bearing on wage determination; bearing of work value reviews on areas not reviewed; mechanics and procedures of work value reviews and job evaluations. Later he made submissions directed to the state of the economy and capacity to pay. Time does not permit a detailed examination of all the submissions. They have been considered and it is proposed that particular reference be confined to the submissions on capacity and the state of the economy. In respect of capacity it was said:

'Now the question of capacity to pay is a doctrine whose application is not confined merely to economic reviews of the wage structure. The doctrine has application to every case before the Commission. Put another way, capacity to pay remains to be considered after it has been established that a case is made out for some variation of rates. If there is no capacity, as has been well recognised by the Commission, no claim however meritorious can for the moment be satisfied.'

Later it was said:

'Although any increase in wage levels under the Metal Trades Award must have some implications for capacity to pay, what the Commonwealth regards as of paramount importance in this case is that the Commission strictly and explicitly confine any increase to employees under the Metal Trades Award and avoid any formulation that encourages anyone—parties, other benches of this Commission or other tribunals or wage fixing authorities—to think that there was room for any sort of flow over to other awards.'

Finally it was said:

'So what may appear to be a modest increase in the National wage bill arising from a decision in this case could well foreshadow, over a period ahead, a heavy increase in the National wage bill as other work value cases come to completion. Following hard on the heels of a year in which there were three general increases in award wages, any further escalation of wage costs would threaten serious consequences for economic stability.

It is in this context we have been propounding that capacity to pay is relevant in this current case'.

In respect of the state of the economy it was said:

(1) The economy is currently growing at a good steady pace.

(2) Demand appears to be increasing at about the rate the economy's productive capacity can match without overstrain.

(3) Prospects seem good for a continuing upward trend in business and employment but costs and prices have been rising at a quickening pace.

(4) Personal consumption expenditure increased by 6.8 per cent during 1966-67 as a whole.

(5) 'Following the unprecedented investment boom of the years 1963-64 to 1965-66, the one major area of spending to show some weakness in the 1966-67 year was private investment (other than in dwellings)'.

(6) 'The downward trend in non-farm stocks during 1965-66 and the first half of 1966-67 ended in the second half of 1966-67. In 1966-67 as a whole, the value of non-farm stocks increased by $253 million compared with $282 million in 1965-66. The level of non-farm stocks now seems to be generally fairly normal in relation to turnover'.

(7) 'During 1966-67 the strengthening of demand was led by public authority spending'.

(8) 'Higher Government and consumer spending, coupled with a strong rise in manufactured exports, has been reflected in the increased production of a number of items of industrial output'.

(9) 'The number in civilian employment and the defence forces increased by 83,500 or 2.2 per cent over the twelve months to July 1967, compared with 108,200 or 3.0 per cent in the preceding year'.

(10) 'Minimum weekly wage rates in June 1967 are estimated to have been about 7½ per cent higher than a year earlier. This rapid increase resulted largely from the $2 increase in basic wages awarded in July last year and the increases in margins which came into operation at the end of January 1967. In the context of rapidly rising award wages, and with conditions in the labour market fairly stable, over-award wages have risen little faster than awards. Average weekly earnings in the recent June quarter were 8.0 per cent higher than a year earlier.

The year 1967-68 opened with a $1 increase in total award wages, which is estimated to add about $170 million to the national annual wage and salary bill and about 1½ per cent to average weekly earnings. This increase was the third general wage increase within twelve months and there is no doubt that together these increases have pushed up wage costs beyond any reasonable estimate of the growth of productivity over the period.

In the year to the June quarter of 1967, consumer prices as measured by the Consumer Price Index increased by 3.0 per cent. However, 1.2 per cent of this increase took place in the June quarter itself, following comparatively small increases of 0.4 per cent in the March quarter, 0.9 per cent in the December quarter and 0.4 per cent in the September quarter. The increase in the June quarter of 1966-67 was the largest increase since the December quarter 1965. All groups of the index recorded increases in the June quarter, the largest being in respect of food (1.8 per cent) and housing (1.7 per cent). However, clothing and drapery (0.9 per cent), miscellaneous (0.7 per cent) and household supplies and equipment (0.5 per cent) also showed sizeable increases.'

(11) 'For much of the last twelve months, bank lending has been running at record or near record levels, pointing to a high actual and prospective level of business spending.'

(12) 'In 1966-67 there was a balance of trade surplus of $95 million compared with a deficit of $193 million in the preceding year.

(13) 'Any assessment of Australia's balance of payments prospects in 1967-68 must be subject to wide margins of error.

Our export earnings are largely influenced by the level of economic activity abroad and the outlook in this respect is uncertain. There has been some slowing down in the rate of economic growth in the United States and in several Western European countries and while it is generally expected that there will be some recovery later in the year it remains to be seen how strong it will be. It seems likely that world trade in 1967 will expand at a slower rate than in 1966.

Given the existing level of stocks and no further deterioration in seasonal conditions there is likely to be an increase in exportable supplies from the rural industries in 1967-68. But in general it seems likely that prices received for rural exports will be lower than last year. The price received for wool will be of particular importance. At this year's opening auctions prices received were well below the average for last year and unless there is a strong recovery, total receipts from wool exports will be less than last year's receipts. Exports of minerals, however, should increase substantially. As to exports of manufactures, much will depend on the level of internal demand and on the cost competitiveness of local output. Provided our cost competitiveness, *vis-à-vis* overseas manufactures is maintained, exports of manufactures should increase again in 1967-68.

Imports seem certain to increase substantially over the level in 1966-67. The rising level of income and of demand will be increasingly reflected in the rate of importing in 1967-68. As well there will be a considerable increase in imports of defence equipment and civil aircraft.

With a further rise in the net deficit in invisibles, the present indications are for a substantially greater deficit on current account than in 1966-67.

It is impossible to be sure of the extent to which capital inflow will be available to finance the repeated current account deficit. Present indications are that the net result on official capital transactions could

be rather more favourable than last year. The transactions of marketing authorities are also likely to be more favourable. As to other private capital inflow, we could not reasonably expect, at best, much change from the level of last year in view of the continuing U.K. and U.S.A. restraints.

Overall, the prospects are for a further deficit in the balance of payments in 1967-68. Fortunately our reserves are sufficiently high to sustain a further run-down in the current year but obviously this trend could not be allowed to continue for long.'

STATE OF VICTORIA AND ITS INSTRUMENTALITIES

Mr Aird, Q.C.

Having submitted that the claim of the unions was a 'money claim made without regard to the work performed either at that time (1947) or now', Mr Aird proceeded to an historical survey directed in particular to the Mooney formula. Tracing the facts and circumstances which preceded the first formula and those which preceded the second formula he stated that the amounts awarded were in no sense work value assessments. He made similar observations in respect of the 1952 decision of Mr Commissioner Galvin and the 1954 decision of the Court. He went on to ask: 'Can these exercises of prices and productivity applied to the original structure in effect alone or the skill side of the total wage be done without regard to other forms of economic gain by award that employees may have obtained over the period by way of leisure and the like.' He proceeded, 'It emerges that the unions seek a formula alteration which leaves the existing relativities of the award . . . as distinct from some particular example completely unaltered.'

The implementation of the prices productivity formula, Mr Aird argued, would bring about a change in relativity favouring the unskilled and he submitted this would be a development opposed to the evidence and inspections. 'If change were otherwise appropriate', he said, 'which we submit is not appropriate, they would be in favour of the opposite change namely some favouring towards skilled against the unskilled'.

Turning to the skilled tradesman Mr Aird expressed the tentative view 'that the concept of apprenticeship and long theoretical and practical training plus secondly the continual use throughout the tradesman's life of such theoretical and practical knowledge . . . might perhaps on their own merit some further recognition of the tradesman class under the award.' Having expressed this *prima facie* view, however, Mr Aird emphasised that apprenticeship training is nothing new and he argued that features which might favour the tradesman had been balanced out by 'the overwhelming effect of the general evidence that there is an improvement of machines and tools used by the tradesman' and also that 'he has been further assisted by greater supervision and greater management control.'

Passing to the process worker Mr Aird claimed, 'it is still true that the considerations of long apprenticeship and theoretical training and constant adaption to new situations are absent in the case of the process worker.' He commented on the relative position with the tradesman's assistant and fore-shadowed a private employer submission that 'it is abundantly clear there is no earthly reason why whatever happens to process workers should affect the tradesman's assistant.' 'As to the third class machinist,' he continued '. . . I feel I can say no more at this stage than that the fact that the third class machinist in the relativities of

this award is clearly in front of the process worker to the extent of $2.10 is appropriate, but the extent of the precise amount may be another matter.'

Before concluding his submission concerning process workers and other non trade classifications, Mr Aird made reference to price index figures contained in the Year Book for Australia, 1966 and argued therefrom that 'in 1937 when the process workers rate was increased by 25 per cent, the price index stood at 145', representing a price decline of approximately 14 per cent. He then added: 'So that the process worker received the double benefit of a 14 per cent decrease in prices as to the real value of his margin combined with a 25 per cent increase in the money value of his margin. This does rather seem to suggest that the concept of a depressed rate for the process worker at least has to be looked at in the light of that type of movement.'

Mr Aird made lengthy submissions directed to the Commonwealth intervention. He challenged, *inter alia*, the soundness of its job evaluation suggestions, Mr Bullows' conclusions, and observations made on capacity to pay. In connection with the lastmentioned contention he said: 'We are opposed on true work value grounds to any increase but we would not want the Commission's decision impugned by the suggestion that it has fixed a rate having regard to this class of submission because in our view it would lead to endless argument as to what the rate might otherwise have been and the perpetuation of the 1947 adjustment argument itself which it would be worthwhile for the Commission to take action to dispose of with finality.'

Mr Aird invited the Commission to reject the Commonwealth concept of a special class of tradesman. 'It is quite impossible' he said, 'to subdivide these tradesmen situations under this award.' With further reference to tradesmen he said:

'As to the suggestion that in this part of the case you can in any sense form some comparison just by naming things that are done between 1952 and now and therefore it must be worth more, it is submitted to the Commission there cannot really be a basis for it, and the only real test to apply is when expert witnesses in charge of such tradesmen—engineers and the like—come along and discuss the matter, and on oath give evidence that the effect on the skill and responsibilities of the tradesmen has been, if anything, in a downward direction, and that is the material that the Commission has.'

Proceeding to the subject matter of 'production, productivity and increased production', Mr Aird argued it does not follow there is any necessary relation between value to the employer and the real nature of the work the employee has to carry out. He amplified this submission at some length and discussed in detail decisions of the Commission including the 'Transport Workers' case and the G.M.H. case.'

Coming to his submission on 'sameness of work', Mr Aird said:

'During the inspections conducted on behalf of our clients, the unions, it is submitted, did not attempt to show a difference in work by way of additional inspections, even though their rights as to time had been protected and they had asked for that protection. It is submitted with respect that there are numerous jobs and areas of work looked at during the Class 4 inspections which are self-evidently on their face comparable with S.E.C. jobs and areas observed. Examples which we submit and which we suggest do not require further elaboration or inspection are the inspections at English Electric at Brisbane on welding steel fabrication and locomotive work, being comparable with the S.E.C. Yallourn workshops, the machine shop work such as at Melbourne and Metropolitan Tramways Board, which of course is fully under the award in every general sense, the Gas and Fuel Corporation, the Country Roads Board, Rheems, Brisbane, English Electric, Brisbane, Cockatoo Dock, Sydney, and others which are perhaps too numerous to be mentioned which are comparable with the S.E.C. Yallourn workshops. And in general concept the ordinary heavy engineering machine shop engaged on job-

bing task work of a wide range is inherently ready and capable of being very different from the machine workshops seen say at Yallourn or at the Hydro-Electric Commission.

The work of maintenance and mechanical fitters generally, it is submitted there would be no reason and no reason has been advanced as to why their work would be different, and indeed this is a field where I think there has been some suggestion that these people, although they are in the generality of fixation, represent a class who do not come to the same extent within the supervisory trend that I have mentioned earlier.'

Mr Aird pointed out that Mr Snell's evidence 'dealt largely and mainly with sameness of work' and he emphasised that as a professional engineer with considerable experience in industry he was well qualified to express an opinion. He submitted that this was a matter in which evidence was most persuasive.

Mr Aird tendered a lengthy document which by reference to relevant trancript gave details of work seen at inspections made at governmental undertakings and private establishments and he sought to show from it that the work was the same.

Later in his submissions Mr Aird said:

'The next matter that I want to mention in detail on this, because it is paricularly important, is in some sense perhaps a cutting back of what I have said already, but if the Commission will pardon me I would just like to give some details in regard to the submission I made that metal trades machine shops, which are the backbone of the metal trades industry, are inherently the same, and I know I gave the Commission some of these before but I would like to bring them all together again. I mention Rheems, Brisbane; English Electric, Brisbane; Sydney Williams, Rockhampton; Cockatoo Dock, Sydney; Bliss Welded Products, Sydney; Borg-Warner, Sydney; T.E.C., Sydney; Gordon Bros, Melbourne; Vickers-Ruwolt, Melbourne; Melbourne and Metropolitan Tramways Board, Melbourne; and Country Roads Board, Melbourne. This of course cuts across the so-called electrical undertaking industry, the private and public industry, and people within and without clause 4 or the appendix.'

The review of Mr Aird's submission is closed by setting out verbatim the following submissions:

(a) '. . . it is beyond argument that it emerges that before 1961 the same rates of pay for the same classifications applied under clause 4 and in the S.E.C., and it is equally beyond argument that the change in 1961 was not brought about by work value considerations and was not based on an examination of work but involved the inclusion of a rate of pay within the appendix which was actually, at least in part, already being paid . . .'

(b) 'It also emerges that what is sought here in regard to the S.E.C. is a decision of this Commission which will indicate the work value component of the wages paid to S.E.C. employees, and which will be decided by this Commission as it sees fit and any residual will be identified by the Commission as a loading.'

(c) 'MOORE, J: Mr Aird, as I understand it, if I can take the fitter as an example, you do not ask that the present difference of $6.40 be reduced? If we give no increase, there would still be a difference of $6.40, and if there is an increase, it would be worked out mathematically——

MR AIRD: Yes.

MOORE, J: You ask us to declare in some way that this is a loading?

MR AIRD: No, we ask the Commission to declare the portion that is work value, Your Honour, and express the balance as a loading.

MOORE, J: As an industry loading? What do you call it?

MR AIRD: There is a title which I think is referred to in that, Your Honour, but one title which would occur to me would be constant loading, because of its special nature.'

Mr Ferdinandy

It is to be recalled that the Trust did not call evidence. At the outset of his address Mr Ferdinandy informed the Commission of terms of an agreement reached between the Trust and the unions concerned in the inquiry. He asked that the Commission make an appropriate order.

The agreement was fully explained by Mr Ferdinandy and there is no need for specific reference at this stage except to one provision which is this:

'(a) The Trust is not asked to, and will not depart from its view that for the purposes of wage fixation on the basis of "work value" there is generally speaking no significant difference between the nature of the work of employees of the Trust in "common" classifications and the work of such employees in outside industry, nor is there any substantial difference between the respective standards of skill and responsibility. However, in view of the agreement recorded in this memorandum, it is not necessary for the Trust to argue this question in the current work value case. Accordingly, the Trust will in this case refrain from offering any evidence or putting any submission on this issue.

(b) The Unions are not asked to, and will not accept, the Trust's view as outlined above. However, in view of the agreement recorded in this memorandum, it is not necessary for the Unions to argue this question, as it affects the Trust, in the current work value case. Accordingly, the Unions will in this case refrain from offering any evidence or putting any submission directly affecting the question of work within the Trust or the skill and responsibility of the Trust's employees.

(c) The Unions' undertaking given above does not prevent them from raising or arguing any submission they see fit as regards any other electricity supply undertaking.

(d) Any party will be free in any subsequent industrial dispute or proceedings to draw such inferences, implications or conclusions from and put such interpretation on any part of the transcript or other evidence in the present work value case, or anything said by any member of the Bench in his decision, as that party thinks fit.'

Having explained the agreement Mr Ferdinandy made two further submissions. He stated that the Trust was strongly opposed to the creation of the classifications, electrical fitter (special class) and machinist (special class). He gave the following reasons:

'The reason for this opposition is that in our view the duties of tradesmen calling for different degrees of skill or involving different degrees of responsibility are so intermingled within their daily duties that the creation of the special class would produce three problems:

1. In our submission it would be virtually impossible to formulate a definition which drew a clear and firm dividing line between the two classes;
2. There would be a series of disputes between the employers and the unions concerning individual tradesmen or small groups of tradesmen and relating to the question of whether or not they were entitled to the higher classification because of some aspect of their work, and
3. We say that in the end it may well be that all tradesmen would end up in the special class and that of course would then defeat the very object of creating such a class.'

'My second submission', said Mr Ferdinandy, 'relates to the question of tradesmen generally, what might be called a base grade tradesman, if the Commission decides to create special class tradesmen.' He then proceeded:

'All I want to say about that is that if the Commission looks at the Commonwealth Exhibit W.22, which contains the weighted points for the various classifications, it will see that not the same number of points are allocated against various tradesmen who have been on par in the past.

The classifications I had in mind in particular are those of boilermaker, electrical mechanic, machinist (first class), turner, sheet metal worker (first class), jobbing moulder and/or toolmaker, fitter, electrical fitter and welder (first class).

They are on par at the moment and my submission is that irrespective of the question whether or not a special class of tradesman is created this relationship of the base grade tradesman—in other words the tradesmen who are not made into special class tradesmen—that they are on par with one another should not be disturbed in any event.'

HYDRO-ELECTRIC COMMISSION OF TASMANIA

Mr Marks

Mr Marks restated the attitude of the Hydro-Electric Commission announced earlier in the proceedings, namely that there should be no increase in the rates of pay presently payable by the Hydro-Electric Commission. He contended that existing rates whether in clause 4 or Division 3 of Part III of the appendix represented proper work values.

In support of his case Mr Marks tendered a number of documents and made submissions thereon. These are summarised in manner following:

(1) The work performed by employees of H.E.C. is no different to that of corresponding employees in private industry, as well as governmental instrumentalities.

(2) 'This submission is supported by the evidence of Mr Snell, for the State of Victoria, particularly at p. 5980, the evidence generally of Mr Murray, commencing at p. 6069, the evidence given for the Hydro-Electric Commission; but remembering, of course, that Mr Murray had experience outside the Commission and was a professional engineer both mechanical and electrical.'

(3) 'We say also that this submission is supported by Mr Bullows, particularly at p. 5826 of the transcript where, in answer to Mr Aird, he said that the work seen in the Hydro-Electric Commission is fairly comparable with work seen in the rest of the Metal Trades Award.'

(4) 'We say that the call upon the metal trades employees in the Hydro-Electric Commission in performing work in any of the classifications common to the appendix and clause 4 does not differ from the call upon the metal trades employees working within any of those classifications in clause 4. Again we refer to Mr Murray's evidence at p 6088.'

(5) 'We say that the work call upon the metal tradesman, both electrical and mechanical, at the Hydro-Electric Commission is within the range of work which can be fairly required of the average or typical tradesman, and in this regard we refer to and adopt the reference given by Mr Aird yesterday, the Graphic Arts Interim Award case, at 101 C.A.R., where the Full Bench of the Commission said that the task in fixing minimum rates was to fix it for a person of average efficiency. We say that that is the task, and, so far as the Commission is concerned, we say that the work done by tradesmen and other employees within the Hydro-Electric Commission is within the range of work of the average tradesman.'

(6) 'We say that the history of the wages paid by the Hydro-Electric Commission to its metal trades employees supports the contention that over the years the position has been established that the work call

upon the Hydro-Electric Commission tradesman is similar to that required of tradesmen in industry generally. For we say that prior to 1962 the rates set out in the main body of the award, which is clause 4 presently, or its predecessor, were the rates which applied to metal trades employees in the Hydro-Electric Commission.'

(7) '. . . the rates in Division 3 of the appendix have been increased on wrong principles without regard to the work being carried out within these classifications.'

(8) 'We say if the Commission, after the full inquiry that it has had in these proceedings into the work being performed at the Hydro-Electric Commission in Tasmania and within industry generally, comes to the conclusion as we respectfully submit it must, that work in the Hydro-Electric Commission and the call upon the tradesman in the Commission is similar to work done within clause 4, then we say how can the Commission exclude the H.E.C. from any order made in these proceedings and further say in that order the Commission would find that the work value element of the wage against the H.E.C. is the same as that applied generally in clause 4.'

(9) 'We say the format of the award itself supports the view that there is no distinction to be drawn of the work performed within the classifications in the appendix and similar classifications in clause 4.'

(10) 'We say that the definitions in clause 29, which are common definitions for both clause 4 and the appendix, apply and, as such, appear in their form to be, as Mr Aird has put, job descriptions.'

(11) 'We say that the unions cannot have it both ways. They cannot say in December 1966 that an application before the Commission was one which covered the electricity supply authorities and then say at this stage that the application does not cover the supply authorities.'

(12) 'For the first time in many years the Commission has been able to compare work in the electricity supply authorities with work carried out in private and other public instrumentalities under clause 4. . . .'

(13) 'Not only has the Commission had the opportunity of seeing the work performed, it has heard evidence from Mr Bullows for the Commonwealth, Mr Snell for the State of Victoria and Mr Murray for the Hydro-Electric Commission, all men with detailed knowledge of the metal trades industry and the sections of the industry which make up the award, and all of whom, in our submission, without equivocation have said that the work carried out by metal trades employees in the Hydro-Electric Commission is the general run of metal trades work and is similar to and requires the use of similar trade skills to that work being performed by metal trades employees in private industry.'

(14) 'So far as the Hydro-Electric Commission is concerned it is desirable to point out that the Commission is not merely involved in the generation and distribution of electrical energy but so far as the sections of the industry are concerned they are involved in Section 1—Mechanical and Electrical Engineering, Section 4—Boilermaking and Erection and Repairing, Section 5—Bridge and Girder Construction and Erection and Repairing, Section 6—Steel Fabrication Construction Erection and Repairing, Section 7—Welding.'

(15) 'It would be quite impossible to deal with a special class, a higher class tradesman, and take him out of the averaging field unless one similarly brought a tradesman of a lower class into being. So we say this is quite impractical and it is quite wrong to suggest that merely because there are tradesmen who are carrying out work in a higher field of skill than that in the general run of work within that classification a special classification should be created for him.'

(16) 'We say the evidence, apart from the question of principle, as far as electrical tradesmen are concerned does not require the Commission to consider the creation of a special classification for special tradesmen on the electrical side.'

PRIVATE EMPLOYERS

Mr James Robinson

Mr Robinson commenced his submissions by stating that 'in reviewing the whole of the proceedings since the Commission's announcement in July 1966, one unequivocal fact emerges, that no valid ground has been provided for the Commission which would warrant a general increase to classifications under the Metal Trades Award'. He discussed in detail the prices and productivity claim put forward by the unions, pointed out that it had been repeatedly rejected by the Commission, in effect described it as being without substance and submitted that as such it provided no ground for a general increase. Proceeding to work value aspects, Mr Robinson traced in detail relevant judgments of Beeby *J.* and submitted it was clear beyond argument that the learned judge eventually reached the stage when the margins which he fixed were based on his expressed belief 'that they were proper for the metal trades industry'. Mr Robinson therefore contended that the claim that rates for the industry were products of the depression was quite erroneous. His submissions on this point included these:

(a) 'It does not require elaboration on my part to show that His Honour made a definite statement that the rates fixed, the 1937 margins, were based on the metal trades industry in a prosperous condition, and it is that level of rates which has been perpetuated ever since, by the 1954 2½ times formula, by the 28 per cent increase in 1959, by the 10 per cent increase in 1963, by the interim margins decision in December 1966 and, insofar as margins formed a part of total wage, by the increase granted in June of this year.'

(b) 'So the allegation that the rates fixed in the metal trades industry, the award rates, have been set at a depressed level is negated directly by the statement of His Honour. But of course it goes further than that. That is a negative proposition.'

(c) 'The positive proposition is that current rates are based on the metal trades industry in a prosperous condition and these facts endorse and support the figures which I gave to the Commission from the 1965 survey of the Commonwealth Statistician. The award rates in this industry are not depressed in relation to manufacturing industry generally; they are in line.'

(d) 'So we put it to the Commission that the unions' submissions on this aspect are entirely misconceived. Any suggestion that award rates are or have been based since 1937 on depressed standards is irresponsible and not in accordance with the facts. They have been based

on the industry in a prosperous condition and rightly or wrongly have been continuously so and are so now.'

(e) 'I end these submissions on the 1930s by saying that in our submission it would be an insult to His Honour Mr Justice Beeby to say of a man with eight years experience, allocated to a particular industry, whose judgments and rates fixed by the judgments indicate a variety of fixations, that the final judgment of His Honour did not represent a proper work value assessment of metal trades classifications. In fact, His Honour in the second 1937 judgment says he believes the margins are appropriate for the industry, having looked at it again for the second time in 1937, and he says they are based on an industry working under prosperous conditions.'

Dealing briefly with the Galvin Award of 1952 and after commenting upon the magnitude of that inquiry, Mr Robinson asserted the decision could not be dismissed as an economic one. He conceded that the Commissioner had refused to increase margins generally but contended that he had adjusted a substantial number of rates. He proceeded:

'If the Commission pleases, Mr Commissioner Galvin found that the mere filing of an application by the unions for work value increases did not justify the acceptance of those claims; Mr Commissioner Galvin found that the mere passage of time does not justify the acceptance in whole or in part of a claim for increased margins. What Mr Commissioner Galvin did—and said he did—was to adjust those rates which he found were warranted, after hearing 117 witnesses.'

Summing up his submissions on the historical aspect, Mr Robinson said:

'We say to the Commission that this historical exercise has shown the Commission three things:

1. That the current award rates are based on a prosperous metal trades industry;
2. That Mr Justice Beeby's 1937 assessment—the two assessments in 1937 and the 1935 assessment in combination—was a work value exercise, and
3. That Mr Commissioner Galvin in 1952 had access to 117 witnesses, to inspections in three States, in his work value role of assessing the appropriate levels of margins in the metal trades industry.

On the basis of those three short conclusions we put to the Commission that there is nothing to suggest that current metal trades rates are owed anything from history on work value grounds—or indeed that the 1952 rates were in any way incorrect either generally or in relation to particular classifications.'

Proceeding to modern developments Mr Robinson said:

'In shorthand terms it may be said that ways and means of achieving this increased output of goods and services are these: low volume manufacture was traditionally associated with low equipment investment and high labour content, relatively skilled. As demand increased, progressive development took place to a stage of extremely high investment in equipment and tools which was associated with a reduction in labour content and skill.'

Later Mr Robinson went on to deal particularly with technical engineering developments. He said:

'When we talk about technical engineering developments we want the Commission to understand the principles behind technical engineering developments. Firstly, they are common to all developing economies in the Western world and, secondly, the principles of industrial engineering carry with them, automatically, inevitably and logically a general reduction in work value demands; and it is essential for the Commission to understand that unless these industrial engineering developments had occurred, unless companies had engaged in an extremely high investment programme, unless companies had engaged in a massive work simplification programme where a large measure of operator skill and responsibility was transferred to machines—unless that had happened—then the increased output of goods and services would not have been achieved; the productivity increase would not have occurred, and the 45 per cent increase in the real value of wages would not have been possible.'

Mr Robinson strongly submitted that there should be no double counting of productivity, contending that the national wage cases, and these only, provided, so far as the Commission was concerned, the means of awarding to wage earners their legitimate share of increased output of goods and services. He cited the *General Motors Holden Case*(1) but while submitting that that decision supported his submissions on the position of the Commission conceded that 'nationally granted increases can be and are accompanied by non-award payments relating to a particular employer and his employees and having regard to the particular circumstances "at the factory gate".'

Proceeding to the evidence, Mr Robinson made a close and detailed analysis, particularly in relation to the employers' case. He said in connection therewith:

'MR ROBINSON: I want the Commission to understand that I have taken the time and trouble to extract these statements to put them in a form that the Commission can readily see and appreciate, to show the Commission that these techniques have been inevitable in a developing industry in a developing economy. They are not fortuitous, they are inevitable. And if the Commission appreciates that, then the Commission will understand that hand-in-hand with the implementation of industrial engineering techniques is the necessary and inevitable reduction in work value demand. They go hand-in-hand and they go hand-in-hand with the huge investment which has been undertaken by industry generally and the metal trades industry in particular, and one would not be possible of implementation without the other.

MOORE, J.: In your submission, Mr Robinson, is the effect of this industrial engineering any greater or any less on tradesmen as compared with non-tradesmen?

MR ROBINSON: I think, Your Honour, it would be fair to say that the implementation is different in emphasis. There is a specialisation, the breaking down of jobs in both; there is the instruction, the detailed planning sheets which are now available, which would apply more to the tradesman probably than to the second and third class machinist because of the narrower skill in any case which they exercise; there is the increased supervision which is available, and there is the improvement in the machine. But I think what the evidence does establish is that there is still a basic trade skill required of the tradesmen classifications, whether they are indentured tradesmen or not, but in a narrower area, whereas in the second and third class machinists, process workers, the sorts of production employees Mr Pye was talking about, their range of skill or the application of their skill is narrower anyway, and it would be more a question of the machinery taking over the skill, and the output being achieved in that way. But in general terms, Your Honour, the same techniques are applied: they are applied with a different emphasis to tradesmen as to other classifications.

MOORE, J.: A number of your witnesses in cross-examination did say they would still like to have all round skilled tradesmen if they could get them.

MR ROBINSON: Yes, Your Honour. When we come to discuss specialisation we will be making a particular point of that. They want them, Your Honour, I think for many reasons. One is that they supply the flexibility which would be needed, and unfortunately there are not enough of them; they provide the nucleus from which to promote employees to supervisory and staff levels of these varied production engineering departments, and so on. But I will, I think, cover the point more adequately in dealing with specialisation in particular.

MOORE, J.: I would think in this new concept of team work, Mr Robinson, you would need to have a tradesman in your team who was able to make his own contribution as well as those your technicians make.

MR ROBINSON: A flexible tradesman?

MOORE, J.: Yes, that your team would work better if the tradesman were an all round skilled man than if he were not.

MR ROBINSON: Your Honour, I think that is so. One has to, I think, take the issue in a series of steps. The flexible indentured tradesman does supply probably the means, the nucleus for supervision promotion, because he has the knowledge of each one of the machines in the particular area in which he is operating.'

At a later point Mr Robinson after again conceding the continuing importance of versatile tradesmen made a submission which elaborated the construction he placed on the employers' evidence. He said:

(1) 115 C.A.R. 931

Gallagher J.]

'So if the Commission pleases the whole conspectus of events—a developing economy with full employment and a rising standard of living—has brought this about. It again has been inevitable, and obviously no blame attaches to the unions, to the employers or to the government for its occurrence. The evidence shows that the employers have adapted themselves to a difficult situation and by planning, by research, by investment and, most importantly, by in-plant training have succeeded in increasing output with a production work force which is, generally speaking and relatively speaking, possessed of a lesser range of skill. No employer witness has suggested that the result is that employees working in tradesmen classifications are not valuable. They are valuable.

What the evidence shows is that the companies have effectively used the relatively limited talents which are available, and, as I have said to the Commission on so many occasions, the reduced work value demands were inevitable, the specialisation was inevitable, if we were to take our place in the world as a developing economy given the circumstances which persisted in Australia in the fifties—and the Commission will understand that we are not seeking to reduce wages because of specialisation but it is as plain as pikestaff that the specialisation which has inevitably occurred provides no warrant for an increase in wages on work value grounds.

To attribute increases in output to specialisation is to misunderstand the fundamentals of the factors giving rise to productivity increases, and to increase tradesmen's rates not on work value grounds but on grounds of attraction rates to future apprentices is to misunderstand the factual situation of tradesmen classifications as I have outlined to the Commission this morning. The evidence shows that the problems facing industry have been overcome by adaptation and by specialisation, and—fortunately or unfortunately—the Commission cannot set the clock back 10 to 15 years; this adaptation and the specialisation is now with us, the evidence shows it is with us, the evidence shows the extent to which it is with us.'

Mr Robinson went on to say:

'The Commission is left in our submission with this position: if the Commission were to interpret the evidence literally it would require a reduction in award rates to the majority of employees working under the Metal Trades Award.'

Asked from the bench whether his submission had been directed to all tradesmen he replied:

'To tradesmen generally. There has been no attempt to separate them: these are culled from the evidence of all the witnesses. If the Commission would like me to give the evidence of the witnesses involved . . . I think nearly every witness gave evidence about this and Your Honour may recall that the witnesses were in the main indentured tradesmen themselves.'

The answer above given was later qualified by Mr Robinson to the extent that electrical fitters directly engaged in the maintenance of complex electronic and circuitry work and who as an essential prerequisite for such work undertake a post trade course in electronics were in a different position. He went on to say:

'We are opposed to the establishment of a separate classification and rate, for the same practical reasons that apply to the splitting of any classifications. These reasons are practical and industrial and if one thing was made clear by the evidence of the employer witnesses, it is that splitting of classifications leads or may lead to industrial pressure to have all employees up to the top rate. The Commission will recall the evidence in relation to blacksmiths, welders, special class, and so on.

If the Commission in its discretion decides contrary to our argument that it should be separately recognised, then we would make two points: one is that we think the Commission should indicate in its decision that the evidence showed that the post trade course in electronics was the normal prerequisite to the performance of this work. The other is that the parties should confer on the definition.

May I make it crystal clear to the Commission that we make no concession whatsoever on the general work of the electrical fitter, which falls into the same category of submissions that I have made in general.'

There are now set out in full propositions put by Mr Robinson at the close of his case:

'We have shown in these proceedings that the unions' claim and their arguments in support of the claim apply to every classification and every award of this Commission;

We have shown that the claim is based and said to be based on general economic considerations;

We have shown it is contrary to basic decisions of principle made by the full bench as recently as June 1967 in the *National Wage Cases* pronouncement. Under those circumstances

we say that the unions' claim and the argument as such in support of the claim must be categorically dismissed as a matter of principle;

We have shown that the Metal Trades Award rates are based on the metal trades industry in a prosperous condition;

We have shown that the Metal Trades rates are directly in line with manufacturing industry generally and we have shown that any general movement would involve a conscious decision by this Commission to move rates in this industry above manufacturing industry generally, and the implications of such a conscious decision by this Commission would be both obvious and far-reaching;

We point out to the Commission that no argument has been advanced why the level of existing award rates is incorrect; we would have thought that this would be an essential prerequisite to change;

We have shown, by painstaking analysis, that no general common ground exists for increasing rates applicable to classifications under the Metal Trades Award;

We have shown that industrial engineering developments, established by the evidence in this industry, have been responsible for the productivity advances which have made a substantial contribution to the national output of goods and services. The national output of goods and services of course is the source of economic capacity considered in *National Wage Cases* for the benefit of employees generally;

We have shown that the industrial engineering developments are inevitably accompanied by high capital investment and reduction in work value demands for the vast majority of employees in this industry;

We have shown that the employers' concession that wages should not be decreased in line with the evidence proceeded on the basis that the Commission will grant increases only to those classifications where a definable increase in work value demands has occurred;

We have pointed to the most interesting and significant feature of these proceedings, namely the unions' late conversion to reality where they now seek non-economic increases to only 16 classifications. We have put to the Commission that the reality of the situation is that these are now the only 16 classifications in dispute, and had the unions taken this view in August of 1966 on a suggestion made by the employers at the first conference as a result of these proceedings the whole history of conduct of these proceedings might have been different. And in respect of these 16 classifications we draw the fact to the Commission's attention that nine of them have been the subject of evidence by employer witnesses.

As a result of those features of the case which we have put to the Commission we now submit that if the Commission grants a general increase it will be acting not only in contradiction of the overwhelming weight of evidence, it will be flying in the face of the whole conspectus of factors which have enabled Australia to take its place in the world as a developing economy, because without those changes the development of the Australian economy could not have occurred.

I end my submissions by referring to the issue of existing relativities, a matter which Mr Commissioner Winter has drawn to my attention on two occasions.

We accept existing rates. The existing rates have, as a mathematical by-product, given relativity. We do not regard the existing relativities as any more than a mathematical by-product of the existing rates. Our evidence establishes that if one were concerned with correct work value relativities the majority of the classifications in the Metal Trades Award would have to have their rates reduced. It follows that maintenance of relativities can carry no weight with this Commission.

If the Commission moves rates for an individual classification or classifications it must do so far the specific reasons applicable to that classification. No consequential movements, in our submission, are in any way legitimate and we want the Commission to understand that we would regard such action by the Commission as fundamentally opposed to the proper principles of wage fixation in work value cases.'

COMMONWEALTH—SUBMISSION IN REPLY

Mr Woodward, Q.C.

In his address in reply Mr Woodward expressed strong opposition to the view that changes in money value were relevant to a work values inquiry. He contended that they have been already taken into account in economic cases and that in any event there was no yardstick available to the Commission for deciding what work had to be revalued because of changes in the value of money.

Mr Woodward submitted that the Commission cannot place any reliance on so-called 'market value' arguments and gave reasons which he summarised as follows:

'(i) There is no evidence of any one "market", or even of any clear "market" which could be used as a guide for any minimum wage fixation. No "market rate" is shown by union exhibits on the subject.

(ii) There is no sufficient evidence to show what form current over-award payments take.

(iii) There is no sufficient evidence as to the reasons why different over-award payments are made.

(iv) The evidence did establish that some over-award payments were the direct consequence of organised union pressure but there is nothing standard about the rates conceded.

(v) Incentive payments are made for above average performance and thus have no relevance for the fixation of minimum wages.

(vi) The only over-award payments which might be relevant would be those paid because it was generally recognised that award rates for a particular classification or job were too low to represent true work value. There is no evidence to identify such payments or even to show that any existing over-award payments are in fact made for this reason.

(vii) The question of absorption is of course vitally relevant to the whole question of over-award payments. In view of Mr Hawke's answer to Moore J's question at pp. 6887-8 of the transcript, we can do no better than to remind the Commission of the words used by Wright, J. in the 1966 National Wage Cases decision. Although it was made in that context—*i.e.* the context of a National Wage Case decision—His Honour's words are equally applicable to the present hearing.

(viii) Clearly work value does not vary with the rise or fall in demand for particular classifications of workers; that is, it does not rise with increasing shortages when over-award payments tend to rise.'

Mr Woodward refuted suggestions that the Commonwealth was playing down and minimising the importance of formal apprenticeship training. 'Nothing could be further from the truth,' he said, 'for years now the Commonwealth has been doing all in its power to encourage apprenticeships.' But he added:

'By the same token the Commonwealth believes that it is utterly wrong that adults should be denied the opportunity to become tradesmen. Ample evidence has been before the Commission to show that adults are being upgraded on a wide-spread scale. What the Commonwealth would wish to see is formalised training for adults.'

Mr Woodward concluded his submissions by reiterating:

'Finally, as the Commonwealth said earlier—the Commission is faced with the challenge to bring to its award-making, principles and practices that have meaning in 1967 and that employ techniques available in 1967. It would be a sad day in the Commission's history if it succumbed to the argument that traditional practices and traditional relativities should be maintained—maintained merely because that is what people in industry—employers and unions alike—are accustomed to. If the Commission were to succumb, the new approach the Commission essayed when it ordered this inquiry would have been fruitless—indeed, the whole exercise of the past eighteen months would have served little purpose.'

ELECTRICAL TRADES UNION

SUBMISSIONS IN REPLY TO MR AIRD AND MR MARKS

Mr McBride

Mr McBride challenged the sameness of work argument. He claimed that protective relays work seen at Yarraville was not seen elsewhere and that this was also the position with other work features. He put a submission in manner following:

'In all our inspections all over Australia we did not see this type of protective relay work being done, we did not see this type of work on air operating high rupturing capacity oil circuit breakers, we did not see the dressing of computators in establishments that

had generators supplying power and the dressing taking place while that generator was turning and supplying power. We did not see the general duties of the unit gangs at Hazelwood, and these are at page 5174-5 where practically every job the man did—and I am not saying every job by every man but a large number of the jobs these men employed in the unit gangs did—was done while the equipment was still alive, and reference to the transcript will support this.

We just did not see this in the inspections of the clause 4 establishments. Admittedly at A.W.V. we were told about occasional working on the live switchboard but this work is work described at p. 5174 as working on the controls in the power station while all the surrounding and adjacent equipment is alive, something which we just did not see.'

Concluding his submissions Mr McBride said:

'Bearing in mind that both the S.E.C.V. and the H.E.C. have said that the work is the same and the work value is the same, they come along to this Commission and ask the Commission to endorse different rates for the S.E.C. and the H.E.C. We say that they are not arguing money amounts in this case; all they are coming to this Commission for is to get some kind of definition of work value and what the work value content is in the amounts to be awarded. We say that if the Commission does this, then the whole position will be further confused. The vital issue in this case so far as we are concerned is the amounts to be paid.

Both the State Electricity Commission of Victoria and the Hydro-Electric Commission of Tasmania have agreed that the amounts in these two establishments be higher than the amounts in clause 4, and in view of that we say the Commission could not concern itself and should not concern itself with trying to define the actual amount of money that goes to work value and then putting some other amount in a different column.'

GENERAL CONCLUSIONS

Mindful of the importance of this long Inquiry I thought it necessary to review the inspections and to describe at some length the evidence and submissions of the parties. In the discussion about to follow I will avoid as far as possible repetition of details which have already been set out.

The matters now arising for consideration include the establishment of the factual position, the construction placed on the facts by the parties, consideration of issues, rates of pay and questions incidental thereto such as over award payments, public interests and capacity to pay.

FACTUAL POSITION

The Inquiry was primarily directed to the investigation of rates of pay for employees working under clause 4 of the Metal Trades Award and in the exercise of this task the Commission whether constituted by Mr Commissioner Winter or the full Bench examined a range of activities of the metal trades section of Australian manufacturing industries.

The inspections and the sworn evidence leave no doubt of the development of secondary industries and of the technological changes which have taken place. That must be a basic finding of fact. Then it is clear that with development and change there has been a decided improvement not only in the range of production but in the quality of goods manufactured. Australia is now producing machinery and components which in the past were wholly imported. Mass production is being attained. Some success has been achieved in export trade and efforts in that direction are continuing.

Modern development has affected materially employers and employees.

On the 'employer' side there has been heavy capital expenditure and the need for managements so to regulate activities that efficient use can be made of expensive machinery. This has meant attention to research, the ascertainment of techniques best suited for the activities of particular establishments, the application of methods aimed at securing efficiency.

On the 'employee' side, the sagacity of the modern machine has widened the range of work for that section of the labour force which is not possessed of technical training or qualifications. The tendency to employ non-tradesmen on the operation of machines which showed itself when Mr Justice Higgins was making his award of 1921 and which had become more discernible when Sir George Beeby brought down his several decisions late in 1929 and early in 1930 has continued to develop, so much so that machine operation is now to a substantial extent performed by process workers, the majority of whom are females. Further, machinery having become faster, the tempo of work has tended to increase. Where production obtained manually or by the use of slower machines may have provided greater opportunity for respite, now it has become generally necessary for employees to adapt themselves to the speed of the machines and to work with greater continuity. Again the need for efficiency has, as already indicated, brought for many employees changes in the methods of work. A shortage of labour has also had this effect.

CONSTRUCTION ON FACTS

The unions and the employers sought to draw different inferences from the facts as above shortly set out, it being contended on the one hand that the changes which admittedly had taken place increased work value and on the other hand that work value had been reduced.

The evidence and submissions for and against the respective contentions have been summarised earlier in these reasons and it is open to me to proceed to consideration of the issues.

CONSIDERATION OF ISSUES

Taking the evidence and submissions as a whole and in the light of knowledge obtained from inspections, I do not accept the employers' case that modern technology, specialisation, planning, simplification and supervision have reduced the value of work. I elaborate on this conclusion, first dealing with tradesmen and then proceeding to other classifications.

So far as tradesmen are concerned, modern mechanisation has produced results which include these. On the manufacturing side the first class machinist is directed to machines which by award definition fall within the work of a tradesman or which the employers as a matter of preference consider are best operated by persons possessing trade qualifications experience and skill. Included amongst these are machines, the setting up of which may be more complicated or which are engaged on work requiring of the operator ability to read drawings and to work to fine tolerances. They may also include machines used for the production of expensive components or tools. On the maintenance side the fitter, whether mechanical or electrical, is concerned with keeping the machines in proper working order, a task which undoubtedly calls for trade knowledge and skill. The work which they perform on machines has on the whole increased, and not reduced, the work value of tradesmen.

As to specialisation, there is a growing tendency to keep employees including machinists on a particular machine but this does not necessarily cut down work value or leave it static. The important consideration in relation to tradesmen is this. It is common ground that the training of an apprentice should extend to a full range of the trade which he proposes to enter. He is taught the trade as a whole and not merely one aspect of it. It is the aim not only of technical educational authorities but of the employers themselves that as far as reasonably

possible the apprentice should emerge from his indentures as a versatile tradesman. Whatever may be the practice in other countries, this on the evidence is the situation in Australia. Bearing in mind the attitude of professional people, who are specialists, to their rates of remuneration, it would be unfair that a tradesman who has been trained over the full range of his trade, and who has necessarily devoted time and study for that purpose should remain on a stationary award wage because the employer has chosen to keep him on the one machine or on the one particular class of work. Just as the work of those in specialist occupations may become more valuable because of specialisation, so may this be the position with a tradesman it being reasonable to assume that with concentration on specific machines or work he would become expert in a particular field. Specialisation does not support the argument based on reduced work value.

Planning with the object of simplification of work or of increasing the flow of work may well be of assistance to a tradesman. Taking detailed drawings prepared by professional engineers or draughtsmen as an example of aids with which he may be provided, he is able more readily to size up what is wanted of him and his work is thereby facilitated. But the simplification of the drawing does not dispense with the exercise of his trade knowledge. He is still required to read, understand and apply. The value of the method is that it enables the tradesman to come more quickly to the correct interpretation or requirement and in that way to exercise his trade skill towards faster completion of the work upon which he is engaged. The employer by eliminating or reducing incidental steps obtains greater use of the tradesman's essential skill and ability. Here again the value of the work is increased rather than reduced.

I turn now to supervision. Although a supervisor may inspect work and may be available for consultation, nevertheless on the evidence a tradesman is employed as a tradesman and is required as such to carry out duties calling for technical training knowledge and skill. He is not an employee who is told how to do his work, shown what to do, who is under constant instruction and who is not asked to accept responsibility. With the tradesman, supervision does not take away the need to exercise his trade skills and to accept responsibility therefor. It is a means of ensuring that the responsibility is being adequately discharged but it does not substitute the supervisor for the tradesman. In the course of his evidence Mr Marks who was a witness for the employers, and whose experience in industry extends over a long period, while stating that 'the toolmaker is under close supervision by foreman and leading hand' went on to add that 'being a qualified and skilled tradesman it is reasonable to expect that this supervision would need only to be a minimum'. This evidence accorded with common sense and was fully consistent with what was seen at inspections, it being the position that although their tasks varied in difficulty or complexity, tradesmen seen at work were exercising trade skill without anything more than general supervision. On the whole of the evidence supervision does not reduce the work value of tradesmen. Nor does it furnish a sound reason against a conclusion that their work value has increased.

Coming to classifications other than tradesmen, the employers advanced against them evidence and submissions upon work value similar to what was said in respect of tradesmen. It has been established that there are modern machines which may readily be handled by employees without technical qualifications whose knowledge and training fall far short of requirements for tradesmen. It is reasonable to believe that these employees and the many others engaged in the large variety of duties connected directly with the conduct of a business in its entirety receive greater guidance and assistance and that their work calls for closer supervision. Nevertheless the whole of the evidence in the light of the inspections leads

to the conclusion that with the exception of those working in classifications on or near the base rate, each employee brings to his task or service some degree of training, skill and responsibility. These are elements proper to consider in the assessment of work value and the greater use which the employer is able to make of them enhances the intrinsic worth of the employee. There are however, as already indicated, employees working in lower classifications whose training, skill and responsibility are negligible and in respect of whom there appears no sound reason for further increased wages on a work value basis. The interests of this description of employee are protected by clause 3 of the award which provides for a minimum wage and are considered annually in National Wage Cases determined on purely economic grounds.

I agree with Mr Brodney that metal trades employees work largely as a team. Each factory or workshop necessarily has its own business objective. The employees while performing separate tasks work in combination for the achievement of that common objective. An essential element in the control and management of business is the attainment of efficiency. I do not believe that systems of work calling for expert management and planning have been introduced as a means for avoiding wage increases. Their essential purpose is for securing successful results in the operation of the business enterprise and this has meant that in general terms each employee forming part of the team now works in a way which has improved his work value.

In the assessment of the weight to be attached to the employers' submissions on reduced work value other considerations call for comment. While not asking that wages should be reduced, it flows from their arguments that in a strict sense there should be general reductions and in fact they have so stated. Yet the employee in the metal trades who does not receive an over award payment is very much an exception. That the employers almost invariably pay more than is required by law would appear to provide a practical reason for refusing to act upon their submissions even if they were otherwise sound which, in my opinion, they are not. Further, particularly with tradesmen but to an extent with other employees also, the proposition that mechanisation and simplification of work have the effect of reducing work value could have adverse effects upon the metal trades industry. Taking the tradesman as an illustration, an apprentice passing through technical college and indentured to a metal trades master could upon qualification find himself in the situation of working in an industry where his work is devalued by his employer, at least for the purpose of award rates of pay. This is a possibility unlikely either to attract or retain skilled labour in an industry in which it is a fundamental requisite.

The evidence, submissions and inspections, all of which have been particularised elsewhere in these reasons, support a finding that work values of employees in the metal trades have increased. I so find.

THE CLAIMS

As the Inquiry proceeded the claims of the unions were further particularised and were finally set out in detail in the document marked Exhibit M63.

I refuse to act upon the submission that wages should be increased on the economic grounds put forward. The 'restoration of marginal relativities' argument has already been rejected by the Commission and apart from that consideration it furnishes no sound reason for the fixation of rates in a work values case. The amounts claimed by the unions are relevant in one way only. They constitute the maximum wages which it is open to the Commission to award on a work value basis for employees working under clause 4 of the Metal Trades Award.

SHOULD THERE BE WAGE INCREASES

It is now to be decided whether metal trades wage rates should be increased and if so in what amounts. Fortunately for the unions this has been a work value inquiry and notwithstanding the rejection of the submission based on the restoration of marginal relativities there is ample evidence before the Commission on work, its nature and responsibilities. It is legally open to the Commission to grant increases by reference to that evidence but first let it be again emphasised that they would flow strictly from an inquiry specifically restricted to work values in the metal trades, that they would not be granted on general economic grounds and could not provide a basis for 'across the board' wage movement.

Having rejected the employers' case and having weighed carefully all relevant facts and circumstances, including qualifications, training and skill, technological changes, changed conditions, changes in metals, alterations of methods of work, increased tempo of work, responsibilities individually and as a member of a team, availability for skilled work and the length of time which has elapsed since previous fixations, I have decided that except for those classifications the wage rates for which are appropriate for determination on purely economic considerations, there should be an upward movement.

TO WHOM SHOULD THE INCREASES APPLY

A considerable number of classifications was not the subject of direct evidence and it arises for consideration whether any award variation is to be restricted to those which were so covered or whether there is proper ground for also taking in others which were not. On 25 October Moore *J.* speaking for the Full Bench made an announcement which read in part:

'Subject to what any party or intervener may say, we propose to pursue the following course. As soon as we reasonably can after the hearing has concluded we will aim at announcing the rates for the 26 classifications seen on inspections and also for such other classifications as we find practicable. We cannot of course inform the parties before that decision what precise number of classifications it will cover, but it will not include a rate for storemen and packers, consideration of which has by agreement been deferred. Nor have we as yet formed any view on the new classifications suggested by the Commonwealth or indeed on the necessity for any new classifications. Despite the fact that we cannot be more specific, we ask the parties to commence now to apply their minds to what will happen after we have announced our decision on those classifications. We take this course with the object of achieving as much as possible by agreement and therefore we will require the parties to confer and within 14 days of the announcement of that decision:

(a) to inform us what agreement has been reached as to rates for classifications not covered by our decision. These rates will be included in our final order.

(b) as to the classifications about which agreement may not have been reached, to supply us with their views either joint or several as to what should be paid together with a short statement of the work done by each classification about which there is disagreement.

As to (b) above we will, in the light of material supplied, decide whether or not we will require argument about those classifications. We would hope then to be in a position to announce our decision on these outstanding classifications shortly afterwards.

We realise that this proposed procedure may cause strain on the parties but we consider that, given goodwill by all concerned, it should succeed and should achieve a proper result.'

Following the above announcement the parties continued with the presentation of their respective cases and made divergent submissions on the number of classifications which could be determined. Mr Heagney who represented the Iron Workers Association took the view that there was no evidence relating to certain classifications in which his union was interested and asked that the Commission not proceed 'very far beyond the limits of the 26 classifications'. At a later stage

Mr Brodney who represented the Australasian Society of Engineers but who also spoke on behalf of the other unions said there were many circumstances which justified substantial increases in all margins. At a later stage still Mr Robinson on behalf of the private employers tendered a document (Exhibit R.40) which gave particulars of some 79 classifications 'in respect of which evidence has been given by private employers in relation to change in work value demands'. After making a reference to the conference contemplated in the announcement he said:

'But we do say that in respect of classifications generally, the Commission should indicate its acceptance of the general pattern of submissions made by employers, and the evidence which has been submitted on the industrial engineering developments, because this is a matter of principle, and the evidence as to general reduction in work value demands flows from it.

We feel it would be of assistance to the parties in understanding the Commission's intention in this matter if an expression were made of the acceptance of the general principle.'

When he came to summarise his submissions Mr Robinson stated further:

'We have shown that the industrial engineering developments are inevitably accompanied by high capital investment and reduction in work value demands for the vast majority of employees in this industry.'

In view of the way in which the case developed, having regard particularly to the evidence and submissions for the private employers and bearing in mind that the announcement contemplated fixation of rates not only for 26 classifications but also for such other classifications as were found practicable, I consider it is open to make determinations for classifications left in issue provided that proper ground exists for so doing. Before proceeding to the qualification just stated, I express the view that full determination is preferable to the alternative method of fixing rates for classifications in respect of which there has been direct evidence and of then throwing the parties into conference with the object of working out rates for others. There would be a distinct possibility of disagreement in which event the Commission would be placed in the position of having to make further adjudications, a process which could conceivably occupy a considerable period of time and in this connection it should not be overlooked that in its earlier announcement of 15 August last the Commission stated its aim of bringing down a final order well before the end of the year.

In a case of this magnitude it is obvious particularly from an industrial viewpoint that an order which should at the one time determine wage rates for employees as a whole would have much to commend it and particularly so when by reserving to the parties liberty to apply to the Commissioner assigned to the industry the opportunity of correcting any provision shown to be inappropriate unfair or unjust would be readily available.

After close consultation with my colleague, Mr Commissioner Winter, who is the Commissioner assigned to the metal trades industry and who was present at each inspection, I have reached the conclusion that the whole of the evidence particularly when considered in the light of inspections, the circumstance that employees work as a team, the general nature of the case presented by employers, the existence of technological changes systems of work planning and methods all aimed at omnifarious efficiency in the operation of business enterprises and the long standing practice of providing the same rate of pay for employees following diverse trades enable the inference to be drawn that a common element exists which can be applied to the fixation of wage rates for classifications of employees generally working under clause 4 of the Metal Trades Award, except those classifications the wage rates for which are appropriate for determination on purely economic grounds, that is to say classifications in which the training skill and responsibility of the employees are negligible. This common element is that work value has increased.

I propose to make determinations bearing in mind that with the generality of classifications a common element exists and that with specific classifications there are additional work value features which call for alteration of relativities.

AMOUNTS

Proceeding to consideration of wage fixations and first dealing with tradesmen, although Beeby *J.* by 1937 had determined margins which he regarded as proper for their classifications, the fact remains that rates for tradesmen in the metal trades industry have not over a period of 30 years been fixed by reference to their training work, duties and responsibilities. The decision given by Mr Conciliation Commissioner Galvin (as he then was) in 1952 although reached after a hearing in which there had been lengthy evidence resulted in award rates being left as they then stood, with relativities except for minor adjustments remaining undisturbed. There were, of course, prior to the Galvin award and subsequently to it, increases on economic grounds but these in the main were of a general character applying to all employees in all industries. In my opinion, the economic increases taken in the aggregate have failed to provide for tradesmen the award wages to which on the whole of the evidence in this case they are justly entitled.

It is, of course, the position that tradesmen as well as other employees are not restricted to award rates of pay but this circumstance does not cut down the impression that the award fixations are inadequate and unreal.

Provision for attraction payments has not been regarded as a procedure properly falling within the functions of industrial authorities but nevertheless there may be good reason why an award should not operate as a discouragement. Particularly is this the case with tradesmen. They are in short supply, so much so that employers have been constrained to invest in machines which themselves perform skilled operations. But nevertheless tradesmen remain indispensable employees and there is a clear necessity of inducing boys to serve apprenticeships and enter trades. When weighing considerations for and against the choice of a career the rate of wage prescribed by an industrial award could well be a decisive factor and it is important therefore that the award prescription for tradesmen should be such as recognises their training and qualifications, the value of their work and their status in the community.

The Commission had evidence directed to the work duties and responsibilities of tradesmen. It had detailed demonstrations of their work. It had evidence of training technical college curricula and the complexity of prescribed courses. It was told of the necessity of keeping up with new developments. It was also told at technical college inspections of the importance of mathematics and of the difficulty of obtaining students of the required standard. Details of these features have already been set out as have the views of the employers.

Subject to considerations flowing from over award payments, public interest and capacity to pay the rates for tradesmen should be those set out in the schedule handed down with these reasons and marked A.

OTHER CLASSIFICATIONS

Proceeding now to remaining classifications, here the position is somewhat different to that of tradesmen. Beeby *J.* in his 1929 decision clearly contemplated systems of payment by results and there is no doubt that over the years particularly in relation to process workers, bonus arrangements reached at a factory level have been commonplace.

These incentives are in my opinion in the best interests of employers, employees and the industry.

For all the reasons set out earlier, I would subject to the same reservations as with tradesmen, award to classifications other than tradesmen and other than those the wage rates for which are appropriate for determination on purely economic grounds, the increases set out in the said schedule A. Full liberty to apply to the Commissioner assigned to the industry is reserved to the parties. I make an explanation which applies to non-tradesman classifications as well as tradesmen. Existing relativities have in general been followed but I have had no hesitation in causing some disturbance where wage justice for a particular classification so warranted.

OVER-AWARD PAYMENTS

Employees almost invariably receive over-award payments and in the past increases to marginal rates made on economic grounds have not been absorbed, that is to say employees have continued to receive the over-award payment and the arbitral increase has been added to it. This practice has given rise to a serious industrial problem and award making being a practical process it is a matter for consideration whether the increases which I have in contemplation should be modified. Having thought a lot about the matter, I have decided that the opportunity for making proper adjustment to award rates which had not occurred for many years and which has only been presented after a lengthy work values inquiry should not be avoided. It is not to be overlooked that although by 1937, Beeby *J.* had fixed margins which he described as proper for tradesmen, the rates must have been determined in light of the circumstances of the day and further that the comprehensive review made by Mr Commissioner Galvin in 1952 had the general result of increases being refused in the public interest on economic grounds. One may reasonably inquire if for practical considerations such as the existence of over-award payments, award wages are not to be brought to a level commensurate with the value of work performed, when will the way become open, it being borne in mind that Australia and indeed the metal trades industry itself are seldom without economic problems? On this aspect I would adhere to the amounts which I have in mind. However I wish to make it clear to the unions and to employees themselves that so far as this Commission is concerned there is nothing in principle to prevent an employer from using existing over-award payments to offset the increases whether in whole or in part. It will, of course, be open to an employer to make an over-award payment if he so wishes and it is not to be expected that by reason of the proposed variation an employee's take home pay will be reduced. But any over-award payment made by an employer should be voluntary and should not be the result of industrial pressure whether in the form of strike action, threatened strike action, bans, limitations or the like. I respectfully express my full agreement with Wright *J.* 'that any fair minded person should concede that over-award payments should bear objective reconsideration in . . . light of . . . new level of minimum wages . . .'[1]

PUBLIC INTEREST

Having given full consideration to this aspect, I regard this as a case where public interest particularly in relation to the availability of skilled tradesmen will be best served by granting the increases in contemplation.

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[1] 115 C.A.R. 93 at p. 119

CAPACITY TO PAY

So far as the metal trades industry is concerned, the employers for reasons which I regard as good and proper expressly refrained from raising capacity to pay. In fact they objected when counsel for the Commonwealth raised the issue. However I have considered the submissions made by Mr Woodward and although devaluation may create some difficulty in the future, the details relating to the present state of the economy when examined in their entirety do not in my opinion preclude the granting of the claims.

FEMALE RATES

There was agreement or understanding between Mr McBride and Mr Robinson that for the purposes of this Inquiry the *status quo* in respect of female rates should continue, that is to say the generality of female employees should be awarded 75 per cent of the male rate with a flat rate for employees at the third class machinist level or below. I would prescribe female rates in accordance with this arrangement but with clear recognition that the arrangement was without prejudice to the right of the unions to argue the question of equal pay, that a test case appears to be imminent and that the Commission itself by its decision in the National Wage Case of July last when the increase granted was made to apply to all adults has already taken an important step in relation to rates of pay for women.

ELECTRICITY SUPPLY UNDERTAKINGS

In the consideration of the cases presented on behalf of the instrumentalities, it is convenient to deal first with the Electricity Trust of South Australia. At the outset of his address, Mr Ferdinandy informed the Commission of terms of an agreement reached between the Trust and the Unions concerned in the Inquiry and sought from the Commission an appropriate order. The proper course for adoption is that the parties submit to Mr Commissioner Winter a draft order for his approval and if approved for his signature.

The cases for the State Electricity Commission, Victoria and the Hydro-Electric Commission of Tasmania may be considered together.

Mr Aird in the course of his address referred the Bench to submissions made by him during the hearing of the general economic claims considered and determined in December 1966.[1] In that proceeding he strongly criticised the reasonableness of decisions, the effect of which had been to make special provisions for employees of electricity supply undertakings including S.E.C. and H.E.C. and he indicated that the work value inquiry then in progress would establish that the work of those employees was identical with their 'counterparts' working under clause 4. This he argued would expose the fallacy of the special treatment decisions. Consistently with this attitude the S.E.C. and H.E.C. continued to be represented throughout the Inquiry and Mr Aird with Mr Douglas for the first-named instrumentality and Mr Marks for the second-named instrumentality, as already noted, presented detailed cases in which it was sought to establish (a) that wage increases should not flow from the Inquiry (b) that the 'sameness of work' argument had been fully established and (c) that the Commission should indicate the work value component of wages paid to 'electricity supply' employees.

With regard to the first matter it is unnecessary for me to say anything more than that my observations and conclusions concerning the evidence and submissions put forward by the employers generally are intended to apply, and

(1) 116 C.A.R. 713

do apply, to the instrumentalities represented by Mr Aird and Mr Marks respectively.

With regard to the second matter the evidence of Mr Snell and Mr Murray has already been summarised and further reference is unnecessary. There are on the evidence similarities between the work of employees in the instrumentalities and those in outside establishments and yet as Mr McBride pointed out certain work was seen at power stations which was not observed at outside inspections. There is an important distinction between a business enterprise engaged in manufacturing processes and a public utility charged with the generation of electricity for domestic purposes as well as for industry. The inspections in the Latrobe Valley demonstrating as they did, the highly specialised nature of power generation, the massive operations, the immensity of the service and its fundamental importance to the whole community highlighted the practical approach of this Commission in recognising the need for special provision for employees in electricity supply undertakings.

With regard to the third matter the decisions of Mr Commissioner Hood and Mr Commissioner Winter fully disclosed the reasons by which they were motivated and no further clarification is necessary. Any increase which may flow to employees of the S.E.C. or H.E.C. should in my opinion be awarded on the basis of the value of their work as employees of electricity supply undertakings to the extent that it was disclosed by this Inquiry.

NEW CLASSIFICATIONS AND OTHER INCIDENTAL MATTERS

It will be recalled that the Commonwealth made submissions in favour of the introduction of new classifications, the elimination of classifications which have become redundant or unnecessary and the combination of others under new titles which would group like work and hence bring about an overall reduction in the total number of classifications remaining in the award. With these submissions Mr Bullows expressed his concurrence. As the Inquiry proceeded the parties, whether employees or unions, in the main opposed changes of classifications and advanced reasons for their opposition. There was substance in the submissions of the Commonwealth and in the evidence of Mr Bullows and although at this stage I would not be prepared to force upon employers and employees changes which they do not desire it may be that upon further reflection and experence there will be a change of attitude on their part. If there is and an appropriate application is made, the Commission as constituted by the Commissioner could readily handle the situation. On the aspect of redundant classifications and questions incidental thereto some headway was made and on the whole the unions proved to be more receptive to Commonwealth suggestions than did the employers. Here again and also with respect to the number of wage rates in the award there is still the opportunity for further reflection and remedial action.

DATE OF OPERATION

In the light of the well established and firmly entrenched principles accepted and applied by this Commission I would refuse the claim for retrospective operation.

I would provide for an award variation coming into operation from the beginning of the first pay period to commence on or after the 22nd day of January 1968 and to remain in force for three years thereafter. Liberty to apply to the Commissioner assigned to the Metal Trades Industry is reserved to the parties.

SCHEDULE A—WAGE RATES

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
196 (NSW)	Div. J (c)—All other labourers ..	34.90	34.85	34.90	Nil
292 ..	Div. O—Employee not elsewhere classified	34.90	34.85	34.90	Nil
76D ..	Div. E—Employee not elsewhere classified	35.60	35.80	35.60	Nil
195 (NSW)	Div. J (c)—Other employees with not less than three months experience in the metal trades industry	35.75	36.05	35.75	Nil
252M (NSW)	Div. NA—Labourer-conveyor 1st 3 months experience ..	35.75	36.05	35.75	Nil
252N (NSW)	Div. NA—Labourer—tub removal 1st 3 months experience ..	35.75	36.05	35.75	Nil
252P (NSW)	Div. NA—Labourer—General 1st 3 months experience.. ..	35.75	36.05	35.75	Nil
291 ..	Div. O—Other employees with not less than three months experience in the metal trades industry ..	35.75	36.05	35.75	Nil
76C ..	Div. E—Other employees with not less than three months experience in the metal trades industry ..	36.60	37.40	36.60	Nil
252M (NSW)	Div. NA—Labourer — conveyor after three months experience..	36.60	37.40	36.60	Nil
252N (NSW)	Div. NA—Labourer—tub removal after 3 months experience ..	36.60	37.40	36.60	Nil
252P (NSW)	Div. NA—Labourer — General after 3 months experience ..	36.60	37.40	36.60	Nil
206 (NSW)	Div. K—Employee delivering material to fitters and taking finished articles from fitters ..	37.00	40.15	37.00	Nil
178 ..	Div. J (b)—Racksman	37.10	39.40	37.10	Nil
162 ..	Div. I—All others in this division	37.25	40.90	37.25	Nil
165 (SA) ..	Div. J (a)—Liquidizer	37.45	41.30	37.45	Nil
167 (SA) ..	Div. J (a)—Pickler	37.45	41.30	37.45	Nil
174 ..	Div. J (b)—Inspector—Other ..	37.45	41.30	37.45	Nil
237D (NSW)	Div. KA—Spray and other painters	37.60	39.20	38.60	1.00
237G (NSW)	Div. KA—Other adults ..	37.60	39.20	38.60	1.00
169 ..	Div. J (b)—Fireman	37.65	41.85	38.65	1.00
187 (NSW)	Div. J (c)—Fireman	37.65	41.85	38.65	1.00
77 ..	Div. F—Electroplater 3rd class ..	37.70	42.05	38.70	1.00
79A (NSW)	Div. FA—Electroplater 3rd class	37.70	39.45	38.70	1.00
116 ..	Div. G (c)—All others in this sub-division	37.70	42.05	38.70	1.00
133 ..	Div. H (a)—Guillotine operator (other)	37.70	42.05	38.70	1.00
134 ..	Div. H (a)—Guttering machinist	37.70	42.05	38.70	1.00
137 ..	Div. H (a)—Power machinist (not otherwise specified)	37.70	42.05	38.70	1.00
139 ..	Div. H (a)—Press operator (light)	37.70	42.05	38.70	1.00
141 ..	Div. H (a)—Silk screen operator	37.70	39.45	38.70	1.00
149 ..	Div. H (b)—Cap solderers (Not otherwise classified)	37.70	42.05	38.70	1.00
152 ..	Div. H (b)—Operator of other power presses and other power machines	37.70	42.05	38.70	1.00
153 ..	Div. H (b)—Solderer and dipper..	37.70	42.05	38.70	1.00
155 ..	Div. H (c)—Dipper	37.70	42.05	38.70	1.00

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
156 ..	Div. H (c)—Grainer, liner and filliter	37.70	42.05	38.70	1.00
157 ..	Div. H (c)—Painter and lacquerer	37.70	42.05	38.70	1.00
172 ..	Div. J (b)—Fuser on medallions, badges or buckles	37.70	42.05	38.70	1.00
181 ..	Div. J (b)—Swiller, gripper and brusher	37.70	42.05	38.70	1.00
188 (NSW)	Div. J (e)—Gripper (brush) ..	37.70	42.05	38.70	1.00
252 ..	Div. N—Vacuum pumper ..	37.70	39.45	38.70	1.00
283 ..	Div. O—Process worker (all divisions)	37.70	42.05	39.30	1.60
33 ..	Div. B—Blacksmith's striker ..	37.85	42.40	38.85	1.00
85 ..	Div. G (a)—Cable jointer's mate	37.85	42.40	38.85	1.00
88 ..	Div. G (a)—Electrical fitter's and mechanic's assistant	37.85	42.40	38.85	1.00
95 ..	Div. G (a)—Linesman's assistant	37.85	42.40	38.85	1.00
160 ..	Div. I—Pickler	37.85	42.40	38.85	1.00
164 (SA) ..	Div. J (a)—Fuser's assistant ..	37.85	42.40	38.85	1.00
171 ..	Div. J (b)—Fuser's assistant ..	37.85	42.40	38.85	1.00
173 ..	Div. J (b)—Inspector—1st class (i.e. one who inspects finished enamel work as to quality) ..	37.85	42.40	38.85	1.00
166 (SA) ..	Div. J (a)—Mixer	37.85	42.40	38.85	1.00
175 ..	Div. J (b)—Mill hand and mixer..	37.85	42.40	38.85	1.00
177 ..	Div. J (b)—Pickler	37.85	42.40	38.85	1.00
192 (NSW)	Div. J (c)—Painter (brush) ..	37.85	42.40	38.85	1.00
237B (NSW)	Div. KA—Testers (other than sound testers) with less than 12 months experience	37.85	39.75	38.85	1.00
253 ..	Div. O—Assist furnaceman ..	37.85	42.40	39.40	1.55
255 ..	Div. O—Belt repairer	37.85	47.70	38.85	1.00
264 (a) ..	Div. O—Dresser, shot blast and sand blast—(a) who operates from outside a properly enclosed cabin	37.85	42.40	38.85	1.00
267 ..	Div. O—Friction saw operator ..	37.85	42.40	38.85	1.00
274 ..	Div. O—Lagger—1st six months experience	37.85	42.40	38.85	1.00
276 ..	Div. O—Oiler (overhead) ..	37.85	42.40	38.85	1.00
278 ..	Div. O—Painter, brush hand ..	37.85	52.40	38.85	1.00
279 ..	Div. O—Pickler	37.85	42.40	38.85	1.00
288 ..	Div. O—Tar dipper	37.85	42.40	38.85	1.00
290 ..	Div. O—Employee directly assisting an employee whose wage rate is equal to or in excess of that prescribed for Classification 19—Mould polisher for the relevant area	37.85	42.40	38.85	1.00
52 ..	Div. C—Driller using stationary machines	38.10	42.80	39.10	1.00
54 ..	Div. C—Machinist, steel construction—2nd class	38.10	44.30	39.10	1.00
61 ..	Div. D—Welder—3rd class ..	38.10	42.80	39.10	1.00
80 ..	Div. G (a)—Battery attendant ..	38.10	42.80	39.10	1.00
105 ..	Div. G (b)—Radio wirer, i.e. employee wiring a complete set from a circuit diagram or model other than on production line ..	38.10	42.80	39.10	1.00

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

[*Gallagher J.*

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
106 ..	Div. G (b)—Power tube operative 1st six months experience ..	38.10	42.80	39.10	1.00
112 ..	Div. G (c)—Formation process ..	38.10	42.80	39.10	1.00
131 ..	Div. H (a)—Drop hammer stamper	38.10	42.80	39.10	1.00
138 ..	Div. H (a)—Press operator (heavy)	38.10	42.80	39.10	1.00
142 ..	Div. H (a)—Solderer and dipper ..	38.10	42.80	39.10	1.00
151 ..	Div. H (b)—Operator of power capping machines or metal pots on automatic machines ..	38.10	42.80	39.10	1.00
158 ..	Div. I—Assistant working over metal pot	38.10	42.80	39.10	1.00
189 (NSW)	Div. J (c)—Gripper (spray) ..	38.10	42.80	39.10	1.00
193 (NSW)	Div. J (c)—Painter (spray) ..	38.10	42.80	39.10	1.00
250 ..	Div. M—Plastic press operator (other)	38.10	42.80	39.10	1.00
250B ..	Div. M—Extruding machine operator (other)	38.10	40.20	39.10	1.00
273 ..	Div. O—Ladleman	38.10	40.25	39.10	1.00
277 ..	Div. O—Painter of ironwork using spray	38.10	53.40	39.10	1.00
19 ..	Div. A—Mould polisher ..	38.50	43.20	39.50	1.00
34 ..	Div. B—Blacksmith's striker on double fires and other assistant	38.50	43.20	39.50	1.00
38 ..	Div. B—Forger's assistant ..	38.50	43.20	39.50	1.00
40 ..	Div. B—Forge furnaceman's assistant	38.50	43.20	39.50	1.00
41 ..	Div. B—Hammer driver ..	38.50	43.20	39.50	1.00
57 ..	Div. C—Rivet heater (a tradesman employed as such in this division who, in the course of his work, is called upon to operate any machine shall be paid at the wage rate prescribed for a tradesman for all work done)	38.50	43.20	39.50	1.00
197 (NSW)	Div. K—Blacksmith (repetition stove)	38.50	43.20	39.50	1.00
201 (NSW)	Div. K—Coppersmith on wash coppers and side boilers for stoves (machines)	38.50	43.20	39.50	1.00
218 (NSW)	Div. K—Metallic enameller ..	38.50	43.20	39.50	1.00
237C (NSW)	Div. KA—Sound testers ..	38.50	40.25	39.50	1.00
238 ..	Div. L—Assistant at ring-making machines	38.50	43.20	39.50	1.00
244 ..	Div. L—Employee on tar dip and sand rolling	38.50	43.20	39.50	1.00
246 ..	Div. L—Faucet maker's assistant	38.50	43.20	39.50	1.00
254 ..	Div. O—Attendant at small rivet heating, bolt heating or similar types of fires or furnaces ..	38.50	43.20	39.50	1.00
256 ..	Div. O—Bender of iron and steel frames used for reinforcing concrete	38.50	43.20	39.50	1.00
257 ..	Div. O—Block and tackle hand ..	38.50	43.20	39.50	1.00
259 ..	Div. O—Cold saw operator ..	38.50	47.70	39.50	1.00
261 ..	Div. O—Dogman and/or crane chaser	38.50	47.70	41.20	2.70
263 ..	Div. O—Dresser and grinder (other)	38.50	43.20	40.10	1.60

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
265 ..	Div. O—Emery wheel attendant..	38.50	43.20	39.50	1.00
265A ..	Div. O—Flame scaler	38.50	44.30	39.50	1.00
271 ..	Div. O—Grinding machine or emery wheel operator ..	38.50	43.20	39.50	1.00
280 ..	Div. O—Piler..	38.50	43.20	39.50	1.00
282 ..	Div. O—Press and block hand assisting a boiler or angle-iron smith	38.50	43.20	39.50	1.00
286 ..	Div. O—Tool and/or material storeman (as defined) ..	38.50	43.20	Deferred at request of parties	
289 ..	Div. O—Employee assisting a ship plate bender or plate setter ..	38.50	43.20	39.50	1.00
63 ..	Div. E—Assistant furnaceman ..	38.60	44.30	39.60	1.00
64 ..	Div. E—Casting chipper ..	38.60	44.30	39.60	1.00
68 (a) ..	Div. E—Dresser, shot blast and sand blast—(a) who operates from outside a properly enclosed cabin	38.60	44.30	39.60	1.00
73 ..	Div. E—Ladleman	38.60	44.30	39.60	1.00
74 ..	Div. E—Loader and unloader of annealing furnace	38.60	44.30	39.60	1.00
75 ..	Div. E—Plate and machine moulder and/or coremaker—1st six months experience ..	38.60	44.30	39.60	1.00
75A ..	Div. E—Shell moulding operative	38.60	44.30	39.60	1.00
76B ..	Div. E—Employee directly assisting an employee whose wage rate is equal to or in excess of that prescribed for Classification 19—Mould polisher for the relevant area	38.60	41.05	39.60	1.00
250C ..	Div. M—Examiner of materials—part finished or finished products	38.60	41.15	39.60	1.00
252E (NSW)	Div. NA — Assistant — drag machine	38.60	41.10	39.60	1.00
252F (NSW)	Div. NA — Assistant — cope machine	38.60	41.10	39.60	1.00
252G (NSW)	Div. NA—Assistant—shakeout ..	38.60	41.10	39.60	1.00
252H (NSW)	Div. NA—Assistant—charging bins	38.60	41.10	39.60	1.00
252J (NSW)	Div. NA—Assistant—furnaces ..	38.60	41.10	39.60	1.00
252K (NSW)	Div. NA—Assistant sand plant ..	38.60	41.10	39.60	1.00
252L (NSW)	Div. NA—Assistant—cope transfer	38.60	41.10	39.60	1.00
252Q (NSW)	Div. NB—Attendant—machine loader	38.60	41.15	39.60	1.00
252R (NSW)	Div. NB—Attendant core placer..	38.60	41.15	39.60	1.00
252S (NSW)	Div. NB—Attendant — conveyor loader	38.60	41.15	39.60	1.00
252T (NSW)	Div. NB—Attendant—shakeout..	38.60	41.15	39.60	1.00
99 (b) ..	Div. G (a)—Patrolman—inspecting, switching or removing lamps or fuses on circuits, but not repairing	38.65	43.35	39.65	1.00
274 ..	Div. O—Lagger—2nd six months experience	38.70	41.30	39.70	1.00
62 ..	Div. D—Welder—tack.. ..	38.85	43.55	39.85	1.00

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
65 ..	Div. D—Core stove or oven attendant	38.85	45.05	39.85	1.00
67 ..	Div. D—Dresser and grinder (other)	38.85	45.05	40.60	1.75
76 ..	Div. E—Tapper-out	38.85	45.05	39.85	1.00
76A ..	Div. D—Emery wheel attendant..	38.85	41.60	39.85	1.00
76E ..	Div. E—Dogman	38.85	47.70	41.70	2.85
79D (NSW)	Div. FA—Spinner—Other ..	38.85	41.60	39.85	1.00
86 ..	Div. G (a)—Coremaker (transformers)	38.85	41.60	39.85	1.00
113 ..	Div. G (c)—Group burning (placing separate chambers in batteries, burning posts to connectors on top of battery)	38.85	43.55	39.85	1.00
128 ..	Div. H (a)—Coremaker (transformers)	38.85	41.60	39.85	1.00
129 ..	Div. H (a)—Dyesetter	38.85	53.40	39.85	1.00
144 ..	Div. H (a)—Spinner (other) ..	38.85	43.55	39.85	1.00
146 ..	Div. H (a)—Spray painter (on one coat work)	38.85	41.60	39.85	1.00
147 ..	Div. H (b)—Canister maker by hand and riveter by hand ..	38.85	43.55	39.85	1.00
148 ..	Div. H (b)—Canister vent closer and solderer working on tins containing substances with an artificial temperature of 150 degrees Fahrenheit and over ..	38.85	43.55	39.85	1.00
150 ..	Div. H (b)—Dyesetter and/or machine setter and/or leading press hand	38.85	53.40	42.90	4.05
198 (NSW)	Div. K—Box fitter on repetition work	38.85	43.55	39.85	1.00
239 ..	Div. L—Cement mixer.. ..	38.85	43.55	39.85	1.00
288A (NSW)	Div. O—Watchman and/or gatekeeper (N.S.W. only) ..	38.85	41.60	39.85	1.00
75 ..	Div. E—Plate and machine moulder and/or coremaker—2nd six months experience	38.95	45.45	39.95	1.00
66 ..	Div. E—Dresser and grinder (when using portable machine) ..	39.35	45.85	41.20	1.85
111 ..	Div. G (c)—Charging and moulding of grids..	39.35	43.95	40.35	1.00
237F (NSW)	Div. KA—Adult assemblers and/or repairers	39.35	40.80	40.35	1.00
262 ..	Div. O—Dresser and grinder (when using portable machine) ..	39.35	43.95	41.20	1.85
15 ..	Div. A—Machinist—3rd class ..	39.80	44.30	40.80	1.00
32 ..	Div. B—Blacksmith's machinist..	39.80	44.30	40.80	1.00
60 ..	Div. D—Welder—2nd class ..	39.80	44.30	40.80	1.00
106 ..	Div. G (b)—Power tube operative —After six months experience..	39.80	44.30	40.80	1.00
135 ..	Div. H (a)—Nameplate camera operator	39.80	42.90	40.80	1.00
136 ..	Div. H (a)—Nameplate etcher ..	39.80	42.90	40.80	1.00
176 ..	Div. J (b)—Packer and/or despatcher	39.80	42.40	Deferred at request of parties	

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
180 ..	Div. J (b)—Sprayer, grip and/or color coats	39.80	42.80	40.80	1.00
182 (NSW)	Div. J (c)—Checker	39.80	44.30	40.80	1.00
191 (NSW)	Div. J (c)—Packer and/or despatcher	39.80	42.40	Deferred at request of parties	
199 (NSW)	Div. K—Checker	39.80	45.45	40.80	1.00
210 (NSW)	Div. K—Fitter making, repairing, assembling, reassembling, setting, installing or testing cooking stoves, ovens, gas or electric stoves 3 feet or under in width ..	39.80	44.30	40.80	1.00
231B (NSW)	Div. K—Storeman—other (Metters Limited)	39.80	42.95	Deferred at request of parties	
232 (NSW)	Div. K—Packer and/or despatcher	39.80	42.95	Deferred at request of parties	
237E (NSW)	Div. KA—Valve grinders other than grinders of loose valves ..	39.80	41.05	40.80	1.00
243 ..	Div. L—Employee rounding and straightening steel pipes ..	39.80	44.30	40.80	1.00
250D ..	Div. M—Impregnating machine operator	39.80	43.40	40.80	1.00
250E ..	Div. M—Laminating machine operator	39.80	43.40	40.80	1.00
260 ..	Div. O—Dyecaster	39.80	44.30	40.80	1.00
281 ..	Div. O—Polisher	39.80	44.30	40.80	1.00
114 ..	Div. G (c)—Mixing and pasting by hand	39.95	43.95	40.95	1.00
44 ..	Div. B—Heat treater operative (as defined)	40.10	43.55	41.10	1.00
71 ..	Div. E—Furnaceman—other ..	40.10	46.60	42.90	2.80
75 ..	Div. E—Plate and machine moulder and/or coremaker—3rd six months experience	40.10	46.60	41.10	1.00
82 ..	Div. G (a)—Bond tester ..	40.10	44.70	41.10	1.00
103 ..	Div. G (b)—Radio repairer (factory)	40.10	44.70	41.10	1.00
110 ..	Div. G (c)—Battery repairer (factory)	40.10	44.70	41.10	1.00
190 (NSW)	Div. J (c)—Millhand and mixer ..	40.10	44.70	41.10	1.00
211 (NSW)	Div. K—Fitter making and assembling Regina or Empress stoves	40.10	44.70	41.10	1.00
240 ..	Div. L—Cement liner	40.10	44.70	41.10	1.00
242 ..	Div. L—Employee in charge of ring making machines	40.10	44.70	41.10	1.00
247 ..	Div. L—Machine operator (in charge of machines)	40.10	44.70	41.10	1.00
248 ..	Div. L—Pipe builder	40.10	44.70	41.10	1.00
258 ..	Div. O—Boiler (inside) chipper and cleaner	40.10	44.70	41.10	1.00
269 ..	Div. O—Furnaceman—Other ..	40.10	44.70	42.90	2.80
274 ..	Div. O—Lagger—after 2nd six months experience	40.10	43.55	41.10	1.00
53 ..	Div. C—Holder-up, whether using hand or machine dolly of any kind, including all work incidental thereto	40.40	43.20	41.40	1.00

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
54 ..	Div. C—Machinist, steel construction—1st class	40.40	47.70	41.40	1.00
79 (NSW)	Div. F—Polisher, other (respondent employers in South Australia and Metal Trades Employers Association in New South Wales and Queensland only) ..	40.40	44.15	41.40	1.00
79B (NSW)	Div. FA—Assembler (as defined)	40.40	44.15	41.40	1.00
79F (NSW)	Div. FA—Polisher—other ..	40.40	44.15	41.40	1.00
140 ..	Div. H (a)—Silk screen maker ..	40.40	44.20	41.40	1.00
145 ..	Div. H (a)—Spray painter (on both prime and finishing coats) ..	40.40	53.40	41.40	1.00
199A (NSW)	Div. K—Checker (Metters Limited)	40.40	41.15	41.40	1.00
231A (NSW)	Div. K—Storeman (General Store)	40.60	44.55	Deferred at request of parties	
287 ..	Div. O—Storeman and/or packer	40.60	43.20	Deferred at request of parties	
70 ..	Div. E—Furnaceman—electric ..	40.85	47.35	44.60	3.75
200 (NSW)	Div. K—Coppersmith on wash coppers and side boilers for stoves (hand)	40.85	45.45	41.85	1.00
268 ..	Div. O—Furnaceman—electric ..	40.85	44.85	43.35	2.50
270 ..	Div. O—Furnaceman on heavy angle-iron or heavy plate ..	40.85	45.45	44.60	3.75
252U (Qld)	Div. NC—Griffin wheel plant attendant	40.90	42.10	41.90	1.00
1 ..	Div. A—Assembler, window-frame making (non-tradesman) ..	41.25	45.85	42.25	1.00
6 ..	Div. A—Fitter—agricultural (non-tradesman)	41.25	45.85	42.25	1.00
69 ..	Div. E—Furnaceman—cupola ..	41.25	47.70	45.00	3.75
96 ..	Div. G (a)—Meter fixer ..	41.25	45.85	42.25	1.00
98 ..	Div. G (a)—Meter tester (2nd grade)	41.25	45.85	42.25	1.00
115 ..	Div. G (c)—Plant assembler ..	41.25	45.85	42.25	1.00
163 (SA) ..	Div. J (a)—Fuser	41.25	45.85	42.25	1.00
170 ..	Div. J (b)—Fuser	41.25	45.85	42.25	1.00
245 ..	Div. L—Faucet maker in charge of furnace	41.25	45.85	42.25	1.00
252A (NSW)	Div. NA—Operator—Cope machine	41.25	45.50	42.25	1.00
252B (NSW)	Div. NA—Operator—Drag machine	41.25	45.50	42.25	1.00
252C (NSW)	Div. NA—Operator—Conveyor ..	41.25	45.50	42.25	1.00
252D (NSW)	Div. NA—Operator—Furnace ..	41.25	45.50	42.25	1.00
68 (b) ..	Div. E—Dresser, shot blast and sand blast—Other	41.60	48.10	43.45	1.85
159 ..	Div. I—Galvaniser	41.60	46.20	42.90	1.30
161 ..	Div. I—Tinner and grease tinner	41.60	46.20	42.90	1.30
179 ..	Div. J (b)—Sand and shot blaster	41.60	47.35	42.90	1.30
194 (NSW)	Div. J (c)—Shot and sand blast dresser	41.60	47.35	42.90	1.30
209 (NSW)	Div. K—Fitter making, repairing, assembling, reassembling, setting, installing or testing cooking stoves, oven, gas or electric stoves over 3 feet and up to 5 feet in width	41.60	46.20	42.90	1.30

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
221 (NSW)	Div. K—Pattern fitter and pattern filer	41.60	46.20	42.90	1.30
237A (NSW)	Div. KA—Testers (other than sound testers)	41.60	42.35	42.90	1.30
264 (b)	Div. O—Dresser, shot blast and sand blast—other	41.60	46.20	42.90	1.30
168 (SA)	Div. J (a)—Stencil cutter	41.60	46.20	42.90	1.30
3	Div. A—Brass finisher (2nd class)	42.10	47.70	44.85	2.75
10	Div. A—Key-seating machinist	42.10	47.70	44.85	2.75
14	Div. A—Machinist—2nd class	42.10	47.70	44.85	2.75
21	Div. A—Pipe fitter on low pressure work	42.10	47.70	44.85	2.75
29	Div. B—White metaller (Preston Tramway workshops only)	42.10	47.70	44.85	2.75
46	Div. B—Tilter	42.10	47.70	44.85	2.75
75	Div. E—Plate and machine moulder and/or coremaker—after 3rd six months experience	42.10	48.50	44.85	2.75
77	Div. F—Electroplater—2nd class	42.10	53.40	44.85	2.75
78	Div. F—Maker-up (British Tube Mills (Aust.) Pty Ltd)	42.10	46.85	44.85	2.75
79 (NSW)	Div. F—Polisher, 1st class (respondent employers in South Australia and Metal Trades Employers Association in New South Wales and Queensland only)	42.10	46.70	44.85	2.75
79A (NSW)	Div. FA — Electroplater — 2nd class	42.10	46.85	44.85	2.75
79F (NSW)	Div. FA—Polisher—1st class	42.10	46.85	44.85	2.75
127	Div. H (a)—Sheet metal worker (2nd class)	42.10	47.70	44.85	2.75
130	Div. H (a)—Dyesetter press operator working from blue prints or plans	42.10	53.40	45.85	3.75
132	Div. H (a)—Guillotine operator (as defined)	42.10	53.40	46.20	4.10
154	Div. H (c)—Artistic japanner and gold worker	42.10	47.70	44.85	2.75
241	Div. L—Cement liner operator	42.10	47.70	44.85	2.75
249	Div. M—Plastic press operator (as defined)	42.10	47.70	44.85	2.75
250A	Div. M—Extruding machine operator (as defined)	42.10	46.70	44.85	2.75
266	Div. O—Fork lift driver	42.10	43.70	44.85	2.75
287A	Div. O—Storeman in charge of a store	42.40	47.60	Deferred at request of parties	
285	Div. O—Rigger and/or splicer (South Australia, Tasmania and Victoria only)—Less than 12 months experience as a rigger and/or splicer within or without the metal trades industries, to apply only to those who commence employment on or after 18 March 1966	42.50	53.40	45.25	2.75

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

[*Gallagher J.*

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
102 ..	Div. G (a)—Switchboard attendant	42.65	48.30	45.40	2.75
97 ..	Div. G (a)—Meter tester—1st grade	42.85	48.50	45.60	2.75
108 ..	Div. G (b)—Radio tester ..	42.85	48.15	45.60	2.75
285 ..	Div. O—Rigger and/or splicer (South Australia, Tasmania and Victoria only)—To apply only to those who commence employment before 18 March 1966 ..	43.10	48.75	45.85	2.75
94 ..	Div. G (a)—Linesman	43.15	48.85	45.90	2.75
99 (a) ..	Div. G (a)—Patrolman—Inspecting and switching circuits, or repairing live feeders or distributors of 600 volts or over, or repairing faults on consumers' premises	43.15	48.85	45.90	2.75
214 (NSW)	Div. K—Gas stove adjuster (outside work)	43.15	48.85	45.90	2.75
251 ..	Div. N—Glass tube bender ..	43.15	48.80	45.90	2.75
275 ..	Div. O—Mobile crane driver ..	43.60	44.50	46.85	3.25
284 (NSW)	Div. O—Rigger and/or splicer (New South Wales and Queensland only)	43.85	53.40	47.10	3.25
285 ..	Div. O—Rigger and/or splicer (South Australia, Tasmania and Victoria only)—Thereafter ..	43.85	49.95	47.10	3.25
31 ..	Div. B—Annealer and/or case hardener	43.90	49.80	47.15	3.25
264A (NSW)	Div. O—Employees engaged in sand blasting (State Dockyard, Newcastle)	44.60	51.20	48.35	3.75
17 ..	Div. A—Motor cycle mechanic ..	44.75	51.70	48.50	3.75
39 ..	Div. B—Forge furnaceman ..	44.75	51.70	48.50	3.75
51 ..	Div. C—Driller using portable machines	44.75	51.70	48.50	3.75
79C (NSW)	Div. FA—Drop hammer stamper who puts in dye and makes force	44.75	51.45	48.50	3.75
84 ..	Div. G (a)—Cable jointer on low tension (under 6,600 volts) ..	44.75	51.70	48.50	3.75
208 (NSW)	Div. K—Fitter making, repairing, setting or installing cooking stoves, ovens, gas or electric stoves over 5 feet in width and/or other heating and cooking appliances customarily used in cafes, kitchens, restaurants, hotels and ships, and produced by jobbing methods	44.75	51.70	48.50	3.75
104 ..	Div. G. (b)—Radio serviceman (elsewhere than in Queensland)	44.85	52.10	48.60	3.75
109 ..	Div. G (b)—Final tester and fault finder	44.85	51.70	48.60	3.75
79D (NSW)	Div. FA—Spinner—1st class ..	45.05	52.05	48.80	3.75
143 ..	Div. H (a)—Spinner—1st class ..	45.05	49.25	48.80	3.75
83 ..	Div. G (a)—Cable jointer on high tension (over 6,600 volts) ..	45.40	52.85	49.15	3.75
2 ..	Div. A—Brass finisher (tradesman)	46.00	53.40	53.40	7.40

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
4 (NSW)	Div. A—Engraving machinist—1st class (N.S.W. only)	46.00	53.40	53.40	7.40
5	Div. A—Fitter	46.00	53.40	53.40	7.40
11	Div. A—Locksmith	46.00	53.40	53.40	7.40
12	Div. A—Machine setter	46.00	53.40	53.40	7.40
13	Div. A—Machinist—1st class	46.00	53.40	53.40	7.40
18	Div. A—Motor mechanic	46.00	53.40	53.40	7.40
22	Div. A—Refrigeration mechanic or serviceman	46.00	53.40	53.40	7.40
23	Div. A—Safemaker and/or repairer (security work)	46.00	53.40	53.40	7.40
24	Div. A—Scale maker and/or adjuster	46.00	53.40	53.40	7.40
27	Div. A—Turner	46.00	53.40	53.40	7.40
28	Div. A—Wet stone grinder and glazer (tradesman)	46.00	53.40	53.40	7.40
49	Div. C—Boilermaker and/or structural steel tradesman	46.00	53.40	53.40	7.40
59	Div. D—Welder—1st class (as defined)	46.00	53.40	53.40	7.40
72	Div. E—Jobbing moulder and/or coremaker	46.00	53.40	53.40	7.40
77	Div. F—Electroplater—1st class	46.00	53.40	53.40	7.40
79A (NSW)	Div. FA—Electroplater—1st class	46.00	53.40	53.40	7.40
79B (NSW)	Div. FA—Silverplate tradesman (as defined)	46.00	53.40	53.40	7.40
81	Div. G (a)—Battery fitter	46.00	53.40	53.40	7.40
87	Div. G (a)—Electrical fitter and/or armature winder	46.00	53.40	53.40	7.40
90	Div. G (a)—Electrical mechanic	46.00	53.40	53.40	7.40
92	Div. G (a)—Electrician in charge of plant and/or installation	46.00	53.40	53.40	7.40
100	Div. G (a)—Shift electrician	46.00	53.40	53.40	7.40
101	Div. G (a)—Refrigeration mechanic or serviceman	46.00	53.40	53.40	7.40
102A	Div. G (a)—Telegraph mechanic and/or serviceman	46.00	53.40	53.40	7.40
107	Div. G (b)—Tradesman (radio)	46.00	53.40	53.40	7.40
125A	Div. GA—Carpenter or joiner (in addition to the wage rate a tool allowance of 50 cents per week shall be paid)	46.00	53.40	53.40	7.40
126	Div. H (a)—Sheet metal worker—1st class	46.00	53.40	53.40	7.40
186 (NSW)	Div. J (c)—Duster's assistant	46.00	53.40	46.10	0.10
216 (NSW)	Div. K—Heavy duty fitter (Metters Ltd)	46.00	53.40	53.40	7.40
35	Div. B—Brass-smith	46.30	54.00	53.70	7.40
36	Div. B—Copper-smith	46.30	54.00	53.70	7.40
45	Div. B—Smith, other	46.30	54.00	53.70	7.40
56	Div. C—Plate setter and frame bender	46.65	54.55	54.05	7.40
7	Div. A—Fitter, turbine blade	47.05	55.10	54.45	7.40
30	Div. B—Angle-iron smith	47.05	55.10	54.45	7.40
42	Div. B—Heat treater	47.05	55.10	54.45	7.40
47	Div. B—Toolsmith	47.05	55.10	54.45	7.40
48	Div. C—Angle-iron smith	47.05	55.10	54.45	7.40
50	Div. C—Boilersmith	47.05	55.10	54.45	7.40

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

[*Gallagher J.*

Number	Classification	Existing rate per week (Victoria—elsewhere)	Rate claimed (Victoria—elsewhere)	Rate awarded (Victoria—elsewhere)	Increase awarded
		$	$	$	$
58 ..	Div. D—Welder—special class (as defined)	47.05	55.10	55.10	8.05
93 ..	Div. G (a)—Installation inspector and/or tester	47.05	55.10	54.45	7.40
16 ..	Div. A—Marker off (i.e., a fitter the greater part of whose time is occupied in marking off) ..	47.40	55.10	54.80	7.40
55 ..	Div. C—Marker off (a tradesman the greater part of whose time in any weekly pay period is occupied in marking off and/or template making) ..	47.40	55.70	54.80	7.40
8 (NSW)	Div. A—Hand engraver (New South Wales only)	48.30	57.35	55.70	7.40
25 ..	Div. A—Scientific instrument maker	48.30	58.35	58.35	10.05
26 ..	Div. A—Toolmaker	48.30	58.35	58.35	10.05
43 ..	Div. B—Heat Treater not subject to plant metallurgical supervision	48.30	57.35	55.70	7.40
20 ..	Div. A—Patternmaker ..	49.40	58.35	58.35	8.95
9 ..	Div. A—Inspector	49.70	59.30	59.30	9.60
89 ..	Div. G (a)—Electrical instrument maker and/or repairer (as defined)	49.70	59.30	57.10	7.40
37 ..	Div. B—Forger and/or faggoter ..	50.35	60.40	57.75	7.40
91 ..	Div. G (a)—Electrician in charge of electric supply undertaking ..	51.80	62.70	59.20	7.40
185 (NSW)	Div. J (c)—Duster	53.30	64.95	53.40	0.10

Note: The order made as a consequence of these decisions is published separately. *See infra* p. 945

APPENDIX

REVIEW OF INSPECTIONS

INTRODUCTION

On 18 July 1966, Mr Commissioner Winter having called together the parties whose appearances had been announced in earlier proceedings concerned with the unions' applications for increased margins or with the employers application for a total wage and after having noted certain further appearances included amongst which was one for the State of Victoria and certain of its instrumentalities made an announcement (later to become known as 'Announcement No. 1'). He opened the proceedings with the following statement:

'A Full Bench of this Commission, of which Full Bench I am a member, has decided to avail itself of the procedure available under section 34 (6) of the Act to obtain from me after such investigation as I consider necessary a report with respect to the following specified matters relative to the Metal Trades Award, 1952 ('the award'):

(1) What, if any, rearrangements or re-designations of classifications or additional classifications under Part I of the award are necessary or desirable to bring them into accord with present-day requirements;

(2) What, if any, alterations of marginal rates prescribed under Part I of the award or additional marginal rates are justified upon the grounds of work value, the economic considerations which have been presented to the bench, or for any other reason.'

At an early stage the Commissioner remarked upon the difficulties inherent to a work values examination of the Metal Trades Award and in this connection directed attention *inter alia* to the following circumstances:

'some decades have elapsed since a general work-value examination was undertaken with respect to the work covered by the award.
since the last general work-value examination was undertaken, the organisation and the technology of metal trades industries have altered appreciably.
as pointed out by the Full Bench in this matter, there are "330 classifications listed in the award" with "as many as 53 separate wage rates with refinements as low as a cent a day between classifications.'

The Commissioner had already pointed out that subject to certain reservations the industries and callings covered by the Metal Trades Award 1952 are the engineering, metal working and fabricating industries in all their branches and all industries allied thereto. He had then specifically named no fewer than 63 important industries which were included in the award coverage.

Having covered introductory matters, the Commissioner proceeded to make observations in manner following:

'(a) It is ludicrous that there should be prescribed within the award "separate wage rates with refinements as low as a cent a day between classifications";

(b) it is illogical that there should now be prescribed within the award some 330 classifications and some 53 separate wage rates;

(c) the award structure permits classification to jostle classification in disorderly and irrational array;

(d) every advantage should be taken of the possibilities conferred by the introduction of decimal currency; both from the point of view of management as to timekeeping and wage calculation simplification, and from the point of view of the trade unions and those employed in industry as to ease in checking as to whether correct wage rates have been paid;

(e) it should be possible to prescribe separate wage rates in minimum gradation variation of 50 cents or, in certain cases, as least 25 cents a week;

(f) in a 50 cent or 25 cent wage step-ladder type of reorganisation of the wage structure, certain clusters of classifications may be expected to gain or lose minor marginal relativity, but this likely eventuality may flow without dislocation because of

other aspects of wage adjustment possibly arising from later decisions of the Full Bench; and

(g) it should be possible to prescribe a greatly diminished number of classifications (if it is desired to retain present designations for easy or convenient management or trade union identification this could readily be done by grouping a number of designated occupations within the one classification range, but isolating them from the clause specifying classifications and giving them title and classification identification either in a schedule or a separate clause providing for designation identification);'

The Commissioner then proceeded:

'Indicating that as I now see it:

(a) the experience I have had in the metal trades industries within the last few years as Commissioner has in part equipped me to formulate certain ideas concerning comparable work-values;

(b) I should be expected to possess sufficient knowledge of work-values with respect to certain classifications of work as to be able to express such value in current monetary equivalents without further inspection (for instance, it would be both unrealistic and an outrageous waste of everybody's time for me to carry out further inspections concerning the work of what is now known as a "rigger and/or splicer", either for the purpose of informing myself of what the "rigger and or splicer" does while at work, or of estimating the worth of such work in order to express its monetary value in relation to that of other occupations);

(c) there are a number of classifications of work concerning which it would be necessary for me to undertake inspections, particularly in order to enable me to make recommendations concerning proper relativities;

(d) it is highly important for me to endeavour to understand the impact and the effect of the impact of technological change upon work values, especially such change as may have been expected to have developed over the last decade;

(e) it is of consequence that the parties advise me as to the areas of metal trades industries into which technological change may have penetrated during the last fourteen years, that is since the last award was made (it might rationally be expected, from their reasonably intimate knowledge of the inspections undertaken by me during the three years that I have been a member of the Commission, that the principal parties would be aware of what has been placed before me in this regard);

(f) it is expected that, within the next few weeks, the principal parties will confer, at first separately and later collectively, so that when next invited to appear before the Commission as at present constituted in this matter, they would be prepared to make either several or joint submissions as to what inspections should be undertaken for the purpose of enabling me best to inform my mind upon work-value considerations;

(g) it should be emphasised that inspections of the metal trades industries must necessarily be in sample form;

(h) it is hoped that sample selection may be a matter of agreement between the parties, otherwise I must decide upon both the samples and the programme;

(i) in the event that in any metal trades industry the choice of sample is left to me, I would in most cases use random sampling selection but where necessary or desirable I would employ representative sampling selection; and

(j) it occurs that it is desirable to take inspections in each State of the Commonwealth wherein the award operates and in such States to inspect certain large scale industries, those of intermediate size and those of small scale dimensions; further, such inspections should, where considered necessary, embrace capital and provincial cities as well as small towns.'

Finally the Commissioner said:

'There are certain other general matters that should be touched upon at this juncture. These are:

1. It must be appreciated that until I present a report or reports to the Full Bench of which I am a member, I will not be ruling upon any matters submitted to me except upon questions of procedure, and then only upon such procedures as are requisite to such investigation as may be deemed necessary to enable me to furnish a report in accordance with the provisions of section 34 (6) of the Act.

2. Apart from matters specifically mentioned in the unanimous views expressed by the Full Bench in the Announcements read by the Presiding Judge, the Honourable Mr Justice Wright, on the eighth instant, the proposals set out herein are those for which I must accept sole responsibility.
3. This prefatory statement is necessary to enable me better and with greater celerity to furnish a report to the Full Bench upon the specified matters directed to my attention.
4. It is not considered necessary, for the purposes of reporting upon the specified matters directed to me, for the parties to make submissions concerning any wage rate currently appearing in any award other than the Metal Trades Award, nor would such submissions either interest or influence me.
5. I am not dogmatic nor doctrinaire at this point of time concerning any of the proposals now outlined.
6. I have enunciated these proposals for the purpose of assisting the parties in a difficult, complicated task; in turn I am hopeful of receiving constructive criticism and helpful advice from the parties.
7. Where necessary in the course of the investigation the Commission will have particular regard to its powers under sections 40 and 41 of the Act.

Finally, and far from least importantly, bearing in mind the emphasis placed upon conciliation by the Act in its chief objects and elsewhere, I would welcome any situation in which the parties may be able greatly to assist by reaching amicable agreement in certain areas of dispute. The Commission as presently constituted will do all that lies within its power to assist in such achievement.

It would, however, be a pity to lose this golden opportunity to establish topical work-values in the Metal Trades Award. I deem it of paramount concern to have regard to the explicit nature of the assignment given me. The clear intention of the Full Bench must not be stultified.'

PROCEDURE

Following the proceedings in the course of which announcement No. 1 had been made the parties conferred both privately and before the Commissioner. A variety of views was expressed and proposals were announced or accepted. However, the proposals were purely tentative. For instance the Commissioner in the course of the second announcement ('Announcement No. 2') while indicating general adherence to proposed arrangements, intimated relaxation was open 'where obviously and genuinely helpful'. Again at a later date the Commissioner said:

'Certainly I will be determining some things after the first inspection is over but initially I do not intend to lay down any dogmatic procedure to be followed. After the first inspection any difficulties that are evident might be overcome. I will certainly be seeking to overcome them.'

Earlier in the course of announcement No. 3, the Commissioner had said:

'The unions have intimated that they require inspections to take place with respect to work being done by employees of the said firms, who are employed in the following classifications: (The number preceding each classification refers to the classification item number in the Metal Trades Award.)

5 Fitter
13 Machinist first class
49 Boilermaker and/or structural steel dresser
59 Welder first class
66 Dresser and/or grinder
87 Electrical fitter
90 Electrical mechanic
126 Sheetmetal worker first class
261 Dogman and/or crane-chaser
283 Process worker

I have stated that I do not necessarily commit myself to the adoption of any one form of measuring or estimating the work value inherent in any job, whether it be that of a tradesman or a non-tradesman.

I have indicated that I will examine, test and, for the time being, use any form of measuring or estimating such work value that is either suggested to me or suggests itself to me.

It has to be made quite clear that I have no intention of permitting those representing parties or interveners to examine or have access to my markings or any conclusion I derive from them in any form of work value assessment, at least until after I have presented my report to the full bench in these matters.

If the parties desire to compare experiences from time to time it occurs that such a practice would be of mutual assistance. However, I will not seek to enforce such a practice.

At an appropriate stage, either upon request by any party or at my own instance, it is proposed to take submissions, evidence and material upon any aspect of my investigation deemed to require such action.

It should be made clear that all transcript notes of inspections and proceedings will be made available progressively to all members of the Full Bench in these matters.'

Consistently with his express intimation that there would not be dogmatic adherence to procedure, the Commissioner from time to time reviewed the position in the light of inspections and of consultations with his colleagues on the Full Bench. As the inspections proceeded, it became clear to him that further detailed examination of a large number of related classifications was unnecessary and impracticable and that an assessment of work values for the metal trades could at that stage conveniently be approached by the examination of 'pilot' classifications. Accordingly, at an appropriate juncture he stated:

'The classifications upon which I shall concentrate from now on are: process worker—all divisions, machinist third class, storeman and/or packer, furnaceman electric, machinist second class, fitter, machinist first class, electrical fitter and/or armature winder, welder special class, toolmaker, pattern maker, and the adult female employees whose classifications are prescribed in sub-clause (b) of clause 4 Margins. The classifications chosen are subject to addition or subtraction.'

There was, in inspections subsequent to the above announcement, substantial attention to the above classifications but it should be made clear that subsequently to the express reservations as well as prior thereto, there emerged information relating to other classifications which could be relevant to the determination of the issues before us.

It will have been seen that the Full Bench, of which he was and still is a member, delegated to Mr Commissioner Winter the function of carrying out the inspections and that the introductory observations already made have largely been directed to proceedings arising from the delegation or from matters incidental thereto. However, after the Commissioner had made sixty-three inspections and while he was continuing with the balance of the programme, the two remaining members of the bench (Gallagher and Moore *JJ.*), finding that other commitments had been discharged and that they had become available for direct participation, joined the Commissioner with his concurrence and cordial approbation in the completion of the remaining inspections. In the result twenty-six inspections were carried out by the Full Bench which when added to those made by the Commissioner brought the total to eighty-nine.

The Range of Inspections

Inspections were carried out by the Commissioner in Queensland and afterwards in New South Wales and Victoria and by the Full Bench in Victoria, Tasmania, New South Wales and again in Victoria. On some occasions the inspections were directed to particular establishments, classifications or features, examination of which was sought by the unions, on others as sought by the employers and in one or two instances as proposed by the Commission itself. As already stated there were in all eighty-nine inspections which led to the examination of many establishments; gave opportunity for direct observation of work

and the conditions under which it was done; provided the means of obtaining detailed descriptions of duties; enabled the observation of systems of working; supplied a detailed picture of the importance of industry whether in relation to the interests of employers, employees, the public or the Australian economy, and provided a mass of information relevant to an assessment of work values in the metal trades. Each inspection was covered by the Commonwealth Court Reporting Branch and there was made available to the Commission official transcript which recorded in detail the multifarious features observed. Short particulars of each inspection are set out in Schedule 1.

It is now proposed to review the inspections in the light of the class of establishments examined, the systems of work, the conditions under which work was done and the information obtained in relation to certain specific classifications.

It has already been noted that the Commissioner at the very outset of the proceedings before him emphasised the magnitude of metal trade activities and commented upon the wide diversity of industries. That his observations were apposite became clear with the progress of the inspections. There was inspected a wide variety of business enterprises which included those engaged in heavy engineering, light engineering, communications engineering, general engineering, shipbuilding; in the manufacture of electrical goods, household goods, machinery agricultural implements, packages, foodstuffs; or in provision of services for other industries. Apart from private industry there were examined major undertakings carried on by government instrumentalities or public utilities and there were also detailed inspections of three technical colleges.

The heavy engineering establishments included those which manufactured or constructed plant or equipment such as locomotives, rolling stock, turbines, generators, boilers, castings and job orders, an example of which was a pump of immense size required for the Snowy Mountains Authority. The light engineering establishments included those engaged in the production of light building materials, springs and mechanical appliances of all descriptions. The communication engineering establishments included those engaged in the production of telephone equipment. The general engineering establishments supplied a wide range of products to the Australian market which included structural steel and other components. The shipbuilding industry so far as the inspections were concerned was substantially covered by the investigation at Cockatoo Dock. The electrical goods manufacturers included those engaged in the production of television sets or components, radios and electric motors. The manufacturers of household goods produced of course a very wide range of products including, merely by way of example, utensils or requisites such as plastic buckets, garbage tins and laundry baskets. Manufacturers engaged in the production of packages produced amongst other things oil drums, paint tins, beer and soft drink cans. Foodstuff manufacturers were substantially covered by the detailed inspection made at the premises of Cadburys in Hobart. The major governmental undertakings included workshops of the Hydro-Electric Commission, Tasmania, the Yallourn Power Station, Victoria, and the workshop of the Melbourne and Metropolitan Tramways Board at Preston. The inspections of technical colleges were made at North Sydney, Collingwood and Hobart.

Systems of Work

The system of work varied according to the activity carried on at each establishment and it need hardly be stated that there was demonstrated in the

inspections an immense variety of machines, tools and equipment. While in some factories machines had seen years of service, much of the plant shown on inspections was modern exemplifying the latest technological developments. Particularly was this the position in establishments which were engaged in mass production and which relied substantially upon relatively unskilled labour for the operation of the machines. However, even in establishments such as have been described and almost invariably in those engaged in heavy engineering there were seen machines the operation of which was left in the hands of skilled tradesmen. These were machines, the setting up of which called for technical training or which required of the operator ability to work to detailed drawings, observe fine tolerances and obtain close accuracy.

At a later stage there will be detailed reference to the work of metal trade employees, particularly those engaged in pilot classifications but it is appropriate to state at this juncture that the inspections left no doubt concerning the knowledge, skills, acumen and experience normally required of skilled tradesmen. The inspections at the technical colleges gave convincing evidence of the technical knowledge and training required of a tradesman whether he is an electrical fitter, an electrical mechanic, an armature winder, a mechanical fitter, a fitter machinist, a boilermaker or a welder and the observance of the actual performance of duties supplied further proof which was no less persuasive. It is correct that there was an appreciable number of establishments in which there were employed professional engineers or qualified technicians and in which planning methods or procedures had been introduced having as their objective the simplification of work or production. But there was left the firm impression that whatever the amount of detail shown on drawings, whatever the degree of supervision, whatever the resort to jigs or templates and whatever the sagacity of the machine, the skilled tradesman is indispensable to industry. That this is consistent with the employers' own viewpoint was illustrated at a factory at which it was stated that machines running into a large number were mostly operated by non-tradesmen. The general manager (manufacturing) was asked, 'Do you work on this 10 per cent target' (i.e. of tradesmen) and to this question he replied, 'We would like to get every tradesman in Sydney . . . but this is all we can acquire.' Further, the importance of tradesmen did not diminish when their work was observed in the light of maintenance duties. Machinery must be kept in proper working order and it was demonstrated that electrical tradesmen, mechanical tradesmen, welders and other appropriate tradesmen work individually or as a team in carrying out maintenance duties, varying in complexity but in most cases calling for the exercise of full trades skill. Again the designation 'toolmaker' affords an instance, not altogether unique, of the application of plebian and inappropriate nomenclature to the description of industrial occupations. The duties which were described and the work which was shown established beyond doubt that the toolmaker is a highly skilled tradesman whose contribution to the successful operation of modern methods of production cannot be overstated. A similar comment could be made in respect of the patternmaker.

Two additional observations may conveniently be made. Firstly, process work whether performed by men or women undoubtedly requires considerable concentration and generally calls for manual dexterity. This work was extensively demonstrated and there was furnished evidence which was not in any way challenged of the diligence of the employees and of their co-operation. Secondly, misgivings commonly held concerning industrial relations gained no support from what was seen on the inspections. Without exception employers through their managements afforded to the Commission full opportunity of inspection and

readily and cordially furnished relevant information. Employees in their turn exhibited interest in their work, courtesy, restraint and a recognition of their responsibilities. The inspections left the comfortable feeling that those engaged in Australian secondary industry, whether as employers or employees, are doing a good job for their country.

Conditions Under Which Work Was Done

Working conditions varied but the inspections showed that by and large employers as far as practicable aim at providing reasonable working conditions in respect of matters affecting health, safety and amenities. Conditions in a foundry are of course markedly different to those which are found in a modern air conditioned factory. So far as they are relevant to wage rates, working conditions will be discussed in relation to particular classifications of work.

Pilot Classifications

It has already been stated in this review that as the inspections proceeded it became clear that further detailed examination of a large number of related classifications was unnecessary and impracticable. It was decided that a stage had been reached when an assessment of work values could conveniently be approached by the examination of pilot classifications. Accordingly, at an appropriate juncture the Commissioner made the announcement previously set out herein and which is now repeated.

'The classifications upon which I shall concentrate from now on are: process worker—all divisions, machinist third class, storeman and/or packer, furnaceman electric, machinist second class, fitter, machinist first class, electrical fitter and/or armature winder, welder special class, toolmaker, pattern-maker and the adult female employees whose classifications are prescribed in sub-clause (b) of clause 4 Margins. The classifications chosen are subject to addition or subtraction.'

There is set out in Schedule 2 information gathered during the inspections concerning the training, work, duties, responsibilities and working conditions material to each of the pilot classifications.

Conclusion

The inspections provided opportunity for appreciation of the great development of Australian secondary industries, the technological changes which have taken place over recent years, the immense amount of capital investment and the vital importance of secondary industry as the means of livelihood for a substantial section of the Australian people. But so far as concerns this Commission their great importance has been that they have made available first-hand knowledge of the work of metal trades employees, its nature and responsibility. That a work values examination was essential became more and more evident as the inspections proceeded. In various establishments there had been no comprehensive investigation of work in the light of technological developments or even in the light of conditions which had existed over a period of years. The inspections were but a first step in the investigation and the Commission must necessarily hear and consider the evidence and submissions of the parties taken in formal proceedings. However it will embark upon that exercise with the comfortable feeling that there has already been made available to it a fund of information which should enable a better understanding of the issues for determination.

SCHEDULE 1

SHORT PARTICULARS OF INSPECTIONS

INSPECTION No. 1—(Trans. 2522)

A.R.C. Engineering Queensland Ltd

Manufacturers and suppliers of steel and wire products. 84 employees under Metal Trades Award. Observed—automatic machine welds; arc welding; spot welding; fabric welding machine; cutting of steel bars by cropping machine; electricians shop and work of electricians. Work of Mr Dodt, *electrical fitter mechanic,* viewed and explained.

INSPECTION No. 2—(Trans. 2536)

N. V. Appleton Pty Limited, Brisbane

Company engaged in light metal work—mainly manufactures louvres, windows, sheet metal products such as door and wall panels; prefabricated buildings. Observed manually operated hot press, automatic hot press and other machines.

Mr Pachenko, sheet metal worker, explains duties.

INSPECTION No. 3—(Trans. 2542)

Steelweld Fabrications, Rocklea

Boilermakers and Steel Fabrication Shop—36 employees under Metal Trades Award.

p. 2545 Crane chaser explains duties

2545 Boilermaker-welder explains duties

2547 Welder first class explains duties

2547 Electric welder first class explains duties

INSPECTION No. 4—(Trans. 2549)

Bradford Kendall Limited, Brisbane

Manufacturer of steel castings up to 4 tons. Ordinarily for railways but wide general distribution. Also manufactures earth moving equipment.

Inspected moulding shop and dressing shop. Inspected work of *dresser and grinder, dogman-crane chaser; electrical* tradesmen.

INSPECTION No. 5—(Trans. 2559)

Rheem (Australia) Pty Limited

National manufacturing organisation having as a major activity production of steel packages for Australian industry. Machine shop handles major repairs and construction of equipment and dies for all Rheem Plants in Australia.

Work and duties of *1st class* machinist viewed and explained. Process worker questioned. Duties of line fitter (*classification toolmaker*) *viewed and explained.*

INSPECTION No. 6—(Trans. 2569)

English Electric—Brisbane

Mechanical engineering. Manufacturer of diesel electric locomotives, electric transformers and other products. Sells in all States—"in competition with whole

world'. (2572/3) Viewed light machine shop; tool room; small press room, Saw machines and work performed in connection therewith by *1st class machinist; 2nd class machinist; 3rd class machinist; process workers.* In Bolt Section saw work of *storeman and packer.*

2574—Heavy Fabrication—*boilermakers, welders, ironworker dressers. First class machinists.*

2578—Observed grinding operations carried out by *L. Delaunay, 1st class machinist.*

2579—*N. Van Diest, 1st class welder,* shows work on casting. Drawings inspected. Welding operations observed.

2585-6—Mr Delaunay and *Mr Warren, maintenance fitter,* furnish statements of duties.

2593—Jim Green—boilermaker—described welding duties.
Allan Vickery, crane chaser, described work.

INSPECTION NO. 7—(Trans. 2600)

Clyde Engineering (Q'ld) Pty Limited

Currently engaged in design and manufacture of diesel electric locos; assembly of road graders; maintenance and service of locomotives.

Work of first class machinist and electrical tradesmen inspected. Duties of Mr Russell, electrical tradesman, viewed and explained.

INSPECTION NO. 8—(Trans. 2611)

Toowoomba Foundry Pty Limited

Mechanical engineering covering manufacture of water supply and allied equipment for use of primary industry, pumps, windmills, irrigation equipment.

2625—*B. H. Adams—dresser and grinder*—work explained.

2625—*Mr Harth, fitter,* explains duties in detail.

INSPECTION NO. 9—(Trans. 2631)

Napier Bros Limited, Dalby, Queensland

Manufacturers of farm machinery.

Mr Hails, electrician, explains in detail duties of himself and apprentice.

INSPECTION NO. 10—(Trans. 2646)

Wyper Bros, Bundaberg

Engineering and implement making—cane harvesters, ploughs and other agricultural implements. Inspection of culling section, instrument section, implement machine shop, implement assembly, harvester machine shop, welding bays. *Work of first class welder* seen and explained.

INSPECTION NO. 11—(Trans. 2663)

Sidney Williams, Rockhampton

Manufacturer of stock watering equipment, particularly wind driven pumping plants, tanks, water troughs, valves and fittings.

Machine shop, Store, Pattern makers shop, *Foundry.*

2671—*N. Phillips* explains duties.

INSPECTION No. 12—(Trans. 2686)

Cyclone K. N. Products Ltd, Townsville

Tube steel and wire fabricators. Work of process workers described. Welding section seen. Wire dressing machine. *Douglas Brennan—machinist 3rd class*—work explained.

INSPECTION No. 13—(Trans. 2694)

Allens Industries (N.Q.) Pty Ltd, Townsville

Supply and installation of air conditioners. Manufacturer of commercial refrigerators.

John Moore—electrical mechanic—describes work.

INSPECTION No. 14—(Trans. 2710, 2711)

Northern Manufactures Pty Ltd, Townsville

Manufacturer of cans, crown seals, small drums and other products.

Detailed inspection of machines, process work, fitters, maintenance of die cutters.

2719—*Peter Szandron* describes work.

INSPECTION No. 15—(Trans. 2729)

Academic Block (Building project), University of Townsville

Work of *John White, electrician,* employed by Allens Industries, duties and experience considered.

NEW SOUTH WALES

INSPECTION No. 16—(Trans. 2807)

Stewarts & Lloyds, Newcastle

Steel pipes and fittings manufacture and pipe fabrication. Number of employees 2286. Number of employees under Metal Trades Award 381.

Inspection confined to area in which work done by maintenance boilermaker. Work of *Mr Williamson, boilermaker,* explained in detail.

INSPECTION No. 17—(Trans. 2824)

A. Dumbrell, Newcastle

All sorts of spring work; heavy truck work; rolling stock, coil springs and heavy industrial springs.

Apprentice working a hydraulic press, forming spring leaves. Blacksmith work on spring repairs seen.

R. R. Regglesford—blacksmith—duties explained. *Seven* furnaces inspected.

INSPECTION No. 18—(Trans. 2837)

Dumbrell Forging Co. Ltd, Newcastle

Subsidiary of A. Dumbrell

Garry Bullors. Smith (*other*) explains duties.

Gallagher J.]

INSPECTION No. 19—(Trans. 2847)

Munmorah Power Station, Newcastle

Inspection limited to *boilermaker* and two *electrical fitters.* 2847-8—***Warren Poller, Electrical Fitter,*** outlines duties. Describes electrical equipment. Describes in full what is included in motor checking and other duties.

J. Holroyd, boilermaker (2851) describes work as boilermaker including welding duties. Gives detailed description including application of theory.

2858—*John Baird* outlines duties of *electrical tradesman.*

Note, very detailed description of duties.

INSPECTION No. 20—(Trans. 3125)

Alcan Australia, Sydney

Number of employees 958—Metal Trades Award—145. Semi fabrication of aluminium and aluminium alloys. Rolling mills, extrusion press, scrap department. 1,100 employees at Granville—200 under Metal Trades Award. Work of *leading hand electrical fitter* inspected—*Peter Gadsby*—reads statement outlining duties. *Detailed inspection of work of electrical trades right through establishment.*

INSPECTION No. 21—(Trans. 3146)

Cockatoo Dock

Ship builders, ship repairers, engine builders and engine repairers. Builds ships commercially and for Navy—manufactures turbines, boilers, condensers and other equipment.

Inspected (1) work of *boiler-marker off, boilermaker and blacksmith.* (2) inspected fitting shop, machine shop, standards room, apprentices school. Very wide variety of machines and equipment seen. H.M.A.S. Stalwart—Floating Workshop—inspected. Boilermakers, blacksmiths, fitters and electricians are all engaged on this ship. Note work of boilermakers.

George Derham, maintenance fitter, explains duties: 'I do the general repairs from bottom to top'.

Blacksmiths shop—work of Mr Jannet making shackles seen. Electric welding duties explained.

3184—light boiler shop—*John Fraser, marker off,* explains duties.

INSPECTION No. 22—(Trans. 3190)

Dickson and Johnson Pty Ltd

Detail and Sheet Metal Workers—Stainless steel specialists.

3195—*Roy Malzard, tradesman welder,* reads statement and his work inspected in detail.

Statement of *Bruce Newland, sheet metal worker,* 1st class read.

3203—work of metal polishers, first class.

INSPECTION No. 23—(Trans. 3216)

Bliss Welder Products Ltd

Machine Tool Manufacturers. Plant designed almost exclusively for production of heavy duty machinery.

3222—*N. Woods, 1st class machinist*—explains duties. Work in Electrical Shop and Fabricating Shop explained. Detailed description of machines.

INSPECTION No. 24—(Trans. 3228)

Sovereign Appliances Pty Ltd

Two factories—Sovereign Appliances and Metters. Maker of refrigerators, air conditioners, dish washing machines. Inspection directed to work of *toolmaker, D. Berry*—detailed description of *work as such.*

INSPECTION No. 25—(Trans. 3249)

Amalgamated Wireless—North Ryde

Number of employees at four establishments—3405.

3252—Purpose of inspection—look at employees working on brake presses, coming under classification 130, die setter to prints.

3254—*Mr Popple, leading hand* makes statement. Explains details of work.

INSPECTION No. 26—(Trans. 3261)

Malleys Ltd

Appliance manufacturer engaged very substantially in manufacture of refrigerators, washing machines, 654 employees, 523 under Metal Trades Award. *Detailed examination of process work.* Statements from two employees *Mr Harry Alton* and *Mrs Lynne Hardy* (3264-5-6) read.

INSPECTION No. 27—(Trans. 3287)

Babcock & Wilcox—engineering and boilermaking

872 employees, of whom 492—Metal Trades. Fully owned subsidiary of parent company in London.

3292 —Principal products in field of power supply and steam raising. Customers include all public utilities and B.H.P.

3297-8—*A. R. Cosgrove—crane chaser*—explains duties.

3301 —Welding School—detailed particulars of welding and of standards.

3304 —Further examples of work of dogman-crane chaser.

3306 —*F. Williams—boilermaker-marker off* explains duties.

3312 —Alec Rodger—boilermaker-marker off—description of work.

INSPECTION No. 28—(Trans. 3321)

Standard Telephones—Alexandria

Communications engineering. World-wide organisation—Manufactures at Alexandria auto-telephone switching equipment.

3324—Inspection of one classification only, *fitter.*

3225—Duty statement of *V.U.W. Griffiths* read into transcript.

INSPECTION No. 29—(Trans. 3343)

Tullochs Ltd—Rhodes

Rolling Stock Manufacturers. General Engineering, Foundry, Building Projects.

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

Gallagher J.]

Covers a wide range of manufacturing. Statement of duties of *Walter Gunn, jobbing moulder,* included in transcript.

3360—Note assessment of work of job moulder by Assistant Foundry Manager.

INSPECTION No. 30—(Trans. 3366)

T. S. Malleable Pty Ltd (Thomson and Scougall Industries)

Inspection of Foundry—malleable iron castings, water and sewerage fittings, general automotive castings.

3368—*David Stead, furnaceman supervisor,* statement included in transcript.

INSPECTION No. 31—(Trans. 3374)

Pettiford Industries Pty Ltd—Padstow

Basically a manufacturer of wire products both formed and welded.

3377—inspection of work classed by company as that of *process workers.*

3377—*Jack Cormack,* describes duties in particular setting up work on machine.

Auto wire straightening machine duties explained.

W. Nugent, process worker, explains machines which he operates. (3278)

3279—*John Barsbey*—cuts tubes, assembly work explained.

Process work explained in detail.

INSPECTION No. 32—(Trans. 3394)

Commonwealth Steel

Subsidiary of B.H.P.—Manufactures range of products which include railway tyres, wheels and axles, heavy and light castings. Inspection confined to *moulding areas* for inspection of work of *jobbing moulder.* Prepared statement of *Mr Gordon Kebble* read into transcript. Work relationship between moulders and patternmakers explained and distinguished.

INSPECTION No. 33—(Trans. 3410)

A. Goninan & Co., Newcastle

General engineering. Business established 1899. Nature of business general engineering and largely diversified to satisfy demand of Australian public—rubber and plastic building materials, locomotives, rolling stock, job orders such as structural steel and other machinery components. Holds overseas licences. *Feels effect of keen competition from imports. Discussion of economic difficulties.* 3415. *John Govard,* tradesman moulder, 'once the patternmaker has finished his work the moulder takes over'. *Details of work of moulder.*

INSPECTION No. 34—(Trans. 3434)

McIlwraiths Industries Pty Ltd, Alexandria

This company carries on business as a manufacturer of building hardware and makes various products which include baths and basins, both of which are finished with porcelain enamel. Work and duties of *duster* explained and demonstrated. This inspection was arranged at request of Commisisoner. (Sole inspection of work of *duster.*)

INSPECTION No. 35—(Trans. 3447)

Containers Limited (Southern Can Group)

Manufacturers of beverage and open top cans. 175 employees—130 under Metal Trades Award. Principal activity of this company over recent years mass production of beer and soft drink cans. *Process work inspected and explained in detail.* Period of training of process worker discussed. Degrees of skill of mechanics (non-tradesmen) in Press Department explained.

INSPECTION No. 36—(Trans. 3461)

Gadston Hughes Ltd, Five Dock

Manufacturer of metal containers. Produces cans for food industry, beer and soft drink industries, paint industry, oil industry and many others. Some of these cans made automatically, some at high speed (510 *beer cans per minute*), some by hand—large paint or oil. *Duties of operators on machine* lines seen and explained. *Brian Parkes, machine setter,* explains duties. Supervision explained.

INSPECTION No. 37—(Trans. 3727)

Cyclone K.M. Products, Granville

Inspection confined to Cyclone Division, which is concerned with tubular steel and wire manufacturing—manufactures fences, gates, playground equipment, rural buildings and so on associated with tubular wire. The work the subject of the inspection was that of *Peddinghouse Machine Operator.* Views of Mr Coyle, manager, as to correct classification heard. *Mr Turkinish—Peddinghouse Machine Operator*—explains and demonstrates work.

3736—Mr Heagney in Wire Working Shop—gave detailed description of work of *3rd class machinist* operating the ringlock machine and also the chain wire machine. A. E. Townsend, leading hand, in relation to 80 double spiral machine explains work and complexities.

INSPECTION No. 38—(Trans. 3745)

Westinghouse Brake Co., Concord West

Air brake engineers. Manufacturer of air brakes mainly for railways. In the main, work involves machinery and casting of one type or another. Supplies from this factory bulk of needs of railways in Australia and New Zealand. The Commissioner observed that the *welders* are all *first class.* Good deal of time directed to work of Mr McColl, *second class machinist.*

Position of State of Victoria explained by Mr Douglas of counsel (with him Mr Aird, Q.C.).

INSPECTION No. 39—(Trans. 3760)

(1) W. D. and H. O. Wills and (2) S. T. Leigh and Co. (subsidiary)

(1) Tobacco and Cigarettes (2) Packages

This was a detailed inspection of work of *electrical tradesmen. Mr L. Nash, electrical fitter,* outlines duties (3764B). *Mr P. J. Scott—Eric Everell,* similar. Electronics Room inspected.

INSPECTION No. 40—(Trans. 3802)

F. Muller, Kingsgrove

Manufacturer of refrigerators and air conditioning components.

3804—*Mr Walter Page, process worker,* reads statement of duties.

INSPECTION No. 41—(Trans. 3819)

Bernard Smith and Co., Alexandria

Boilermaker. Mr Scott (Boilermakers Union) contends should be classified as *welder special class* because of different types of steel he works on.

Views of Mr Bullows expressed.

This company is basically a pressure vessel manufacturer—oil storage tanks and some alloy steel vessels. Work of *Mr Carlaw, boilermaker,* considered.

INSPECTION No. 42—(Trans. 3835)

Pioneer Industries, Homebush

Engaged in manufacture of springs, mainly for automotive industry, railway rolling stock and general engineering industries, Makes springs from the very smallest size used in an electric razor to the largest spring used in a locomotive.

3837—Mr Markham introduces *Mr W. Riddington,* classified as a *fitter.* Duties set out in transcript, employee classified as process worker, in fact being paid as machinist.

INSPECTION No. 43—(Trans. 3854)

North Sydney Technical College

This inspection was initially directed to the training of *electrical tradesmen* and was conducted on that basis. However upon completion of the electrical survey, an examination was made of training of mechanical tradesmen. Detailed explanation of training given. Work demonstrated.

INSPECTION No. 44—(Trans. 3894)

Telephone and Electrical Industries (T.E.I.), Meadowbank

Manufacturer of telephone exchange equipment and trunk line or carrier equipment. This is a very large establishment with 1975 employees, the majority of whom are covered by Metal Trades Award. Almost 50 per cent of employees are females. *Process work examined in detail.* Training School inspected.

3927-28—*Relationship between process worker and second class machinist considered.*

3903 —*See description of work of process worker* (Mrs Cilla) *given by Commissioner.*

INSPECTION No. 45—(Trans. 3397)

Borg Warner—Fairfield

Automatic and Industrial Gear Transmission Manufacturer. Manufacturers axle assemblies, manual transmissions, automatic transmissions, gear sets for trucks and agricultural implements engaged in import trade. *Good example of highly mechanised establishment, attempting to substitute machines* for skilled labour; but

note statement of manager—'we would take every tradesman in Sydney if we could get him' (3949).

System of mechanisation, planning and simplification of work explained in detail. Only 10 per cent of machinists are tradesmen. (*First of employer inspections.*)

INSPECTION No. 46—(Trans. 3976)

A.W.A.—Ashfield

3096—Types of production used in this division are parts and completed products for television, telephones and other completed requirement. (Second of employer inspections.) This inspection was aimed at establishing simplicity of work performed on machines. The company has 2,103 employees, 1,475 of whom are under the Metal Trades Award. 687 are females mainly on process work. *Detailed examination of machines and process workers.*

INSPECTION No. 47—(Trans. 4018)

Nuttal Engineering—Rosebery

Manufacturing engineers concerned in the manufacture of variety of industrial equipment including transmission equipment, material handling equipment, diesel engines, paper box making, paper corrugating machines, including rotogravure machines and machine tools. About 50 per cent of production is in regard to centre lathes. Inspection arranged in relation to *first class machinists, fitters and pattern makers.* Third employer inspection also directed to simplification of work.

INSPECTION No. 48—(Trans. 4039)

Australian Electrical Industries—Auburn

Manufacturer of Electrical Equipment. 528 employees under Metal Trades Award.

This *employer* inspection of the control and switch gear department was mainly directed at showing that *schematic diagrams* prepared and made available to *electrical fitters simplify their work.* The impression to be gained from the inspection is that notwithstanding the diagrams, the work performed by the electrical trade fitters called for the skill and judgment of qualified fitters. An incentive system where electrical fitters may qualify for a 25 per cent bonus on wages was explained. Work of process workers also reviewed and detailed description of work of operator given by Mr Waldron, Company Executive.

INSPECTION No. 49—(Trans. 4060/61)

Lawrenson Alumasc Pty Ltd—Lidcombe

This was a very short inspection arranged by employers of *process work* performed in an establishment specialising in contract die casting of zinc aluminium and brass components supplied to manufacturers of motor vehicles, household appliances and various other industrial products.

4062—'*Typical machine operation or process operation*' explained by Mr Summerson representing management. *Fay Mullard seen* carrying out a de-burring operation; Process workers stand while at work.

INSPECTION NO. 50—(Trans. 4067)

Standard Telephones—Alexandria

1659 employees. Communications engineering employer inspection of *process work* (females) in relation to assembly of 800 series telephone.

Layout designed to produce apparatus mentioned on a flow line basis using female process workers. Detailed explanation given by *Mr J. Smith, Production Superintendent.* From the detailed inspection made, it appeared that much of the work performed by female process workers required manual dexterity, speed and concentration.

4075—Employees on production work receive bonus payment amounting to 25 per cent of wages.

INSPECTION NO. 51—(Trans. 4093)

Email Limited—Rosebery

Manufacturer of high and low voltage switchgear, which it supplies direct to shire Councils, electricity authorities and electrical contractors. Number of employees under Metal Trades Award 464.

At the request of the employers, the Commissioner made an inspection of the work of an *electrical fitter, mechanical fitter* and *process worker.* The *electrical fitter* was a fully qualified tradesman. The *mechanical fitter* was a recognised tradesman. The employers sought to establish that the work of both the electrical fitter and the mechanical fitter was restricted to assembly of parts in a completed state which had been already manufactured by the company. The extensive kit of tools conceded to have been used by the *electrical fitter* indicated that he was required to exercise the skills of his trade. The *mechanical fitter* used a more limited range of tools but nevertheless it was acknowledged the work he was required to do would call for a training period of two to three weeks, assuming that when starting he was a 'fully accredited fitter' (4101). In the inspection of the work of a *process worker,* it was stated that she could operate all the machines in a group.

INSPECTION NO. 52—(Trans. 4108)

Delairco Pty Limited—Sydney

Electrical and Mechanical Engineering and Services. Detailed inspection of work of *electrical tradesmen.* (Union inspection.) See statement of *Mr Stewart, managing director,* at 4109 for explanation of 'unusual method' of training apprentices—they are trained to do the work of both electrical fitters and electrical mechanics. *Statement covering all fitters in shop read.* Installation and service work explained. Comments of *Mr Mitchell, electrical tradesman,* on new principles used for carrying out work on ships expeditiously emphasised.

INSPECTION No. 53—(Trans. 4125)

Further inspection at T.E.I. requested by unions for classification of *tool makers.*

Work of *tool makers* described and examined in detail. There were demonstrated the intricacies of the work, the need for reading and applying drawings, the need for fine tolerances, the need for precision. See passages at 4128 ,4131, 4132, 4134 (per Mr Mitchell on behalf of company) and at 4137 (*per Mr Samoolin, toolmaker*).

4140—*G. Holt,* toomaker, gave details of fine precision work on machine 'all the mechanism would not be more than plus 0 or minus .0002 inch at your slides'.

INSPECTION No. 54—(Trans. 4144)

Melesco Manufacturing Co. Ltd—Yennora

This company is engaged in the business of pipe manufacturing. 183 of its employees are under Metal Trades Award. Union inspection in relation to *welders.*

4147—The main activity of the company is the manufacturing of super heaters for power station work. See detailed information on welding given by *welder, Mr Saywell,* who is highly certificated and who is also a teacher at Granville Technical College (4147).

See also 4148, 4150-51, and particularly at 4152 where Commissioner comments upon need for clarity of definition of welder in award. See also definition of 'porosity' (4154) and consequences thereof.

INSPECTION No. 55—(Trans. 4160)

S.T.C. (Liverpool)

Standard Telephones Communication—company engaged in manufacture of radio transmission equipment for export to most countries of the world, supplies to the Armed Services, P.M.G and D.C.A.

Process work. The machines do the work (see remarks of Mr Jones, Company Executive, at 4161) but it was clear on inspection that notwithstanding the sagacity of the machines, the work requires much concentration on the part of the girls using them. Note statement of Mr Jones at 4168 'that the current programme was for 65,000 finished transistors per month' in this room. (4168) The company prefers to keep a girl on the job. Note 4162 (ante) concurrence of Mr Jones with statement of Mr McBride re responsibilities.

INSPECTION No. 56—(Trans. 4184)

Borg Warner—Fairfield

Union inspection of classifications of *toolmaker* and *electrical fitter.*

4184—Statement by John Lennon—details of duties of electrical fitters. Note statement at 4186 by Mr Keith, Company Executive, 'it is part of the responsibility of the electrical tradesman to ensure that any machine that depends on electric energy is completely safe'.

4187—*Toolmaker* gave *details of duties.*

VICTORIAN INSPECTIONS

INSPECTION No. 57—(Trans. 4225)

W. G. Goetz and Sons Ltd—Spotswood

Manufacturers of power presses, steelmetal working, machinery and high speed can making and can closing equipment. 180 employees under Metal Trades Award.

Employer inspection upon work of *first class machinist, second class machinist* and *process worker.*

4229—Note statement by *Mr Moss, Company Executive,* relating to particulars given to first class machinist which include details on drawings, discussion with leading hand and 'detailed indication of the method' to be followed by tradesman.

4230—Note concession of Mr Moss concerning range of machines which a *first class machinist* should be capable of operating.

4239—Work of *process workers* inspected and company emphasis upon simplicity of work.

INSPECTION No. 58—(Trans. 4252)

M. B. John and Hattersley Ltd—Ballarat

Valve manufacturers—600 employees under Metal Trades Award. Employer inspection of work of *furnacemen electric* and *pattern maker.*

4255—Detailed description by Commissioner of operation of loading or charging furnace.

4257—Work of *pattern maker* described in detail. Range of tools described. See 4257-8.

INSPECTION No. 59—(TRANS. 4262)

Ronaldson Bros and Tippett—Ballarat

Engineering, manufacturer of internal combustion engines and orchard spraying machines. 59 employees under Metal Trades Award.

Employer inspection of work of *fitter* and of *first class machinist.* As regards the fitter it was sought to show that he merely assembles components which he does not make himself. As regards the first class machinist it was sought to show that after setting up the machine he uses a jig which gives him his locations accurately and which obviates the need for references to drawings.

'For economy we try to work a production line in a modified sense' which means that the company has developed a system aimed at speed of production by confining each tradesmen to one particular job.

INSPECTION No. 60—(Trans. 4279)

Monsanto Chemicals—Melbourne

68 employees under Metal Trades Award. Manufacturer of chemicals and plastics. Employer inspection of work of *fitter* in repair and maintenance of plant.

Notwithstanding the emphasis placed upon a system whereby a foreman directs a fitter to a particular job, it became clear on inspection that the fitter to whom the job was assigned was *not* told what was wrong; that he himself ascertained the trouble; and that using his trade knowledge and skill he went about correcting it. (4293.)

INSPECTION No. 61—(Trans. 4305)

McPherson Bolts—Melbourne

4305—Announcement No. 7.

4305A—Fastener manufacturers—Number of employees under Metal Trades Award—305.

Work of '*Machinist class* 2' inspected.

4306—Procedure followed by *machinist* when changing from one type of bolt to another.

INSPECTION No. 62—(Trans. 4323)

Vickers Ruwolt—Melbourne

Heavy engineers, steel founders and structural steel engineers. 711 employees under Metal Trades Award.

Inspection of work of *storeman and packer*. Duties of employees in a large and extensive heavy engineering establishment, which necessarily carries a wide variety of supplies, falling under award definition of *storeman and/or packer* described and explained. See 4326, 4327, 4328, 4329, 4330, 4332, 4333, 4334, 4335, 4338. Method of making wooden packing cases described.

INSPECTION No. 63—(Trans. 4342)

Collingwood Technical School

This inspection at the Collingwood Technical School was directed to the training of *electrical tradesmen* (*electrical fitters—armature winders—electrical mechanics*) and of *mechanical fitters* (*fitter and turner* or *fitter and machinist*).

Courses of study explained in detail. Training in practical work explained in detail. Note statement at 4345A by Mr H. Whittaker (head of Electric Fitting Section) of common elements in training and work of electrical fitters and electrical mechanics and also of distinguishing features—'the electrical mechanic concentrates more on wiring, the electrical fitter concentrates more on the manufacture and repair of equipment, the armature fitter concentrates more on armature winding of motors and things like that'—'There is a commonness running through (the training) but it varies on the application of the trade side.'

Note—4345—introduction in Victoria of a new syllabus based 'on the realisation that an *electrical fitter* must be capable of manufacturing, repairing, maintaining or fault finding any electrical equipment whether the work involved be of an electrical or *mechanical* nature'.

4349—Note comments by *Mr R. Anderson*, representing *Apprenticeship Commissioner of Victoria*.

4354—*Armature winding*, electrical motor maintenance and repair explained and described.

4360—jobs which fitting armature winding apprentices perform, outlined.

4364—*Electronics course* for 4th year students 'This needs to be seen as a fifth year subject because we rely very heavily on electrical theory already learned'.

4370/1—*Fitting and Machining Department*. Details of subjects taught in Grades 1, 2, 3 and 4. Details re *Technicians Course*—which is an advanced course.

4373—information on skills involved in various practical subjects.

4373—'training of modern apprentices in economic use of machine tools' described 4375 per *Mr Edwards* (*Head Teacher,* Mechanical) . . . 'We are not training apprentices to go out into a mass production shop and be machine operators. We are training them in the *actual skills that are required in the trade.* It does not matter whether they are working in a jobbing shop or in a production shop, these skills still apply'. Mr Edwards then proceeded to give an example.

4376—Skills taught in Grade I—explained.

4378—'I will go through the skills in Grade IV fitting and turning.'

4382/3—observations on 'fitters and turners'—per Mr Edwards, 'as far as we are concerned at the school *we are teaching fitters and machinists and not actually turners and fitters.*'

4384—Particulars of a set of publications used in 'fitting and machining apprenticeship course'.

4385—Note, that *Mr Edwards* has noticed quite a difference in the ability of students.

THE COMMISSIONER: (Q) 'I suppose that a good deal would depend upon the efficiency and the training they get at the place of employment?' (A) 'Yes, we find that some have done no machining, whereas others have done quite a lot of machining.'

INSPECTION No. 64—(Trans. 4401)

McColl Electric Works Pty Ltd—Melbourne

Electrical Engineers and Manufacturers, 231 employees under Metal Trades Award.

Engaged largely in production of electric motor and of power plant. *Mr John Fitzpatrick, electrical fitter, explains duties.* Detailed inspection of establishment. See general observations. Economic factors discussed.

INSPECTION No. 65—(Trans. 4438)

Willow Ware Pty Ltd—Melbourne

Houseware manufacturer. Number of employees under Metal Trades Award—127.

Detailed examination of work of *process workers,* their duties and responsibilities. Machines with high production rate seen. Management's views on qualifications of process workers expressed. Technical changes discussed—'quality is the responsibility of everybody'. Export markets named. Products named. General observations.

INSPECTION No. 66—(Trans. 4462)

Gordon Bros, Melbourne

Manufacturer of refrigeration units, air conditioning and food and chemical machinery.

Number of employees under Metal Trades Award—182. Technological changes. *Work of first class machinists demonstrated. Work of toolmaker seen.* Mr Murdock, *machinist first class* explains duties. Planning of machine shop explained. General observations.

INSPECTION No. 67—(Trans. 4495)

L. Horsecroft Pty Ltd, Melbourne

Manufacturer of laundry, dry cleaning and textile machines. Number of employees under Metal Trades Award—92. Drawing office, planning office, machineshop, assembly line, fabricating section, steel yard and metal working machinery and stores inspected.

Work of storeman and/or packer considered. General observations.

INSPECTION No. 68—(Trans. 4524)

Vickers Ruwolt Pty Ltd, Melbourne

Company engaged in production of heavy machinery. Employees under Metal Trades Award—711.

Mr A. Palmer, pattern maker, statement of qualifications and duties (trans. p. 4524). *Mr O. Turnbull, fitter, statement of qualifications and duties* (trans. p. 4525). *Mr J. McDonald, first class machinist, statement of qualifications and duties* (trans. p. 4526). *Mr Hanson, furnaceman,* statement of duties (trans. p. 4528). Detailed inspection of work of patternmaker, fitter, machinist, furnaceman. *Apprentice Training School* seen and discussed. General observations.

INSPECTION No. 69—(Trans. 4575)

Radio Corporation Pty Limited (also known as Astor Centre)—Melbourne

Manufacturer of radio and television sets. Employees under Metal Trades Award—374.

Detailed examination of process work. Planning arrangement discussed. Simplification of work claimed. Bonus system explained. Comment.

INSPECTION No. 70—(Trans. 4611)

H.E.C. of Tasmania—Power Branch Workshops—Hobart

Number of employees under Metal Trades Award—92.

Detailed explanation by Superintendent of work performed. Electrical Shop. Heavy Machinery Shop. Light Machine Shop and machinery used seen. Sheet Metal Shop. Welding Shop. Galvanising Plant. Power Fabrication Shop. Substation Section.

Mr Shelley, leading hand electrical fitter, explains duties. General observations.

INSPECTION No. 71—(Trans. 4667)

H.E.C. of Tasmania. Repulse and Cluny Power Station Construction Sites

Construction work is performed by tradesmen under Metal Trades Award. Near Ouse (Tas.). Number of employees under Metal Trades Award—101. Particular inspection of work of mechanical fitters, electrical fitters and mechanics. Nature of work and equipment explained. Permanent installation work explained. Field maintenance workshops inspected. Electrical workshop seen and explained. Cluny Power Station seen. Mr Hunnibell (project engineer) explains work of mechanical fitter on rotor. *Gerry Ruppert, fitter,* explains duties. Comment. Site allowance.

INSPECTION No. 72—(Trans. 4695)

Cadbury Fry Pascall Australia, Ltd—Hobart

Chocolate and confectionery manufacturers. Number of employees under Metal Trades Award—137. General comment.

P. Banks, electrical fitter, presents statement of qualifications and duties. Foreman Stevens comments on above. Ted Eaton, fitter and turner, reads statement. Mr Banks demonstrates work in Generator Room. Mr Eaton demonstrates work in Fitting Shop. Statement by Foreman Cross on *qualifications of fitter. Mr Banks demonstrates duties in New Crumb Plant.* Foreman Stevens comments thereon. HSU Wrapping Machine explained. Electrical maintenance work explained. Wrapping machine, Assortment Section *important* explained.

INSPECTION No. 73—(Trans. 4732)

Hobart Technical College

Educational requirements—mathematics—trigonometry. Trades training. Comment.

INSPECTION No. 74—(Trans. 4772)

Johns and Waygood Limited, Hobart

Structural and lift engineers. Number of employees under Metal Trades Award—66. Manufactures component steel parts for buildings, television towers, barges and other purposes. Manufactures and maintains lifts. Employer inspection designed to show that system simplifies work. Duties of *boilermaker* doing typical job explained. Mr Panzenbock, *welder*, explains qualifications and duties.

INSPECTION No. 75—(Trans. 4805A)

Sunbeam Corporation Limited—Hurstville

Toolshop which specialises in manufacture of plastic and die cast moulds.

Employees under Metal Trades Award, 22. Union inspection directed to work of toolmakers. Mr Longfield, *toolmaker*, statement of duties. Supervision and advice given to toolmakers explained. Capital value of one tool $15,000 to $16,000. Need for working to very fine tolerances. Detailed drawings examined —26 sheets for one tool. J. Gould, *toolmaker*, describes operation of *Pantograph Machine*. R. Horley, *toolmaker*, describes operation of *milling machine*.

INSPECTION No. 76—(Trans. 4837)

Sunbeam Corporation Limited—*Penshurst*

Further inspection demonstrating work of toolmaker. Employees under Metal Trades Award—18.

Mr Butt, *toolmaker*, explains work, need for precision. Procedure on fitting punches to die and to give the necessary clearance between the punch and the die. Optical grinder explained. Optical Viewer demonstrated.

INSPECTION No. 77—(Trans. 4853)

EFCO Manufacturing Co. Pty Limited—Arncliffe

Manufacturer of builders hardware and refrigeration fittings. Number of employees under Metal Trades Award—172.

Inspection directed to process work. Planning system explained. Assembly of parts by hand explained. Die cast Door Furniture—detailed description of work of process work given. Target 500 or 600 sets per day. No bonus.

INSPECTION NO. 78—(Trans. 4863)

Standard Waygood Limited, Villawood

Company concerned with manufacture of switchgear transformers and motors.

Throughout this employer inspection the company representative sought to indicate the effectiveness of the planning system and the way in which it is designed to reduce the responsibilities of employees. Particulars of products.

Layout of plant. Production planning. Material flow. Production, Engineering Section. Production Control. Stores Section. Duties of storemen explained. Stores Receiving Section, Tank Bay. Heavy Welding Bay. Mr J. McNiece, electrical fitter, explains duties. Martin Farrell, *electrical fitter,* explains responsibilities in *Testing Area.*

INSPECTION NO. 79—(Trans. 4909)

W. and T. Avery (Aust.) Pty Ltd

Manufacturers of weighing machines and scales. Number of employees under Metal Trades Award—77.

Layout of factory described. Work of second machinist discussed. Mr L. Page, *fitter,* described work. Importance of obtaining accuracy explained. Functions of storeman in component section explained.

INSPECTION NO. 80—(Trans. 4933)

Amalgamated Wireless Valve Co. Pty Limited, Rydalmere

Manufacturer of valves, picture tubes and transistors. Number of employees under Metal Trades Award—563.

This inspection covered a wide range of process work. Mr A. Newton, *electrical fitter,* explanation of duties. Work of female process workers demonstrated. Manual dexterity is a basic requirement. Description of duties of process worker by Commissioner. 'Extreme concentration.' Coral Clout turns out 240 components per day. Receives 100 per cent bonus. Miss Dixon does a simple job—309 per hour. Mrs Mills—'to get the bonus it depends on yourself'. Observation by Commissioner upon concentration. Miss Margaret Out and Miss Veronica Lee working together, using a machine and doing certain manual work, reach an output of 2000 per day. Method of assessing bonus on operation involving possibly 20 movements explained. Work of Miss Taffy Mehmet which carries a merit allowance but not a bonus discussed. Reference to toolmakers. Work of quality-Control Operator, Mrs E. Crews, demonstrated, 'I have to make sure the quality is correct and I cannot afford to make any mistakes'. Duties of electrical fitter, Mr A. Newton, demonstrated.

INSPECTION NO. 81—(Trans. 5010)

Tramways Workshops, Preston

Maintenance, repair or overhaul of Melbourne trams.

Work of *electrical fitters, armature winders, mechanical fitters* seen and explained. Work of *first class machinist* seen and explained. 'There is a high degree of mechanical fitting work inherent in all of these operations here, particularly on the trams.' per Mr Hall—Works Manager. Trade skill of *armature winders emphasised.* Work of *3rd class machinist demonstrated.* Agreed this work calls for 'a degree of skill'. First class machine area inspected and *detailed particulars of machines given.*

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

Gallagher J.]

INSPECTION No. 82—(TRANS. 5052)

Work carried out at Tramways Sub-station explained in detail. 'We rely on the fitter to do the job and finish it properly' (per Mr Wilcox, Engineer). Superiority of Australian equipment acknowledged.

INSPECTION No. 83—(Trans. 5062)

S.E.C. Workshops, Yarraville

Number of employees under Metal Trades Award—126.

Workshops servicing the construction and operating division of transmission department of S.E.C.—functions explained. Inspection with object of looking at work of electrical fitter, machinist, first and third class, toolmaker and welder. Responsibilities of electrical fitters summarised. Work and qualifications of *Mr J. Nicholson, electrical fitter* in switchgear section, discussed.

Machine Section. Detailed particulars of machines given. 'First class machinists capable of operating all machines.' Work of third class machinist explained.

Toolmaking Section. Mr J. Glawitsch, toolmaker, duties and qualifications discussed. Responsibilities and need for accuracy. In Germany toolmaking course took 3½ years over and above that for fitter and turner.

Welding Shop inspected—'class of work subject to constant change'. Preference for qualified tradesmen as welders, special class. Laboratory Workshop inspected. 'It is a changing field.'

INSPECTION No. 84—(Trans. 5095)

Yallourn Power Station

Observation on distinction between S.E.C. and outside work.

Duties of mechanical fitters in power station seen and explained. Noise of Power Station. Comparison with Vickers Ruwolt. Duties of boilermaker welding section of boilermaker under hot conditions. *Mr Grixti, electrical fitter,* describes work on generator. Mr Culph, Assistant Electrical Plant Engineer, explains supervision. Techniques in welding work discussed. Work of welders under hot conditions.

INSPECTION No. 85—(Trans. 5124B)

Yallourn Central Workshops

'Sameness of work.' Effect upon this submission of Apprentice Annexe which provides special training. Training discussed. Medium Machine Shop Bay—machines therein described. Added responsibility of first class machinist in heavy bay. First class machinist work on any machine in shop. Summing up of skill and responsibilities of first class machinist. Comparison with Vickers Ruwolt. Blacksmiths Shop inspected. Mr G. Whittle, *electrical fitter, outlines duties.* Observations on 'familiarisation'. Apprentice Annexe. George Hornsby, electrical fitter. Discomfort.

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

[*Gallagher J.*

INSPECTION No. 86—(Trans. 5169)

Hazelwood Power Station

Particulars and inspection of range of work of electrical fitters. 'They all have to be familiar with this equipment.' Responsibility of electrical tradesman to ascertain and report faults. Duties of unit gang (*electrical*) on soot blowers described. Absence of supervision of tradesmen when on shift work conceded. Mr Marlin *electrical fitter explains duties.* Work performed on live circuits discussed. Explanation of work of electrical fitter by Mr E. Hutton, overseer. Effect on power supply of failure of boiler—importance of keeping boilers trouble free. Total number of employees under Metal Trades Award, 202.

INSPECTION No. 87—(Trans. 5212)

Gas and Fuel Corporation Lurgi Plant—Morwell, Vic.

Inspection of work of special class welder, mechanical fitter and electrical mechanic. Stringency of maintenance—high level of competence of mechanical fitters. *High pressure welding discussed.* 'Weld around the clock' explained. Difficulty of welding stainless steel explained. Departure by welder from manufacturers recommendation. Duties of fitter in relation to stoker box. Detailed description of machines. Capital value of machine $200,000. Series of special lectures for tradesmen explained. Duties of electrical tradesman explained. Statement by Mr Ferdinandy re South Australia.

INSPECTION No. 88—(Trans. 5249)

Country Roads Board, Central Depot—Syndal, Vic.

Inspection of storeroom and detailed description by Controller of Stores of work of storeman, his qualifications, duties and responsibilities. Value of stores and range of stores stated. Need for honesty stressed. Cleaning duties of storeman described. Steel Store.

Workshop—Large variety of machines. Details given. Technological changes. Keeping abreast. C.R.B. sends tradesmen to special schools. Duties of fitters in tractor shop described. Difficulty in obtaining tradesmen discussed. Replacement value of machinery $16m. Fuel inspection Repair Section—highly skilled work. Apprentices Centre and purposes thereof. Mr Leslie Miller, shop steward and first class machinist refers to 'terrific changes' since 1920 and improvements in efficiency.

INSPECTION No. 89—(Trans. 5289)

Joseph Lucas (Aust.) Pty Ltd—Cheltenham, Vic.

Manufacturer of automotive electrical equipment.

Company explains planning system having as its objective simplification of work of operators including tradesmen. Various forms of process work, seen and explained. Bonus payments considered. Work of toolmaker seen and discussed.

SCHEDULE 2

THE PILOT CLASSIFICATIONS

The eleven pilot classifications of male employees will be considered first in relation to tradesmen and next in relation to non-tradesmen.

TRADESMEN GENERALLY

The tradesmen falling within the pilot classifications are fitters, machinemen first class, electrical fitters and or armature winders, welders special class, toolmakers and patternmakers. While there were met on the inspections a few employees who had not served apprenticeships and yet who were recognised as tradesmen, it was very substantially the position that service of an apprenticeship and attendance at a technical college were essential requisites for qualification as a tradesman.

The prospective tradesman obtains his training in two ways. (a) He learns the theory of his trade and is given practical lessons at a technical college. (b) He serves an aprenticeship usually of five years and by working alongside skilled tradesmen at his place of employment is taught the trade by being shown the work and by actually doing it. The practical training given at his place of employment is at some establishments preceded or supplemented by tuition provided at apprenticeship schools or annexes set up by employers.

Technical College

The Commission had the advantage of detailed inspections made at North Sydney Technical College, Collingwood Technical College, Melbourne and Hobart Technical College.

Although each college is to an extent affected by legislation or departmental arrangements applicable to the State in which it functions, they have much in common whether in relation to basic educational requirements, courses, training and tuition, examinations and prescribed qualifications.

Dealing with basic educational requirements, emphasis was laid at each college upon the importance of mathematics. Taking as an example, North Sydney Technical College, it was said by the Chief Teacher, Electrical Trades, that the level which a student would be expected to reach in mathematical capacity during the course would be equivalent to the fifth form (Wyndham Curriculum) and he went on to state that the student would be required to go to complex algebra and would take in geometry.

As to courses and in particular to those concerned with electrical trades, it was said at North Sydney that electrical mechanics and electrical fitters receive the same basic training and 'that as far as the technical college is concerned there is little distinction between the two.' The electrical course consists basically of three years of eight hours per week. It was said: 'We have stage 1, 2 and 3 dealing with applied electricity, which is a lecture class, laboratory which is pertaining to the lecture and trade drawing which is referring to the drawing aspect itself plus the fact they are reading blue prints. They have workshop theory and practice, wiring theory and practice. This covers the whole trade as a basic course.' It was said further: 'We are primarily here to teach the "whys" of the job. In other words, our job here is supplementary to the job training . . . we are not trying to teach these boys how to do the job but why to do the job.'

Turning, in particular to fitting and machining it was said at Collingwood: 'To give you some idea of the time that is allotted, not to each individual subject but for the training of the apprentices in the school, the grade 1 and grade 2 apprentices are at the school for one day per week—eight hours per day. Grade 3 and grade 4 are here for about one day per fortnight—8 hours per fortnight.' In relation to each particular year of training it was explained:

'In grade 1—the subjects taught are trade theory, trade practice, trade calculations which are applicable to the engineering trade, science and trade drawing.

For grade 2—the subjects are similar theory practice, calculations science and materials.

The idea of the materials section is to give the students an introduction into some materials that are used in the engineering trade, how the materials are produced, and also to give them some knowledge of trade drawing.

For grade 3—the subjects taught are theory, practice, heat treatment and welding. The idea of the section on heat treatment and welding is to give the student an introduction to welding and welding practice, and also in the heat treatment of steels and some non ferrous alloys. This is to give them an introduction so that if they have to harden, temper or heat treat a job in the workshop they know the procedure to go about in getting the required results.

In grade 4 we have only the two subjects—practice and theory.'

Elsewhere during the inspection it was said by a head teacher:

'. . . we are not training apprentices to go out into a mass production shop and be machine operators. We are training them in the actual skills that are required in the trade. It does not matter whether they are working in a jobbing shop or whether they are working in *a production shop these skills still apply*. If I could give just one particular example. We will take for instance a gear jobbing machine on which we teach the aprentices the skill in grade 4. If the machine was set up then the semi-skilled operator could operate that machine. Where our tradesman comes into it is when he is at a jobbing shop or production shop and he has to have the skill and knowledge to be able to correctly set up his gear train so he can produce these particular gears.'

In connection with the training of welders (known in Tasmania as boilermaker-welders) it was said at Hobart by a head teacher:

'By the time the apprentice is finished his third-year course, if he has completed it successfully we consider he is of quite important value to his employer. It is safe enough to say when he has completed that three-year course successfully he would be a chap his employer could send out, although he is still only an apprentice, to do estimate jobs.

Our course in mathematics or calculations prepare him for that sort of thing particularly on the calculation side. We keep it as near or as much as possible to workshop practices and he will be able to cost out the type of work he will be doing for his employer. His drawing is another subject on which he spends quite a bit of time.'

At each of the three technical colleges inspected the Commission was given comprehensive information concerning training. It is impracticable to describe this information in detail and merely by way of example it is stated that at North Sydney an inspection was made of the various sections commencing with the library and proceeding to the laboratory, the electrical trades workshop, armature wiring room and the wiring room. At each point the Commission was given detailed information relating to the training given in the particular section. The explanations showed that the work taught and which an apprentice is required to assimilate can be highly technical.

Upon the completion of their courses students receive certificates but only after they have passed examinations which have satisfied responsible authorities that they have assimilated requisite trade knowledge and have acquired requisite trade skills and experience. By way of summary I make the following observations:

The training of an apprentice calls for basic educational requirements, attendance at a technical college and service in a trade.

Although in practice relaxation of standards is at times made, the basic educational requirements considered desirable are somewhat higher than generally realised. Before entering the electrical trade, for instance, boys should have attained a standard in mathematics only one year below that set for matriculation. To follow the trade course at Technical College, a knowledge of trigonometry and elementary physics is desirable if not essential. There is a great deal of experimental work in the teaching of the electrical trade, calling for a 'scientific background, elementary scientific but nevertheless scientific.'

With the mechanical trades, there was not the same emphasis on basic educational requirements for fitting and machining but clearly some academic knowledge is necessary, particularly in mathematics. The work requires very close attention to accuracy of measurement and the ability to make precise calculations. The desirability of basic education was, however, emphasised by the boilermaker-welder instructor at Hobart.

Attendance at a technical college where training is given in the intricacies of the trade, both theoretical and practical is essential and it was clear that an apprentice whose training was limited to the establishment of his employer and who did not attend technical classes would be at a big disadvantage.

The syllabi prescribed for technical education at appropriate college and the obligation to complete prescribed examinations as well as constituting a standard for apprentices, undoubtedly are of value in ensuring both for industry and the public that tradesmen are satisfactorily qualified.

Apprenticeship Schools or Annexes

At a number of establishments the Commission saw evidence of facilities provided by the employer for the preliminary or supplementary training of apprentices. I give three examples. At Cockatoo Dock, fitting and turning boys first complete a probationary period of three months and are given training in maintenance and reconditioning work. At Vickers Ruwolt, there is an engineering apprentices training school. For a period of twelve months boys on the mechanical side work under a well qualified and experienced instructor who trains them in the operation of a wide variety of machines. They are taught to work to fine tolerances and to read blue prints. They do fitting as well as machining. At the end of the training period of twelve months, the boys go to various departments of the factory. At Yallourn Central Workshops there is an apprentice annexe in which apprentice fitters, mechanical and electrical, boilermakers, motor mechanics and coppersmiths receive special training both in first and second year. In reply to a question, it was stated that the training received 'is definitely superior' to that which a boy would get in outside industry.

PARTICULAR TRADESMEN—CLASSIFICATIONS

(1) *Electrical fitter and/or armature winder*

It has been already explained that at technical college electrical fitters and electrical mechanics receive the same basic training. On the practical side there tend to be separate branches of the trade with the electrical mechanic concentrating on wiring, with the electrical fitter concentrating on manufacture and repair of equipment and with the armature winder concentrating upon tasks such as armature winding of motors. However it was found on inspections that at some establishments there is no precise demarcation between branches and that an employee classified as an electrical fitter sometimes performs duties ordinarily

recognised as belonging to an electrical mechanic. Alcan (Australia) Limited is an example of one establishment inspected in which it was said the work of a mechanical fitter and an electrical fitter is interchangeable.

The work of electrical fitters came under review on at least twenty-five of the inspections. It, of course, varied from place to place but there was the common feature of ability to read and to apply diagrams sometimes of a complex nature, to work to fine tolerances, to ascertain and correct electrical troubles and to keep up to date with technical requirements. At the inspection of W. D. & H. O. Wills, Mr L. Nash, an electrical fitter who was introduced by Mr McBride, stated: 'Essentially the maintenance work that I do is in the cigarette factory where processes take place ranging from the classification of tobaccos to the packaging of completed cigarettes.' He continued.

'In this factory there is a variety of electrical equipment; motors ranging from fractional horsepower up to 200 horsepower, motor control gear, automatic timers, electrical interlocking on a variety of machines, automatic bin control, electronic controls for steam on heaters, hoists, repair motor bearings, rewinds, solenoids, installing and maintaining personal automatic telephone exchanges, lathe turning incorporated in the electrical trade, substation attendance, safety inspection of portable tools or cooling machines, electronic weighing machines, package fault detectors, air-conditioning contro', lifts, general electrical equipment including fans, radiators, clocks, light and power.

In addition to the cigarette factory there is a power station, a printing factory, metal printing and processing factory and while electrical tradesmen tend to specialise in these factories, they can be and are called upon to perform work in any part of the establishment.

In addition to maintenance work electrical tradesmen also do fitting and construction work, e.g. making switch boards that can be seen about the factories.'

At Munmorah Power Station, an electrical fitter described in detail electrical equipment; what is included in motor checking, installation work on boilers and maintenance of cranes. He described work in the electrical workshop which included the dismantling and repair of small motors. He described the repair of welding machines. As a leading hand electrical fitter he has ten men in his charge who include electrical fitters, mechanics and tradesmen's assistants. At the same inspection another electrical fitter gave a detailed description of work connected with the installation of control gear. He also described modifications to compressors.

In the electrical shop at Bliss Welded Products Limited it was said: 'we make all our own switchboards control panels and so on.'

At the premises of Delairco Pty Limited, it was said in the course of a detailed examination of the work of electrical tradesmen:

'Fitters do a variety of work, rewinding of motors and generators up to approximately 150 horsepower and 200 kW. respectively; make up switchboards up to 3,000 amps; do service calls; general electrical breakdowns. We do shipping repairs and maintenance. We also do installation work ranging from soap mills to graphic art control equipment. We do our own lathe work and welding and make some of our own workshop equipment; for example winding machines, benches and ovens. We also do repairs on motor starters and control equipment. In addition to re-winding of motors we do all the bearings, commutators gear boxes, etc. We do repair and rewinds if necessary on transformers ranging from instrument transformers of approximately 10 kVA.'

At McColl Electric Works Pty Limited, an electrical fitter gave the following statement:

'I am employed by McColl Electric Works Pty Ltd as an electrical fitter and have been employed for the last two years. Prior to this I worked for A.W.C. Pty Ltd at Burwood as an electrical fitter on outside service work. I served my apprenticeship with the Victorian Railways and I am a fully qualified tradesman.

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

Gallagher J.]

The work done by electrical tradesmen in this factory can be divided into four sections—switch gear, motor generators, motor winding and motor service. I work in the switch gear and motor generator sections.

In the switch gear section fitting work is done on a wide variety of switch gear ranging from 15 amp. to 2,000 amp. Whilst we do a certain production standard, almost every job varies from customer to customer.

In the motor generator section we do all the lining-up of the generator sets, the alternators and control wiring. We do our own oxy-welding, brazing and silver soldering, also our own rigging. In the winding section, stators and armatures up to 50 h.p. are wound.

In the motor service section motors are received and stripped, and reports go to electrical fitters about any faults. All faulty bearings are replaced, bearer rollers and sleeve to sleeve bearings being scraped if necessary to fit. After being repaired the motors are reassembled and tested by electrical fitters before being despatched.'

A further statement of duties was given by an electrical fitter at Cadburys. He said:

'I am employed at Cadbury Fry Pascall as an electrical fitter and have been so employed for the last seven years. I am a qualified tradesman and hold an 'A' grade licence. My work covers installation and maintenance of a variety of electrical equipment.

Pumps and water cooling—Various types of electrically driven pumps and cooling systems are used and the control varies from magnetically controlled valves to pressure floats.

Control Panels—There are many and various types of control panels with very intricate wiring, together with push buttons, switches, speed controls, lights and alarms, etc. Much of this is new of the Klockner Moeller make, a very highly refined type of German manufacture consisting of many compact and highly exacting relays, contactors, etc., usually in great numbers.

Industrial electronics—Has a wide and varied application in this industry. P.E.C. are used to control machines in feeding amounts, numbers, colours, etc.; electronic weighing of confectionery into small bag lots, etc. Heating and sealing of plastic bags also being done electronically. Metal detectors on conveyor belts and other equipment has other complicated electronic apparatus and even large steam boilers are electronically controlled.

Refrigeration—Is used extensively in this factory for production and is maintained on the electrical side by the electrical fitters.

Compressors—Are electrically driven and controlled and the various forms of running same includes the limits to pressure—both down and up the boosting of extra pressures to meet peak demands, the operation of switches, etc., by pressure and vacuum requires added knowledge and responsibility.

Steam Boilers—A considerable amount of steam is used in the industry and the boiler is of a very modern design and electronically controlled and requires many alarms, contactors, relays, switches, alarms, signal lights, etc.

The present method for motor control is push button, with most motor starting direct on line. Interlocking of contactors for starting and/or stopping purposes is widely used with the one push button station starting motors and other electrical equipment on three and four separate floors at the one time.

The new Crumb Plant is one department where this method of starting control is widely used.

Also interlocked with the motor controls is a big variety of other electrical control equipment such as motor controlled steam valves with pressure switches to control even temperatures, compressed air valves, and oil pressure valves.

Most wrapping machines and card cutting guillotines have metal detectors for picking up the smallest pieces of metal in chocolate and confectionery and together with steam boilers and other types of machinery is either wholly or in part operated by electronics; photo electric cells are used throughout the plants.

We do maintenance and installation of automatic telephone equipment and we have approximately 270 lines.

Three automatic elevators have always been repaired by the electrical fitters. For the last 12 months Johns and Waygood have spent four hours per week on these, at all other times electrical tradesmen do the maintenance.

Cadbury Fry Pascall do not employ an electrical engineer. They have at present four mechanical engineers and most of the electrical installation work is discussed with them by our foreman and/or tradesmen performing the work in hand. Wiring diagrams are almost

unknown at the time of installation, and after a job has been completed the tradesman draws the wiring diagram which is then sent to the drafting office for blue printing for future records. Some older machines still have not any wiring diagrams.

We are responsible for maintaining all electrical equipment installed throughout the plant, all houses on the estate and the golf house. With the exception of one man employed as an electrical instrument fitter all other electrical tradesmen are required to be very versatile and no one man specialises on any one particular job and especially is this emphasised by a complete rostering for shift work. Even during normal working hours on day work a tradesman can be working on installation work and be sent several times a day to repair some breakdown on vital machinery which is holding up production and teams of female process employees are idle.

The rostering of shift work is such as to rotate shift work so that all take a turn. Earlier this year a comprehensive electronic fire alarm system was installed which is also maintained and repaired by our men.

In the seven years I have been employed here I have seen about [illegible] on installation work. I have never [illegible] job.'

The extracts which I have made from the transcript notes of inspections give some indication of the range of duties of electrical fitters. The employers sought to establish that by supervision or systems of work, the work of tradesmen including electrical fitters is reduced in responsibility or is simplified. For instance in reply to the statement above set out of [illegible] at Cadburys said:

[illegible]

At Email Limited it was said that the work of both the electrical fitter and the mechanical fitter was restricted to the assembly of parts in a completed state which had already been manufactured by the Company. Again, the employer inspection at Australian Electric Industries was mainly directed at showing that schematic diagrams prepared and made available to electrical fitters simplify their work. It was stated that the schematic diagrams cover the operation of the complete electrical scheme. Similarly at Standard Waygood Limited, throughout the inspection, the company representatives sought to indicate the effectiveness of its planning system and the way in which it is designed to reduce the responsibility of employees.

Due weight is, of course, to be given to the 'employer' inspections but the overall impression gained from many inspections left no doubt that notwithstanding supervision or the existence of planning systems, electrical fitters are called upon to exercise the skills of their trade. For instance at Email Limited, the electrical fitter was in possession of a comprehensive range of tools but nevertheless described as the normal range of tools for an electrical fitter. Mr Clift, representing the management, was asked whether he used this range of tools in his work and to this question he replied: 'I would say he would as a fitter.' As a final illustration of the responsibility of an electrical fitter we set out a statement made by an electrical fitter at Borg Warners:

'There are eleven electrical fitters on this plant, two being on afternoon shift, six on day shift, three on casual day shift. Our job is to maintain the plant and to install new machinery. There are approximately 2000 machine tools in the plant, most of which have electrical and hydraulic control; a small percentage of them have pneumatic controls. In the event of the breakdowns when the cause is not known, we are mostly called first to look at the breakdown and to proceed as we can to rectify the fault, if not to repair it. If we cannot repair, we get fitters to help us or to repair it themselves. It is our job to get flow lines going as soon as possible to obviate unnecessary loss of production.'

During the above inspection Mr Keith an executive of the company conceded: 'It is part of the responsibility of the electrical tradesman to ensure that any machine that depends on electric energy is completely safe.'

In connection with armature winders I set out the following passages extracted from the transcript notes of the inspection at the Melbourne and Metropolitan Tramways Workshop:

'*Armature Winding Area*

MR DOUGLAS: Now, Mr Hall, where are we?

MR HALL: We are at the bench where the armatures are rewound.

We have on each tramcar four 40 h.p. motors which are operated from 600 volts, and each of them has a rotating part which drives the tram, called the armature. A typical one is straight ahead of you there. These over a period of many years, twenty years or more, suffer the ravages of time and service, and eventually they have some form of breakdown. They are brought in here and tested and, where necessary, they have to be rewound.

All through the work that they do here they must be very careful and honest with themselves that they have not made a mistake, because if they let anything slip, if their work is other than first class, when they have done their job, the result will not be there. So this is one of the skills, that they have to be able to recognise when anything is other than perfect.

They are responsible for the cleaning down of all of that armature, and they clean out all the slots and file them to make sure that there is no little edge that can cut this coil, because the insulation must be protected at all times.

They then start to insulate the core, and there is quite a wide range of insulating materials that they use. These are on the bench here. You can see quite a wide range of materials, including oil canvas, elephant's hide with a special plastic surface, and red fibre.

MR DOUGLAS: The work they are doing, I take it, Mr Hall, requires the exercise of trade knowledge and skill?

MR HALL: It needs every piece of it, yes.

The other thing he has to be most careful about is that he has to fit that particular wire into a slot in the commutator, and the electrical contact that he gets is of paramount importance. He must not strain that wire in any way, because that is a critical area where he solders that wire in, that can break in service when that has been put in. They must all have their own insulations all the way round, and there must be very good contact. When he has put all these in, he will take what is called a voltage drop tester, an electrical testing instrument, to ensure, before he solders them, that all is right, and after they have been soldered they will again be checked. Then later he applies a special binding insulation over the top of that to ensure that the thing is secure.'

Fitter

The Commission was afforded full opportunity of detailed examinations of the work of fitters, whether manufacturing or maintenance.

At English Electric in Brisbane, a very large establishment with 829 employees under the Metal Trades Award, which is engaged in mechanical engineering and which manufactures, amongst other products, diesel electric locos, electric transformers, electric rotating machines, and switchgear, fitters showed the Commission their work and explained what was required of them. A maintenance fitter said that he 'covers about everything at different times when they break down'. In the machine shops he carries out general maintenance running repairs and attends to such details as clutch adjustments, belt adjustments, air lines, air valve adjusments. He went on to say that sometimes a foreman asks him to

dismantle a machine, for example a lathe or a milling machine, and then find the damaged part. This employee explained that when sending a part to the machine shop he could be called upon to make a sketch of it, get a micrometer and measure it. He then proceeded, 'My next step would be I would have to get a micrometer and measure the width of that key (demonstrating) not where the step is, in the bottom of the step on the unworn part and add 25 thou. to that, place the micrometer on the outside of the key to get the height of it and send those measurements plus the length and the radii on the end of the key with the rough sketch to the machine shop foreman'. He added 'when I get the part back I naturally have to fit it'.

At Pioneer Industries, a company engaged in manufacture of springs, mainly for automotives, railway rolling stock and general engineering industries, and employing 112 employees under the Metal Trades Award, Mr Markham representing the Australian Society of Engineers introduced Mr W. Riddington and then proceeded to give the following description of his duties:

'I would like to introduce Mr W. Riddington, who has been employed at Pioneer Industries for eight years. Mr Riddington resides at No. 4 Margaret Street, Greenacre, and is classified as a fitter.

Prior to his eight years with Pioneer Springs he was employed for five years by W. Mobbs of Hurstville, seven years with AWA Ashfield and fifteen years with E. W. Purdie of Ashfield.

The present duties performed by Mr Riddington include the maintenance of all mobile equipment such as forklifts, mobile cranes, trucks, and etc. He also works on air equipment, including compressors and associated components. He does general repair, maintenance and servicing of all machinery including the furnaces. As an example, in the laminated section, where springs are manufactured he does the maintenance of guillotines, profiling presses, eye rollers, both mechanical and hydraulic, draw-outs, heat treatment cambering, tempering furnaces and the shot peiner or air blast.

He is required to do assembly work, including broaching or rebushing, work on the hydraulic clip presses, the mechanical press riveter and the chain belt conveyor. He works on testing equipment such as the hydraulic press scales and the exhaust system in the paint booth. With relation to U-bolts in the laminated section he carries out similar processes, but there are additional machines there including the screw cutting and rumbling machine and the buckle machines.

In the coil shop the additional machines include bar-reels, centreless grinders, coiler and conveyor. In the blacksmiths' shop there is the upsetting machine, the pneumatic hammer, scragging machine, heat-treatment furnace, hardening tanks, washing tanks, washing machines and furnaces.

In the small spring division, where they manufacture spring washers, tension springs, torsion springs and small springs for telephones and the telephone exchanges, all the work on the machines is carried out by maintenance fitters. Some of these machines have been made locally by the fitting staff. Work in this division is performed on the roller and grinder, the Karl Hack, small winders, torsion machines, various presses, hydraulic torsion winder and the heat treatment furnace. In the checking section there are various machines ranging from those operated electronically to others operated by air. In the toolroom the fitters are responsible for machine tool maintenance

That concludes the list of duties as outlined to me by Mr Riddington. At this stage I request that we go into the workshop to inspect some of the matters mentioned in the duty list.'

Following the above description the Commission proceeded upon an inspection of the workshop and the plant and was given detailed demonstrations.

The extracts above set out give details of the class of work performed by maintenance fitters at factories where there is a variety of machines and since mechanisation is the rule rather than the exception they fairly illustrate the work of a typical maintenance fitter in contemporary industry. So far as fitters on the manufacturing side are concerned, their duties are best explained by reference to

the work of first class machinemen. However, again merely by way of illustration I set out details of work of fitters engaged in assembly work. In the reference to the work of electrical fitters I have already noted the contention of the employer at Email Limited that the fact that parts handled were in a completed state made fitting work less complex. A similar contention was put forward in respect of mechanical fitters. The Commission having viewed the work noted that the fitter was called upon to use a range of tools which included block spanners, screwdrivers, various files, tapes, wrenches and a ring spanner. It also noted a managerial statement in relation to the fitter that 'if he was a fully accredited fitter we would expect him to do this (the work under demonstration) within a fortnight or three weeks'. A further example of an inspection requested by the employers in which the contention of simplification was put forward was that arranged at W. and T. Avery (Aust.) Pty Limited, a company concerned with the manufacture of weighing machines and scales. 'In essence', said the managing director, 'by the time the production is placed in the factory every operation and the materials required have been planned so that with parts, lists and where necessary drawings a complete production programme exists for every component sub-assembly or complete assembly'. During the inspection, Mr Horsburgh, representing the Amalgamated Engineering Union, introduced Mr L. Page, a fitter who was engaged on work on a new weighing machine. Notwithstanding that Mr Page was handling completed parts he was able to demonstrate that his work called for considerable trade skill. In the course of demonstration he said:

'On this weighing machine, this lever (indicating) is the head work and is connected to the bottom works on which the load is placed. The volume produced by the load is conveyed through a rod to this lever (indicating) which in turn is connected to an indicator—and it indicates the weight on a chart. This handle (indicating) deposits weights on this lever, which is called the tier beam. In the first position two weights are on one end and none on the other. You pull it into one position and it deposits one weight on this end equal to one revolution of the chart. So this machine is one thousand lb on the chart—each unit of weight represents one thousand lb. The chart would be in the round area which is now vacant. In the third position we take a unit weight off that end which is equivalent to putting one on the other end. The same applies to the fourth position. In this opening (indicating) the printer mechanism fits; it also is connected to the lever by a system of other levers which operate a wheel on which there are engraved raised figures.

On the centre behind the indicator is a disc called a type disc which also has raised engraved figures. All of this has to be synchronised so that when you have a weight on the machine, the bottom works or platform, then you operate the printer and it will give you a recording of the weight on both a tape and ticket.

Everything has to be lined up in its right position. A fair amount of this work is fabricated; you have a little bit of a line here and a little out of alignment there. It is all to be lined up.'

In connection with lining-up, Mr Page said:

'This wheel (indicating) is operated by the hand lever. For each notch of the lever, the wheel turns certain gradations. That is part of the lining up. The leverage has to be worked in to be accurate on each division. In between each of those notches, as this indicator goes round, it touches each division so that the wheel then turns—and you get eight gradations for each one of those. That is worked out by the lever. That has to be fitted and worked in so that you get the right movement.'

That the assembling of particular plant may call for the knowledge and skill of an experienced tradesman was further demonstrated when the Commission saw at Vickers Ruwolt a pump which had been constructed for the Snowy Mountains Authority and which is to be installed at Jindabyne. The pump stands 13 feet 6 inches from base to the top of the outlet, is capable of delivering 2,800 gallons per minute and is to be driven by a 40,000 h.p. motor. When in use it will pump water from Lake Jindabyne 800 feet up the mountain to a dam

from which the water will be fed back through turbines to provide electricity and will then be returned to the lake. In connection with his work Mr O. Turnbull, who is a fitter, said:

'When we first start on a job the foreman will tell me or one of the fitters on the job to get all the relevant blueprints together, and from these and the bills of materials required we get all the component parts ready to start assembling the job. On this present job a lot of parts come from outside firms and these must be checked for correct size with micrometers and other measuring instruments to ensure that they will join together within the tolerances on the blueprints. On this job the tolerances are very fine, 2 thou being the maximum.

I use all types of tools such as hand drills, portable drills, hand grinders, buffs, scrapers, to get the required finish for the job.'

When demonstrating his work on the pump, Mr Turnbull said:

'This is the Jindabyne job I mentioned in my statement. We are closing it up for a pressure test at the minute. The main shaft for the pump is lying at the side. Naturally it is heavy and you have a crane to handle it, but you must be there to supervise the rigger to see that it is rigged properly.

The tolerances on this are very fine. You can see here the feeler gauges and this one is a 1½ thou feeler gauge and as you can see I cannot get it in so it has sealed properly.

Here we have a 16 inch bearing shaft. The bearing fits on to this part here and the other end is off the motor. We take off the suction point on the other side and put the shaft there. We have already tried that on the shaft but we must try the inside of the casing itself to see if we have sufficient clearance. After that is all done we dismantle it after it has been accepted by the Snowy Mountains Authority. Everything is cleaned and sandblasted before delivery to the customer. You can see a bearing over there which also belongs to this shaft. This here is for supporting the shaft on the turbo side. I had to fit this bearing to the shaft. I must have 14 thou clearance underneath. I had to use a scriber on this job. When I started off it was 10 thou clearance. After I have done this the Swiss engineer in charge will come along and try it out for himself to see if the workmanship is all right.'

First Class Machinemen

It was common ground on the inspections that a first class machineman, within the meaning of the metal trades award, is a tradesman. He is usually a mechanical fitter, an electrical fitter or a toolmaker. As the inspections proceeded the Commission saw a wide range of machinery designed for a multitude of purposes. Many of the machines were described as tools but this homely designation did not detract from their ingenuity, efficiency or capital cost. Nor did it detract from the intellectual capacity of the designers. Further, while the Commission saw conventional types, which have been good work horses for years, it was also given the opportunity of viewing the operation of machines produced in the light of current research and technological development. As a broad generalisation it may be said that some modern machinery has been designed with the object of coping with a shortage of skilled labour and, indeed, this was acknowledged to be the position at the first inspection at Borg Warners.

It was there stated by the general manager (manufacturing) that the company having found difficulty in obtaining skilled labour developed a policy of installing machines 'which as far as possible could be operated by semi-skilled labour'. When I come to the discussion of process work, it will be seen that there have been many instances where a similar policy has been followed. Nevertheless, there are machines, some of them highly modern which require that the operator be possessed of a full range of trade skill including understanding and application of drawings and ability to work to fine tolerances. In certain instances, also, the setting up of the machine was such as required the 'know-how' of a tradesman as distinct from an employee who although possessed of skill was without technical qualification or training.

I proceed to illustrations of the work of a first-class machinist.

At the Brisbane works of Rheem Australia Pty Limited the Commission saw a young man, Mr C. Falcon-Green, who had served his apprenticeship with the company and was six months out of his time. He was operating a milling machine and he told the Commission that he does all types of tooling work and die work. He can also operate lathes, cylindrical or surface grinders. He can read all blueprints. When demonstrating his work he informed the Commission he was taking off .0015 of an inch over a full surface. At English Electric, also in Brisbane, the Commission observed grinding operations carried out by Mr L. Delaunay, first-class machinist. In the course of a demonstration of his work, Mr Delaunay said:

'This is a rotor shaft for an electric motor. It is a precision ground part. It is tooled up within half a thou or a thou, whichever is recorded on the drawings. This is a drawing of the whole of the shaft and the operations of the grind. Each dimension is tooled up to a thousandth of an inch with variances of half a thou. It is a micro finish which is required.'

The work of Mr Delaunay was further observed and tolerances were explained.

At inspections arranged by employers, emphasis was placed on the assistance given to first class machinemen. Thus it was said at W. J. Goetz that not only is the employee supplied with detailed drawings but there are initial discussions with the leading hand who as a matter of general policy gives a detailed indication of methods of procedure. Mr Moss, company executive, while stating that as a matter of company policy employees are kept on the one machine, conceded that first-class machinists from their trade training should be capable of operating horizontal borers, centre lathes, milling machines and grinders. Again at Nuttall Engineering, Rosebery, in the course of an explanation of company system aimed at simplification of work it was said: 'To simplify things further, we supply a complete part list of every item which would go into the machine . . . then each of the individual parts has a separate drawing . . . all these drawings are fully detailed with all dimensions . . . we do not have a tool-room—we have what we call a jig shop . . . the turner takes that to do the turning, the milling machinist mills the part, the grinder grinds and the fitter puts the things together.'

No doubt at some establishments work is simplified but there are others at which a full range of trade skill is required of the first class machinist. In the first class machining area of the Melbourne and Metropolitan Tramways Workshop, the works manager, Mr Hall, named the machines in manner following:

'We have a row of Ward turret lathes on the left here, six Macson engine lathes between us, we have a Kitchen and Wade vertical drill, Richards line borer, 20" Macson lathe, there are two vertical borers used for tyres, a Butler shaper, a planing machine, a Craven and Niles wheel lathe, a wheel press, three Herbert drills, Parkson milling machine, Keeley cylindrical grinder, Macson tool cutter grinder and a Heine press.'

Mr Hall stated that the first class machinists work 'to quite a wide range of drawings'. When asked whether there would be a wide range of tolerances according to a particular component being machined he replied, 'This bearing supports a motor on the axle. The outside diameter is 4¾ inches, plus nothing minus 2,000ths of an inch'. When asked to summarise the skill and responsibility of the first class machinist in respect of a particular component under demonstration, Mr Hall said:

'He is doing a batch of 200 of these. That finished product there represents work that has come from our foundry, through quite a familiar process, and when it is finished that

will be worth $9. He has to make sure that he does not have wastage there, that it is parallel, it is correct to tolerance. He is responsible for the setting up of his machine, all phases of it, and for the end product.'

By way of final reference to the work of first class machinist I state while at the Central Depot of the Country Roads Board, Victoria, and after having been shown standard machineshop equipment ranging from lathes, engine lathes, centre lathes, drills, grinders, milling machines, band saws and lapping machines the Commission was informed by Mr Leslie Miller, a first class machinist of 45 years standing, that he had seen 'terrific changes' going back to the 1920's when he started his apprenticeship. He proceeded to say:

'A job that took half a day then we can do now in 1½ hours with highspeed tools selection of gears on the screw cutting machines. The old counter-shaft driven machines are obsolete now.'

After stating that machines are more accurate and far more efficient and when asked by Mr Horsburgh whether 'it was necessary to have more skill today than in the old days to operate these machines' Mr Miller replied:

'Yes, definitely—that is, to get the efficiency from the machines. A man who had not the skill would be working a highly efficient machine but would not be getting the full use of it.'

Mr Douglas of counsel, appearing with Mr Aird, Q.C., for the State of Victoria and instrumentalities, then asked Mr P. M. Jeffries, Central Maintenance Engineer, 'to comment on the remarks made by the first class machinist in relation to the machines working faster and so on'. Mr Jeffries did so in manner following:

'Yes, I agree in principle that machines do work faster. Over the periods that Mr Miller was speaking about, engineering technology has advanced. We now use such things as throw-away inserts in tungsten carbide cutting tools. Obviously this eliminates the time wasted in tool grinding. The use of the tungsten carbide tools, for instance, has enabled us to increase rates of metal removal. There is no doubt that this has occurred over the past thirty or forty years Mr Miller was speaking about.

GALLAGHER, J.: Mr Miller said this has greatly accelerated the work, but I take it this would be self-evident?—Yes, the rate has increased over the years.

By and large have you found that the employees have kept abreast of the change in technology?—Yes, I think so.

They have accommodated themselves to the use of new methods?—They have got to. I think the tradesman learns from the apprentice in this way. The apprentice goes to school and comes back and talks to the tradesmen, and they pick up these new things. They read things we put up on the notice-board here, too—things of technical interest.

MR MARKHAM: Would it be true to say that a lot of tradesmen go to various schools of a night in order to keep up with changes in industry?—This is true. In fact, the Country Roads Board sends tradesmen to special schools for this purpose.'

Welder—Special Class

The art of welding is the achievement by the welder of a perfect union and the technical knowledge, qualifications, skill, training and experience for the attainment of this objective were explained and demonstrated during inspections.

The principal products of Babcock and Wilcox are in the field of power supply and steam raising equipment ranging from small packaged boilers to thermal power stations of considerable size. As an example of its work one of its current contracts is for the supply of eight boilers for the State Electricity Commission, Victoria. Its customers include all principal utilities throughout Australia, B.H.P.-Whyalla and many others in petrol chemical oil and associated industries. In the production of plant spread over this extensive and important range of work there is necessarily involved a great deal of high class welding and the care taken by the company to ensure a proper standard is indicated by the fact that it has set

up its own welding school. This school as well as other sections of the works were inspected by the Commission. It was stated that all of the welders working on pressure work are put through the school to bring them to the standard of welding required. The length of time spent in the school depends upon the aptitude of the welder and could vary from a week to a month. 'We develop new techniques,' it was said, 'and if we want to train a welder in these new techniques, we bring them into the school.' In the course of further discussion it was said:

'. . . with an odd exception a welder special class is capable of carrying out pressure welding and has an aptitude for it. "Having reached the standard of a welder special class they would expect to be able to do it." There are standard codes specifying the welding required. In 90 per cent of orders, the customer stipulates or refers to a standard body. "What they really want is to be within the code. You could be working under the Department of Labour and Industry, the British, American or Lloyds code. If you are working under those codes, the welder must be able to do the work to the standard required and the X-ray quality as approved." '

In reply to the Commissioner it was conceded by a company executive:

'. . . that having gone through this welding school, a welder would be capable generally of doing any pressure welding work, except perhaps that which may be required in particular jobs by the Snowy Mountains Authority whose specifications are required to be strictly observed.'

A detailed inspection of welding was made at Melesco Manufacturing Co. Limited. This company is engaged in the business of pipe manufacturing but it was stated that its main business is the manufacturing of super-heaters for power station work. During the inspection the Commission had the advantage of viewing the work of Mr K. Saywell who is a welder employed by the company and who is also a part-time teacher at the Granville Technical School. Mr Saywell, who was introduced by Mr R. Scott, representing the Boilermakers Society, stated:

'I hold the welding trades certificate. I have advanced welding certificates in oxy welding and electric welding from the Department of Technical Education, a pressure ticket for oxy acetylene welding, a pressure ticket for manual metallic arc welding as well as a supervisor's ticket from the Department of Labour and Industry. I spend two nights a week at Granville Tech. on welding theory mainly. I have three different classes on one Wednesday night elementary arc welding classes for theory, following Wednesday night I have the theory refresher course for D.L.I. pressure ticket electrical and on Friday night I handle engineering certificate course fellows who do a 13 week crash programme on welding.'

When demonstrating features of his work and in particular relation to a pressure vessel, Mr Saywell said:

'The particular steel in this is of about 35 tons tensile which is a medium low alloy type which does require special precaution in the welding of it. Firstly the whole thing has to be pre-heated to a temperature of about 200-220 degrees centigrade. This is what these torches are doing now trying to keep the whole of this heated so you do not get any trouble with hardened areas of brittleness in your metal alongside the welding.'

Later in connection with another job Mr Saywell said:

'It is almost impossible to place the metal where you want it in the manner you would like. The magnetic field becomes unbalanced around your arc and it will repel your molten metal as it is travelling across the arc and will cause it to blow out to one side of your arc and it becomes virtually uncontrollable. They claim there are means that will minimise it but I have not yet learnt of any way to overcome it. You can overcome it to a certain degree by changing the angle of your electrode. It can have some effect if you change the position of your earth return lead.

Under some conditions you can change the polarity of your machine where you reverse your cable on the machine so that the current goes in an opposite direction. With this particular type of electrode we are using here you can only stick to one polarity because of the nature of this type of electrode. There are two or three reasons for this. They only function correctly on what we call the positive polarity or the reverse polarity. This is brought about by the fact that two-thirds of your heat in a positive arc is liberated on the positive side of a DC arc.

I have found these electrodes we are using on this particular job operate at their best on the positive polarity. This extra heat that is liberated on that side of the arc does have a large bearing on the correct functioning of this electrode.

THE COMMISSIONER: Do you make up your mind which one to use to overcome that DC machine difficulty, or does the company instruct you?

MR SAYWELL: Sometimes you will get instructions. If you are in difficulty you can approach the supervisor or Mr Williams. He will help you out.

MR SCOTT: Would you do this most of the time by yourself?

MR SAYWELL: Most of the time you have to sort these problems out yourself. With your experience and proper training you come to know them without going to anybody else.'

I set out one further extract from the transcript relating to Mr Saywell:

MR SAYWELL: This would depend on various circumstances. If you had any reasonable doubt at all about the quality of the weld you had the thing would be to either remove it by oxy-acetylene gouging or by grinding it out and recommencing the weld from where you were sure the metal was good and proceed with your welding from there.

MR SCOTT: Could you experience any difficulty with porosity on this job?

MR SAYWELL: Yes. This is one of the major problems with these electrodes. It is a common [illegible] with all electrodes classified under the low hydrogen group. These are the minimum to high tensile electrodes. They may have varying amounts of alloy elements in them but it seems to be a problem even the manufacturers cannot overcome and that is the fact [illegible] the first quarter of an inch of these electrodes you will encounter porosity in your weld metal. There are ways [illegible] this and they [illegible] a welder who understands this can [illegible]

In this workshop they prefer if we are using a butt joint that is to be X-rayed [illegible] we [illegible] there are [illegible] instead of [illegible] our weld in the arc crater we start half an inch back on the existing weld metal and [illegible] electrode [illegible] off and we go [illegible] weld. [illegible] is [illegible]

MR SCOTT: Would you describe to the Commissioner what porosity really is?

MR SAYWELL: It is a [illegible] of small gas inclusions in a weld usually with a maximum dimension of about one-sixteenth of an inch. After that it is termed a blow hole.'

In order to furnish a further example of the basic training, knowledge and skill required of a special welder I turn now to the on the job description given by Mr Panzenbock during the inspection at the establishment of Johns and Waygood Limited at Hobart. He stated:

In my apprenticeship I gained the basic knowledge of my trade; I was taught the fundamentals and basic applications of the trade from structural steel to everything lighter. When I came out of my apprenticeship I was equipped with the basic knowledge of what the manufacturer expects of you when you go to work for him. This is necessary, because when you finish your course you do not know in advance what sort of manufacturing business you will work in, whether it will be steel manufacture, motor cycle manufacture, the boilermaking industry or a hydro-electric scheme. When I finishd my apprenticeship I was equipped with the basic knowledge and skill to start anywhere.

GALLAGHER, J: Equipped to start in any industry?

MR PANZENBOCK: Yes, any industry that falls within the scope of my apprenticeship. Later when I worked with various firms, like others, I gained experience and knowledge particular to the respective industry or peculiar to the job I was doing. For example, Johns & Waygood is concerned with the building industry; we manufacture for factories, columns, buildings. Now in my apprenticeship I did not do this part of the work; but I had the basic knowledge of what to look for, the skill to read drawings, to measure, to cut, to do everything. When I came here, if I applied this knowledge correctly, then I could do this job—and I do do it. You do of course gain such knowledge every year, knowledge of the work, the routine practice of the job. You gain more skill because you are always learning—you never finish, because science is always progressing. You must keep up with the progress just as science does; you must keep up with the new machinery that is brought in, the methods required for it, and with steel itself. You are always getting better steel and better methods—you have to keep up with them, and you must do this in your daily work. You must not be ignorant of what is going on.

GALLAGHER, J: You are saying you must keep up with the times, must look at new methods and understand them

MR PANZENBOCK: Yes. You must consider everything the eye can see; you must get a grip because of the basic ideas picked up during apprenticeship. Then you get out and apply them and find out if you can do the job. Then you think to yourself "Can I do this better and faster, more efficiently". You find out. If you do, you keep up.'

The extract which follows provides details of the work upon which Mr Panzenbock was engaged, the requirements and difficulties:

'The job is the foundation of a large government building, four steel piles which will hold the entire building. The job requires special knowledge and treatment of the weld itself; it cannot be treated as an ordinary construction job. It is quite a responsibility.

MR SCOTT: What type of welding are you using?

MR PANZENBOCK: It is all special welding, it must result in a thorough, completely through weld; that is, the weld must be right through, must achieve fullest penetration for strength of the material. For this welding we use low hydrogen electrodes; these have a higher content and higher quality than the normal mild steel electrodes. The job requires pre-heating of electrode itself, because it is in the nature of the electrode and in a way it is used. The steel too must be pre-heated in order to eliminate moisture which it absorbs from the air. This must be removed in order to prevent bubbles and faults, remove at the very beginning when you start to weld. If you do not pre-heat the steel or the electrodes, you will get porosity, which means you do not achieve the necessary strength of the weld. Summarising, for this job you must ensure two things: pre-heat of electrodes and steel and stiffness in relation to expansion and contraction, to prevent either expansion or contraction on the job.

GALLAGHER, J: You are saying you must allow for expansion or contraction?

MR PANZENBOCK: Yes, we put stiffness on each end so that when you heat it and the steel starts moving, you do not get a different measurement or size from what is intended.

GALLAGHER, J: How do you allow for expansion or contraction? Have you measuring devices which give this?

MR PANZENBOCK: No. You learn this over the years; it is just practical knowledge, to know how much, to know that certain steel will expand or contract. The first thing is always to allow say $\frac{1}{8}$ in, or more or less, to counter this expansion or contraction.

GALLAGHER, J: Must you make an allowance, commensurate with the site where the steel will be used? Say the job is going to a very hot place, then do you allow for greater expansion?

MR PANZENBOCK: Yes. The more heat you pump into it, the greater will be the shrinkage of the job. On this particular job you can see the square; this will fit on the column which is lying down. You will allow $\frac{1}{8}$ in for the welding shrinkage and an additional $\frac{1}{8}$ in for clearance of the column. When the shear head is welded we found it had shrunk by $\frac{1}{16}$ in to $\frac{1}{8}$ in from its original size. If you do not pre-set it, but just set according to the plan, you would find it shorter because of this shrinkage.

GALLAGHER, J: As a general rule do you accept the manufacturers' recommendation?

MR PANZENBOCK: Yes, you accept the recommendation as a basic start, because the manufacturer has tested this and has found that within the range it will give the best result for the electrode. Here we take the recommendation as a base and apply it to our welding sets. The relationship to our welding sets is important, because the welding sets give varied output depending on the power in the supply, as to how much can be used. This volume can vary considerably. About amperage I myself have found in this shop that whereas the output is so much one day, mainly towards evening there is a higher output available from the system than at the peak period of noon; that is the load is greater at night when industry shuts down. This must be taken into account, you always have to give it a trial on a piece of steel to see how the electrode runs on your particular hand set; this is so if you are not familiar with the electrode. Then you must adjust the amperage to what you feel is correct for the set; then you do the job, see how you go.'

The work as demonstrated and explained of tradesmen-welders whether first class or special class, strongly substantiated the claims of the importance of the work, of its highly technical nature and of the detailed training, knowledge and

skill required. In an age in which welding is becoming more and more extensive, more and more varied and more and more complex, there is no room for doubt concerning the responsibility of those carrying out the work, even though expert supervision may be available.

Toolmaker

This work was explained and demonstrated during a number of inspections which included those at Sovereign Appliances, T.E.I., Borg Warner, Gordon Bros and Sunbeam Corporation.

At Sovereign Appliances, a toolmaker, Mr D. Berry stated that he had served an apprenticeship of five years; that he studied at a technical college; that he had been a toolmaker for eighteen years; that the toolmakers at the factory who are six in number have the ability to handle any work and that they make about 70 per cent of the dies used for the production of refrigerators. Mr Berry stated that in connection with his work he uses a surface grinder, a centre lathe, drill, shaping machine, milling machine, band saw and jig saw. He also sets out dies in the presses for the purpose of trying them out. He gave the following explanation of a particular job.

'This is what we call the top half of a job. This timber is cut to the required size and it must be squared up to within .001 in in 12 in. It is then marked out and cut on the jigsaw to the shape required. Next we fit the blades in. The top half is then set in the die in the press and we bring the press together on to the bottom and we obtain a mark on the plates. From that mark the toolmaker gets the required shape and it is all done by hand. The accuracy of the component depends on the accuracy of the fitting of the top half to the bottom half. The amount of clearance between the top half and the bottom half must be correct otherwise there is a burr.

THE COMMISSIONER: Would you tell me something about the development of these plates?

MR BERRY: First of all we have ⅜ in mild steel plate. Then we bring the press together and get an impression on the bottom plate. Next we cut the tool steel to size and it is screwed and dowelled on to the bottom plate. The screws hold it down and the dowels, which are half-inch long, are used to position it so it cannot move. Then, while it is in its soft state we fit the top half to the bottom half.

It is all filed by hand, and it depends on the thickness of the material. We must allow certain clearances.

When we are using 20 gauge material we allow .0015 to .002 in clearance. We work on that tolerance in the fitting of the punch to the die. With a thicker plate the clearance is more.

It is put on by hand and it is up to the toolmaker whether the job is a good one or a bad one.'

At T.E.I. the workshop is divided into two areas; one for the manufacture of new tools and one for the repair of tools. On inspection, the work of toolmakers was described in detail. There were demonstrated the intricacies of the work; the need for reading and applying drawings, the need for fine tolerances, the need for precision. In connection with drawings it was said on behalf of the company:

'We have a tool drawing office which fully details the dimensions of the whole job. The toolmaker goes to the drawings. This is a drawing of a particular tool. The drawing is of a Pierce coin form crop die T3683PAS4, sheet one of five sheets. This is given to the toolmaker together with a drawing of the component. He is given this by the leading hand and he is given a detailed drawing, a component drawing and an explanation of what the tool has to do and how accurately it should be produced. The tolerances are all laid down so that individual piece parts are all fully dimensioned. The type of steel, the finished dimensions, the hardness, and if necessary where it should be ground, are shown, "we hold the toolmaker fully responsible but he works to the drawing."'

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Mr Samootin, toolmaker, stated that the normal tools applied by a toolmaker in his work were these:

'Universal vee block (made by Mr Samootin himself) magnetic chuck block, a ground vice, an internal vee block, three micrometers, a .0001 indicator, precision squares, toolmakers' parallel clamps, scribers and centre punches, depth rules, dividers, plug gauges, dowel punches, dowel and corking punches, a five-inch sine bar, parallels, hammers, screwdrivers, guide lifters, drill clamps, allan keys, extension allan keys, files, spanners, telescopic gauges for internal measurements, ball gauges, slip stones, taps, spotting screws, and reamers.'

The obligation to observe fine tolerances was described by Mr G. Holt, toolmaker, in manner following:

'All the mechanism would not be more than plus 0 or minus .0002 inch at your slides. Your die here for cropping off the ends would have a tolerance of about 7/10ths on the actual die faces for cutting. All the electrical circuitry would be done by the electricians. In the final lining up everything has to be within .001 in of your component parts. There is not much room for error. They have to coincide.'

At the Hurstville premises of Sunbeam Corporation, the Commission was given the following particulars by a highly experienced toolmaker, Mr Longfield:

'I served my apprenticeship with Airzone Radio as a fitter and machinist and at the completion of my indentured time was issued with a certificate as a qualified fitter and machinist. I joined the firm of Canning and Milner at Penshurst about fifteen years ago as a toolmaker, and when this firm was taken over by Sunbeam Corporation Limited, I commenced employment with them. As a toolmaker I have worked on all forms of press tools, also jigs and fixtures, third dimensional moulds, laminated dies and precision plastic moulds.

During my employment with Canning and Milner, and now with Sunbeam, the main toolmaking work performed by me has been the manufacturing of third dimensional dies for all types of moulds. This type of work involves the use of all types of machine tools such as milling machines, lathes, precision grinding machines, etc., and I aim to work to tolerances of .0001. Blue prints are supplied and from these the work to be produced is developed and manufactured. There is no inspection carried out on the work done and the only test on the finished tool is when it goes into production.'

In connection with the duties of Mr Longfield and other toolmakers, Mr Canning, Company Executive, and himself qualified as a toolmaker explained in detail the system followed. He stated:

'The apprentices are taken through as fitters and machinists and for some reason or other, we do not know why, they are not called toolmakers. These lads are taken through and given some opportunity of learning the trade as toolmakers here specialising in die cast moulds and plastic moulds and they are not specialists in any way along the line. After they complete their indentures they can choose, if they like, to specialise with any particular machine.

The manner of this shop functioning is that all the product design is done outside of this shop as far as the article goes and it is handed to Mr Milner as the chief tool designer. It is drawn up at the Campsie plant and drawings come over here complete and from then on myself and the leading hand peruse the drawings with Mr Milner's advice at times. Material is then ordered and when it comes it is put over there and checked to see it meets specifications. The leading hand and myself gather the drawings and mark each piece of steel with an article number so that when we send it out to the machinists there is no doubt as to what piece of steel they are going to get. From then on it is under the supervision of the leading hand and myself to describe how we want it machined, how much we want left after hardening and grinding and roughing down and generally they are advised from us as to the manner in which we want them to proceed.

GALLAGHER, J.: Is this supervision and advice given to qualified tradesmen?

MR CANNING: Yes. The leading hand and myself are here to answer all queries from the tradesmen. The tradesmen are given a lead as to how we would like them to proceed with most of this work and then they are on their own from there, particularly a chap of Mr Longfield's calibre. He is quite capable after being instructed on the job, to carry out the work on his own initiative. The apprentices are placed with a tradesman.

GALLAGHER, J: Would you tell Mr Longfield what you want and then you would leave it to him as a skilled toolmaker to carry out what you have asked him to to.

MR CANNING: That is correct. From time to time we check with Mr Longfield whether he is going along accordingly as we would like him to. Mr Longfield is of such a calibre that after being advised where necessary, he can carry it out himself.'

During the inspection, Mr Milner who stated that for the last ten years he had been the tool designer for the establishment, stated that it should be the aim of all toolmakers to work to very fine tolerances and he went on to say, 'if they are overdoing it, they are spending money needlessly. If they are underdoing it they are wasting money unnecessarily'. Mr Milner further stated that for a boy to be a good toolmaker 'it is important that he be good at mathematics'. Mr Milner readily conceded that drawings which a toolmaker is called upon to read may be complicated. He indicated one tool, the drawing for which ran into twenty-six large sheets.

At the Penshurst premises of Sunbeam Corporation, Mr Horsburgh introduced Mr W. F. Butt a toolmaker who gave the following particulars:

'I served my apprenticeship at Hadfields (Aust.) Limited as a turner and fitter, then worked for various firms. For the last twenty-eight years I have been employed as a toolmaker by firms such as Slazengers Limited, S.A.F., Tasma Radio, making jigs, fixtures and press tools. I am now employed at Sunbeam Corporation, Penshurst, as a toolmaker, making new press tool dies. In this capacity I often have to design and draw up the die before making the tool.

In these dies a close tolerance is required in machining and finishing, working to a .0001, requiring the use of a projector, slip gauges etc. For nineteen of the twenty-eight years as a toolmaker I have been in the employ of Sunbeam Corporation Limited.'

Mr Butt gave the following description of work which he was performing:

'First, I check the drawings and get the parts made up. They are made up, brought in, machined, then hardened, then ground down to size and finished down to limits. Steels we are using are SC23 and SC25; other steels would be mild steels to be case hardened. I show the die itself, the bolster, stock, stripper plate all hardened and ground in the centre. Then the punches. That (indicating) comes from here and the lot is put back on the first thing mentioned.

GALLAGHER, J.: You said that when you get the drawing you check up on your parts. Does that mean you have to enumerate all parts that you require?

MR BUTT: That is so.

GALLAGHER, J.: Do you requisition them?

MR BUTT: Yes, I write a list for them.

MR MARKHAM: In other words, you develop the whole of the die?

MR BUTT: Yes.

MR MARKHAM: How many segments are in this die?

MR BUTT: About 300—or more.

MR MARKHAM: You say 300 segments in it?

MR BUTT: Yes, all those parts in the die.

MR MARKHAM: Do you carry out the machining or grinding operations?

MR BUTT: I do the machining and grinding operations on it—and finishing as well.

MR HORSBURGH: Will you show the finished product?

MR BUTT: I show them; they are cutters.'

From the inspections there was gathered a firm impression that toolmaking is a highly skilled trade. The toolmaker works from drawings, at times highly complicated and it was obvious that this requirement alone calls for considerable technical knowledge. Apart from reading from the drawings, the fabrication work itself whether performed manually or by machines requires great accuracy and may call for the exercise of consummate skill. The inspections emphasised the importance of toolmakers. They are the men who put into practical effect ideas which enable development of mass production, that is to say the so-called tools which they produce are very often the ingenious machines which when operated by process workers produce in bulk everyday requirements covering a large range of products.

Patternmaker

When inspecting the premises of Sydney Williams & Co. Pty Limited, an old established Queensland company engaged mainly in production of plant for primary industry, the Commission was shown the patternmakers shop and later the pattern storeroom. At a later inspection at Commonwealth Steel, Newcastle, there was explained to the Commission the work relationship between moulders and patternmakers, it being stated that moulding starts at the pattern making stage. It was further stated that the dimensional accuracy of the mould depends on the skill of the patternmaker in his interpretation of the customer's drawing. In the final stage of a cast, for accuracy, the moulders work with measuring sticks supplied by the patternmakers.

Detailed attention was given to the work of patternmakers at the 'Nuttall' inspection. There, the Commission was given the opportunity of testing the soundness of the planning system evolved by the Company for the simplification of work. At one stage of the inspection, it was said that the patternmaker would get everything he wanted from the drawings. However, upon being reminded of an observation by Mr Bullows which had been to the effect that a patternmaker in order to turn out the particular article would need something more than the drawing—he would need his background of trade skill and experience. Mr Nuttall answered in the affirmative. Previously Mr Nuttall at the request of Mr Horsburgh had explained the work of a patternmaker in connection with core boxes. He said:

'In a foundry the pattern is made to make a hole in the sand. If that was filled with metal you would get a solid blob of iron. If you wanted to hollow the metal part out it is required to make a piece of sand exactly the shape of the whole you need in the casting so a core box is made. The core box is filled with a special type of sand that has oil mixed with it. The core is turned out of the core box and put in an oven where it is dried and the oil oxidises and goes hard and makes the sand hard like a brick. That core is then placed inside the mould and as you can see it leaves spaces where metal can run. When the metal is poured into the mould it fills those cavities that are left and the heat burns out some of the oil in the sand which makes it possible to remove that sand very easily from the centre of the casting.'

It was stated that there were three core boxes for the job and one pattern, and that 111 hours were involved in the manufacture of the pattern. Mr Drayton, the patternmaker, whose work was being observed stated:

'You have got to know how everything is going to come out. We have to know what pieces to leave loose so they are going to be able to get the sand out of it, so that it will be in the shape that is required to do the job.'

The following further extract from the transcript is relevant to the skill of a patternmaker:

'MR HORSBURGH: Is it important that the patternmaker eventually develops through his pattern and core box a job of work which will finally bring to completion as near as possible even thicknesses of metal which are shown by the drawing as required?

MR NUTTALL: Yes, that is true. That is why we always make a trial casting. If the thicknesses are not right the patternmaker has to alter the pattern. That does happen on occasions but in most cases they come out near enough.

MR HORSBURGH: According to the skill of the patternmaker?

MR NUTTALL: Yes.

MR HORSBURGH: Does the patternmaker make provision for the machining which is required on the casting?

MR NUTTALL: Yes, he allows a certain amount for machining. He adds that to the dimensions on this drawing.

THE COMMISSIONER: What would that be?

MR NUTTALL: Usually $\frac{1}{8}$ in for the machining.

MR HORSBURGH: That is wherever it shows there is machining required.

MR NUTTALL: He adds ½ in on there, wherever it is shown.'

The work of patternmakers was further inspected at the works of M. B. John and Hattersley Limited, Ballarat. It was said, 'The patternmaker when doing the job on the lathe inspects his own cutting tools and sets up completely the job. In most cases it is all handwork unless, say, a machinist in a turning fitting job works with fixed cutting tools.

The following description was given of the range of tools:

The tools used by the patternmaker comprise a turning gouge, an angle, flat tool both left hand and right hand, square faced tool, bull nosed tool, small radius for turning radii and fillets.

There are paring gouges, flat paring chisels ranging from 18 in to 1½ in, paring gouges of the same sizes, callipers, dividers, trammels, combination squares, protractors, centre finders, screwdrivers, hammers, very small brad hammers and claw hammers.

There is a contraction rule which is most important which has a range from standard all through the various metal used in this establishment such as brass, iron, steel, aluminium and sometimes double aluminium for master patterns. Contraction rules are most important because everything has to be made to suit the metals that the pattern has to be cast to in order to allow for contraction.

Further detailed attention to the work of patternmakers was given at Vickers Ruwolt. Mr A. Palmer gave the following statement of duties:

'My name is Alan Palmer and I live at 355 Liberty Parade, West Heidelberg. I am 35 years of age. I have been at Vickers Ruwolt for eight years. I served a five years apprenticeship as a pattern maker at Bell & Wiltshire, South Melbourne, four years at R.M.I.T. pattern making, one year at R.M.I.T. engineering drawing, Intermediate, Brighton Technical School.

Reading the drawing

As a patternmaker when first confronted with a drawing I am able to visualise every part of the job, creating a plan for shape to suit moulder, engineer and draftsman.

Setting out job

Accurate views are set out depending on which view will be of the greatest advantage in making a pattern.

Machining method and allowance

As a patternmaker I must have a general knowledge of all machining practice so as to build my pattern. Allowance for machining must be made where necessary in accordance with the types of metal used.

Moulding techniques

(a) Properties of metal must be known by me for the allowance for contraction and stresses within the metal which may distort the final casting.

(b) Provision for runners, risers, heads and chills must be made in appropriate sections to allow for liquid shrinkage.

(c) A general knowledge of sands must be understood for contraction and finish of final casting.

Patterns, core boxes and templates

The pattern is constructed in accordance with the number off, size and most efficient way of moulding, that is whether solid, boxed, lagged, segmented, frames, strickled, loamed, from wood, fibre glass, metal, plastic or a combination of the lot. Each individual part of the pattern is carved or machined and fitted together so as to arrive at an accurate and complete pattern form. This incorporates the art and skill of using hand tools to a fine degree of accuracy.

Tools of trade

All my patternmaker's hand tools such as planes, paring chisels and gouges, carving gouges, spokeshaves, combination squares and levels, rules and other instruments must be bought by the patternmaker being of the highest quality. I am called upon to use all wood working machinery such as wood lathes, thicknessers, sanders, saws and pattern millers besides metal lathes and millers, within fine limits.

Checking moulds and cores

Moulds and cores associated with my work are checked by me to ensure correct position of cores and metal thickness in accordance with the drawing and set-out.

Checking castings

The casting is checked to see that the right contraction has taken place and that correct moulding metal has been used.'

Following the reading of the above statement, the Commission moved to the pattern area and Mr Palmer proceeded to an 'on the job' explanation of his work. Opening a drawer containing a large number of drawings, he said: 'There are hundreds of drawings we get and each one represents a different job. The patternmaker is required to understand the drawing.' Mr Palmer remarked that mistakes are made in the drawings and are 'nearly always picked up by the patternmaker'.

Mr Palmer demonstrated his work on various jobs. In connection with an auger for a brick company he said:

'(Mr Palmer demonstrates how the parts fit together). To get this to shape I have to build a frame. All we have to work off is a casting and we have to take the size off the casting. We build this up to get the size of the flight to go through there. The casting comes from the brick company. There was no drawing for this job. This does not happen very often.

GALLAGHER, J: You take the measurements from that casting?

MR PALMER: Yes. We cut this out on the band saw and sand it, then we have to get our shape which in a flight is a straight line on a curve. You can see how I have to carve all that out. You cannot cut this out, you have to carve it out by hand, and that is where our hand tools come in.

GALLAGHER, J: What tools would you use?

MR PALMER: Paring gouges, paring chisels—on a job like this it has to be right, if it is not, it is no good. You do not get any tolerance for a job like this; it has to be right. I have here also a No. 7 plane, a No. 4 plane, a crank gouge—you can see it is bent so that I can get through long areas. I have my tool box here also.

GALLAGHER, J: When you say the job has to be right, that implies the degree of accuracy?

MR PALMER: Yes.

GALLAGHER, J: What is the tolerance?

MR PALMER: There is no tolerance; it has to be right.

GALLAGHER, J: You form the judgment if it is right?

MR PALMER: Yes. It has to be dead right.'

In connection with plaster work Mr Palmer said:

'This is plaster work that I do. They want to put a wire base around there, so we have to make these dies (indicating). We had to get the cast out of the core box and allow 3/16th wear so that they can press these out. As you see, we have to be able to work not only in wood, but also in plaster, metal and fibreglass.

GALLAGHER, J: You are required to use the material which is suitable for the particular job?

MR PALMER: This is what we call a skeleton pattern. I mentioned in my statement that you have to make a number off, and when there is only one off a job you have to try to keep the cost down. We have to work out where our sections are and the different sizes. When the moulder gets this he fills it up with sand and sleeks it off.

GALLAGHER, J: You work out the sections from those drawings?

MR PALMER: Yes. On the drawing they give you the size, the radius, the diameter, and we have to work out and set out the rest from there.'

The following extract from the transcript relates to the work of another patternmaker, Mr Harris:

'COMMISSIONER WINTER: Mr Harris, I have been interested to watch you from afar using the spoke shave on the job you are working on, what is it you are making?

MR HARRIS: This is a wear strip for the flights. It goes around the edge of the flight. It is a surface on which all the wear takes place.

COMMISSIONER WINTER: You appear that you have been very concentrated on the job you are doing, what degree are you taking off?

MR HARRIS: Within about a sixty-fourth.

GALLAGHER, J: It seems to be agreed a sixty-fourth would be the finest.

MR HARRIS: Yes.

COMMISSIONER WINTER: Making patterns in materials other than wood, would they present any problems?

MR PARKIN (foreman of pattern shop): They all have certain problems on different types of materials. We use a lot of wood here: aluminium has its own problems; fibreglass; they all have their problems.

COMMISSIONER WINTER: You would not express an opinion as to the relative skill required to work in wood compared to working in a metal or fibreglass or plastic?

MR PARKIN: No, a patternmaker has to be versatile enough to work in either of those elements—he is versatile.

GALLAGHER, J: Each patternmaker requires the same type of tools, is that the position?

MR HARRIS: That is correct.

MR PARKIN: I agree with that. One might have one tool a little bit different. There are individual differences as there are differences in different people; but fundamentally the basic tools have to be the same.

GALLAGHER, J: Mr Harris, what valuation would you put on them?

MR HARRIS: I value my 70 per cent of the full kit at $220.'

The patternmaker is a highly qualified, skilled tradesman. When asked at Vickers Ruwolt how long it would take to fully understand drawings, the foreman patternmaker, Mr Parkin, said: 'In his five years apprenticeship he gets a good knowledge of drawings and after two years experience he is a reasonably good patternmaker.' From our personal observations, it is beyond question that this tradesman performs duties essential to the operations of manufacturers engaged in heavy engineering where foundries exist and prototypes are required. Accuracy of prototypes used for the manufacture of heavy engineering jobs is mandatory and although there is necessarily supervision and consultation, the employer must rely heavily upon the training, experience, competency and efficiency of the patternmaker. This is another instance where the designation tends to obscure the skill and intricacy of the work.

Furnaceman (Electric)

At the Vickers Ruwolt inspection, Mr R. Hansen, a furnaceman whose experience extended over forty-five years described in detail the duties of the classification. He made reference to 'the types of furnace, the work of pouring metal, observation and checking, repairs to the furnace, daubing, the charging of the furnace, the relationship with the metallurgist, the system, the duties of the furnaceman in connection with electrodes, the steps taken to correct a malfunction and work in connection with annual overhauls'. Mr Hansen later gave evidence.

Earlier in its inspections, the Commission had seen the works of Dumbrell's at Newcastle, in which there are seven furnaces, T. S. Malleable Pty Limited and John & Hattersley.

At the works of T. S. Malleable, Mr David Stead, furnaceman supervisor, gave the following statement of duties of an electric furnaceman:

'At the company's works at St Peters there are Cupola furnaces and two electric furnaces The electric furnaces were commissioned approximately fourteen months ago and were put in as a means of achieving a better quality metal. Since the introduction of the electric furnaces the normal working position is that one Cupola furnace and two electric furnaces are in operation. The normal crew employed on the furnaces consists of: 1 charger, 1 labourer, 1 fettler and rammer, 1 crane driver, 2 electric furnacemen, 1 foreman or charge hand on day shift.

Scrap metal, coke, etc. is charged into the Cupola furnace during the shift and, as hot metal is required for the electric furnaces the Cupola furnace is tapped by the furnaceman (approximately every twelve minutes) and the hot metal is transferred into the electric furnace by use of launders. After the metal is lifted to the required heat or temperature in the electric furnaces, the metal is poured directly into ladles for subsequent pouring into moulds. Two furnacemen plus the supervisor, who performs the duties of electric furnaceman, work on the floor and it is the duty of the furnacemen to attend to the one Cupola furnace that is operating plus the two electric furnaces. The furnaces are controlled by a panel and adjustments are made from time to time to correct any faults. The panel is read every hour and recordings made. The items recorded on the sheet at hourly intervals are: volts, amps, power factor kilowatts 1, 2, 3; earth leakage, kilowatt hour reading.

The capacity of the electric furnaces is three tons and it is the duty of the electric furnaceman to ensure that the furnace is kept to a level to meet the pouring requirements. This requires a tap every twelve minutes. Additions of scrap are made to the furnace but are done on instructions of metallurgist. Each man in the crew interchanges each week with the exception of the supervisor, and has a turn on each of the jobs. The duties set out above are those performed on day shift. On night shift which runs from 10 p.m. to 8 a.m. one furnaceman is employed. The Cupola furnace does not operate other than on day shift and it is this man's function to maintain the heat in the two electric furnaces and to take his readings and record them each hour. Adjustments to the panel are made as required to maintain the heat. As required furnacemen assist on repair to launders and ramming of furnaces.'

During the demonstration of the work the Commissioner observed:

'I see that he uses a hooked iron rod about eight feet or nine feet long to push the steel scrap into the furnace. I am told the scrap comes from steel girders cut with oxyacetylene. I am informed that the Cupola is now being tapped into the electric furnace by the launders.'

I now set out a description of the work of a furnaceman electric given by the Commission at the John & Hattersley inspection:

'I witnessed the operation of loading or charging the furnace. The furnace door, when opened by a reasonably remote control left an aperture of approximately one foot square. The furnaceman electric who had a face shield on and was wearing asbestos gloves, emptied fine material from two cans through the furnace door. In this operation on several occasions I saw his hands come within one foot of the furnace door. At times flames came through the furnace door. Then, by means of a shovel, he loaded material of a somewhat largish size into the furnace. In this operation his hands did not come any closer than a point of about two feet from the oven door. It took approximately ninety seconds to load the furnace.'

Reverting to the foundry inspection of Vickers Ruwolt, on the one hand it was clearly demonstrated that the work of a furnaceman subjects him to hot conditions and on the other hand that modern methods of handling materials have reduced the laboriousness of his work. However, some manhandling is still required. The Commission was left with the impression that notwithstanding the supervision of a metallurgist, the work calls for some skill, carries responsibility and is at times performed under unpleasantly hot conditions.

Process Worker

Process workers constitute a substantial section of the employees working at metal trades establishments. The majority of them are females, quite often married women. They have no trade qualifications and in general they handle machines the operation of which calls for manual dexterity, rather than technical skill. Let it not be thought, however, that their value as employees is to be deprecated. They keep up with fast producing machines, their work requires close concentration, they are production minded, their productivity is high.

On at least twenty of the inspections there was reference to the work and in some cases the attention given to it was of a detailed nature. As regards training, in general an employee may be engaged without having had experience of the work but again as a generalisation it may be said that a period of two months elapses before full efficiency is attained. On some of the inspections, an example of which was that made at the premises of Amalgamated Wireless Valves Limited, the Commission was told that an indication of manual dexterity may be sought before an employee is engaged. Other employers have set up training facilities and the employee goes through a school before taking up full duty on a machine. For instance, it was explained by the instructress at the training school at T.E.I.:

'We teach them most of the jobs that are done in the factory . . . Girls stay in the school for about three weeks, though a bright girl might stay only a fortnight or a week. The instructress sits opposite the girl and shows her what to do—for instance for spring sets we tell them to do ten—that is after we feel they know procedure sufficiently well to sit on their own.'

The range of machines operated is enormous, there is a wide diversity between products and for these reasons there is necessarily a wide difference between forms of work. Some companies keep their employee to the one machine. Others require them to work a variety of machines or at least encourage them so to do. Still others require them to perform work which although incidental to machine production is carried out manually.

The nature of the work, the tasks, duties, features and conditions were seen at various establishments. At Malley's the Commission saw the mass production of refrigerators, viewing each section concerned with a particular phase and particular production lines. At Containers Limited, a company engaged in the mass production of beer and soft drink cans, it saw a production line operated by process workers, thirty of whom were females. The machines did the whole job. Material went in at the commencement of the line as body plate and came out at the end of the line as a finished product. The line turned out 380 cans per minute. At Gadston Hughes, the Commission saw more beer cans, this time on a line operated by three employees and which turned out cans at the rate of 510 per minute. At T.E.I., the Commission saw the mass production of telephone equipment. At A.W.A. and again at the Astor Centre it saw the mass production of television and radio parts. At Willow Ware it had the opportunity of seeing the manufacture of a wide range of plastic household goods. Finally just by way of one further example of an extensive variety of manufactured products, it saw at Joseph Lucas the mass production of automotive equipment.

It is of course impracticable to give detailed descriptions of the work of all employees whose work was seen. Nor is it really practicable to pick out examples which could fairly be described as typical. In some cases it was extremely simple. In others it was complex. Some employees were confined to one specific task. Others performed a wide range of duties. In some establishments employers had

set up systems of work having as the objective orderliness or simplification. Others relied upon conventional supervision. As a general statement, it can be said that employees performing simple tasks are expected to attain a high rate of production while for those engaged upon complex tasks the target is much smaller.

In general—there are exceptions—employees engaged on process work receive incentive payments. A target varying according to the complexity of the job is set and usually within a relatively short period of time the employee becomes entitled to the full bonus which may amount to 25 per cent of ordinary wages. Incentive schemes appear to meet with the cordial approval of the employees and it is a matter for consideration whether work which without question calls for adequate remuneration should be further rewarded by means of increased rates of ordinary pay, by improved bonus payments or by both methods.

Machinist—Third Class

The work of a first class machinist has already been discussed and it will be recalled that that classification of employee is engaged upon machines the operation of which by definition calls for the services of a tradesman. These are mainly machines where the operator is required to work to drawings, observe fine tolerances, or to perform setting up of particular difficulty. A machinist third class within the meaning of the Metal Trades Award 1952 is an adult employee other than a process worker who operates any power driven machine for which a rate is not elsewhere prescribed in the award and without limiting the scope of the foregoing includes such an employee operating any of the following: Nut bolt, rivet or dog spike making machines, tapping machines and drilling machines on work other than that specified in the definition of machinist first class. Although the definition of machinist third class in contrast to those of machinist first class and machinist second class makes no reference to setting up, at Cyclone K.M. Products, Mr Heagney described the duties of a third class machinist in manner following:

'The classifications are the 3rd class machinist operating the ringlock machine and also the chain wire machines. The products produced on the ringlock machine are known as sheep fence which has 12 swifts, 6 strands by 28 inches and 12 inch squares. Pig fence, 16 swifts behind the machine, 8 wires and 30 inches high with 6 inch by 6 inch squares. Cattle fence, 6 swifts working behind the machine, 6 wires, 36 inches high with 12 inch squares. Stock and boundary fence, 10 swifts behind the machine, 5 wires, 27 inches high and 3 feet squares. The same gauge wire is used.

The operator starts and stops the machine as required to change over the mesh in accordance with the type of product made. This involves the altering and re-setting of the die holders to meet the product being produced. He also re-sets the rollers underneath the machine and is responsible for the adjustment of the speed and tension of the machine when he is doing these readjustments. He is also responsible for the cleaning of the machine. During the running of the machine if there is any breakdown he is required to make minor adjustments.'

Mr Heagney continued:

'On the chain wire machine there is a 3rd class machinist employed. He is required to load his swifts and to start running the machine. The machinist is required to set up the machine with altered mesh ranges. The mesh ranges from ¾ inch up through 1 inch, 1¼ inch, 1½ inch, 2 inches, 2½ inches, 3 inches, 4 inches. The variation of the wire gauge used ranges from 14 gauge through to 13 gauge, 12½, 12, 10, 8 and 6. It should be pointed out that the gauge wire used can be used for quite a number of mesh sizes, that is you could have a 1 inch mesh being manufactured by 13 gauge wire or 10 or 12 gauge wire.

When the daily order form is made available it is set out on the form what is to be manufactured and what gauge wire is to be used together with the mesh sizes. The operator has the responsibility of the setting up of the machine to meet the variation in the sizes of

the mesh and also the adjusting of tension on the rollers, guillotine fingers, changing trays, raising or lowering the fingers, to see the mesh is running correctly, to change the knuckles to obtain the required size of the mesh.

At the back of the machine he is required to make adjustments to the rollers; he is also responsible for the alteration of the speed of the machine. I am informed the setting up of the machine takes 130 minutes.'

In discussion which followed the above description it was stated by the works manager that setting up time varies considerably—from 10 minutes to 2 hours. He said that 130 minutes indicated an extreme case and went on to say that 'the run of the mill set up would run from 10 minutes to 30 minutes.'

At an earlier inspection, namely that conducted at the Townsville works of Cyclone Limited, another third class machinist, Mr Douglas Brennan, also described how he set up the machine and how he was required to measure the size of wire products by means of a tape. Mr Brennan informed the Commissioner that he attended to the machine while it was running and at times he would rectify faults in the wire. He stated that he had been 'doing work of this character' for 23 years.

Instances of the work of first, second and third class machinemen were seen at Borg Warners. There it was stated (as has already been noted) that finding difficulty in obtaining skilled labour, the company developed a policy of installing machines which as far as possible would do the work themselves and which could be operated by semi-skilled labour. Accordingly where the award so permits it uses second and third class machinemen. In connection with the Ex-Cell-O Transfer Machine in the Automatic Building it was said by the general manager (manufacturing):

'The operator is classified as a third class machinist. At the moment he is engaged on loading two components (differential carriers) into the first stage of a transfer machine. This first stage consists of eight stations.

The operator's job is to load two components, actuate the clamping mechanism, and wait until the pallet moves off and the empty pallet comes to the unloading station. To actuate the pallet, the operator presses a button after the job is loaded. No gauges are involved.

MR HEAGNEY: I notice a hammer there: what is that used for?

MR AMEDEE: The operator taps each casting to make sure the clamps are right. It has developed more from habit than necessity.'

As a final illustration of the work of third class machinemen, their skill and training, we set out the following extract from the S.E.C. inspection at the Yarraville Workshops, Melbourne:

'MR CHAPMAN (Works Manager): This is still a part of the machine section. The two employees here that we will be looking at are third class machinists.

From the information given to him on the actual article, that is the drill sizes, he inserts the drill in the machine and proceeds to drill the holes.

He is provided with the job marked out, he is provided with drills which he selects—he has got to select his own drills from a rack that he has and he has the responsibility of ensuring that the holes are drilled where they are marked.

GALLAGHER, J.: Where do you get your third class machinists from?

MR CHAPMAN: Mainly we train them here. We employ them first as skilled labourers and those who have a bit of aptitude for this type of work are encouraged to proceed.

GALLAGHER, J.: What training would you give them?

MR CHAPMAN: We give them a try-out under close supervision by the foreman.

MR DOUGLAS: What is the skill involved in doing the work a third class machinist is required to do? Where does he exercise skill?

MR CHAPMAN: In locating the job in the correct position in the drilling machine. He has to locate the job directly beneath the drill. The accuracy of the finished product depends to a large extent on this location of the job under the drill and also the selection of the right drill.

GALLAGHER, J.: It is work that requires concentration, Mr Chapman?

MR CHAPMAN: It does, yes. Each of these holes must be located accurately under the drill —every one.

GALLAGHER, J.: While the machinist is doing the work he has got to watch all the time?

MR CHAPMAN: Yes, that is correct.

GALLAGHER, J.: How many parts of this nature would a third class machinist turn out on a particular shift.

MR CHAPMAN: This job has four holes, two on the side, making a total of six holes. I would imagine he would drill approximately 200 to 300 holes a day.

GALLAGHER, J.: He would have to have a good understanding of the machine to use it.

MR CHAPMAN: That is correct. These people would be concentrated mainly on drilling machines. Ninety-nine per cent of their time would be spent drilling on the one machine.

We have another third class machinist to indicate the type of work a third class machinist is called upon to do. In this case he is drilling with the aid of a jig. He locates these parts, which are turnbuckles for overhead transmission lines, in a drill and drills a hole through the threaded portion.'

Second Class Machinist

At the Westinghouse Brake inspection a good deal of time was directed to the work of a second class machinist, Mr McCall. It was contended that Mr McCall had been carrying out on the previous working day work much more complicated than engaged on during inspection. Mr McCall contended that he carried out this work with drawings and very little supervision. Mr Richards, Works Manager, contended that 'most of this work is done with a jig which controls the position of the jobs and also has a bearing on its size'.

In the course of inspection of his work Mr McCall was asked what machining he had done on a particular casting. He replied:

'I have done everything. I have done each of the bores. This one has a five thou. finish. This bore has a 30 micro inch finish. This one has one thou. that way. Some of the bores are angled holes that go right through. I did all the tapping in this side and all the drillings and tappings in the other side. I also did the base. I also did the angled holes around the edge. Other than the multi-turned surface I did the lot of this.

THE COMMISSIONER: You did this with drawings and without supervision?

MR MCCALL: Little supervision.

MR RICHARDS (Works Manager): Most of this is done with a jig which controls the position of the holes and also has a bearing on the sizes. With one or two exceptions all of this was done in a jig.

MR MCBRIDE: We do not deny that.

MR MARKHAM: Who sets your speeds and your feeds?

MR MCCALL: I do.

MR MARKHAM: Who sharpens your tools and does your set-ups?

MR MCCALL: I do.

MR MARKHAM: How much direct supervision would there be in association with this work?

MR MCCALL: Very little. I was on this job for 49 hours altogether and I would say there would be none. No one actually helped me. Mr Nimmo and I discussed things occasionally, where the jig was wrong, and we discussed ways and means of getting a better finish. The 30 micro inch finish on this is impossible to my way of thinking, and we discussed this, and we did it in the rough with a finishing operation. I do not think anybody helped me at all.

MR RICHARDS: Mr Nimmo is an assistant engineer on the job and not just someone working with Mr McCall.'

Later Mr McCall explained his work on a twin shaft Herbert drilling machine in manner following:

'THE COMMISSIONER: What unit are you drilling?

MR MCCALL: An E1 brake valve body. I am in the process of drilling these three holes to get it to fit on the jig which is located here. I am also in the process of tapping around that circle four half-inch dry seal and one quarter-inch dry seal holes. When I am finished with that I will take it to the other end of the shop where you have a speed drill and I will put a small hole through into here. This machine is not fast enough. I will come back here and drill a hole through there and tap these three holes and the job is finished.

The Commissioner and the party observed Mr McCall tapping threads into an E1 brake valve body.'

At the T.E.I. inspection it was stated in answer to a question raised by Mr Bullows that a person considered to be a higher class process worker could be designated as a second class machinist although his work would not fit the classification.

At the inspection at W. and T. Avery Pty Limited, the following discussion took place in relation to the work of an employee regarded by the company as a second class machinist:

'Second class machinist:

MR CHAMBERS: This is called a horizontal milling machine. This man loads a component into the fixture, sets it going and on completion runs the machine back and takes the component out and puts in another one.

MR CULLEN: Who sets up the machine?

MR CHAMBERS: The machine shop charge hand.

GALLAGHER, J.: He does not set it up himself?

MR CHAMBERS: No.

MR BULLOWS: Are you aware by definition a second class machinist can set up his own machine?

MR CHAMBERS: Yes.

MR BULLOWS: You would still classify this man as a machinist second class.

MR CHAMBERS: Yes.

MR HEAGNEY: We do not agree the employees we have seen are properly classified in accordance with the definitions of the Metal Trades Award. I would feel they fall within the company's classifications rather than the accepted definitions of the award.

MR CULLEN: This quite often happens. The purpose of these inspections it to show the type of work being done within the award. The question of the proper classification is a matter for argument at a later stage.

MR HEAGNEY: We wanted to indicate so that it was not put into your minds——

GALLAGHER, J.: That this was typical of the work of a second class machinist throughout industry. I quite follow that. We understand that.'

At the premises of Gordon Bros the Commission saw second class machinists working on production lathes.

The whole of the information placed before the Commission on the inspections in the light of demonstrations of actual duties made it clear that machinists second class, who satisfy the award definition, perform duties calling for skill and experience.

Storeman and/or Packer

At the request of the parties, consideration of this classification was deferred.

REASONS FOR DECISION OF MOORE *J.*

In November 1965 the unions lodged a claim for increases in margins in the metal trades calculated by applying movements in prices and productivity to the second Mooney formula of 1947. The margin then claimed for the electrical fitter was $16.80 or an increase of $5.60. When the matter was heard in mid-1966 the increase claimed had become $5.90 because of further economic movements. On 26 September 1967 the claims were restated before us, the margin sought for the electrical fitter then being $19.70. The Commission asked that the claims be stated in total wage terms and on 7 November 1967 the total wage claim for an electrical fitter in Victoria (Elsewhere) was expressed at $52.40, an increase of $6.40 on the current total wage. On 14 November 1967 the unions explained that there was an error in their document of 7 November and on 16 November supplied another list of claims expressed in total wage which included a claim for the electrical fitter in Victoria (Elsewhere) of $53.40 or an increase of $7.40 per week. The unions agreed that the extra dollar which was applied to all rates resulted from them treating the dollar increase of June this year as if it were a basic wage increase. The employers strongly opposed the kind of claim made by the unions and argued that it was unacceptable in principle. They also submitted that if work values in the metal trades had changed, the changes were not sufficient to cause an increase in any rate. If despite this submission the Commission found that the work value of particular classifications had increased we should not use this fact as a reason for increasing all rates.

Nature of Proceedings

The form the proceedings took is a direct result of action by the Commission in July 1966.[1] Neither the unions nor the employers had requested a work value review of the metal trades but the Commission, for reasons then expressed, decided to set in motion the first work value review of the metal trades for many years. Although in 1952 Mr Commissioner Galvin held a long enquiry, his decision[2] was mainly an economic one and generally speaking continued the rates and relativities of 1947, which were the result of agreement.

This is the first review by a full bench of any significant group of blue collar workers since the total wage was introduced in the decision of 5 June 1967.[3] It was then pointed out that any future work value cases could be undertaken in the knowledge that future adjustments of total wages would take place annually for economic reasons. Although it is no longer identifiable, what was once called a secondary wage will as part of the total wage be adjusted annually for the first time in the history of wage fixation in this country.

Although in the future the whole wage will be adjusted for economic reasons we still must put this award on a proper footing now; in other words, make an award upon which annual reviews of total wages can properly operate. Both the results of this case and the method of arriving at these results are important. I reject the concept that there is some onus on an applicant to demonstrate either that work has changed since an earlier work value assessment or that the earlier assessment was wrong. In work value cases the Commission should, after considering all the material put before it, place a value on each classification about which it has adequate knowledge to make an assessment. That material will of course include earlier and current fixations and the reasons for them.

Although the Commission must at all times use its general industrial knowledge and act with common sense, it seems to me that in work value cases it must

(1) 115 C.A.R. 93 (2) 73 C.A.R. 324 (3) 118 C.A.R. 655

confine itself to those classifications about which there is some material before it or some specific agreement between the parties as to value. Any other approach seems to me to be inconsistent with the new kind of procedures suggested in June 1967. The argument that everyone in an industry from the managing director to the labourer in the yard is working as a team is attractive but the rewards for this kind of teamwork which leads to increased productivity will be distributed to employees generally in National Wage cases. Unless the Commission confines itself in work value cases to forming views about the value of the work itself the new approach introduced earlier this year may be frustrated. In work value reviews employees will be guaranteed a consideration of the work they do in the knowledge that its value will be assessed on factors related to their work. In annual economic cases they will receive the fruits of overall economic improvements. There is no room in this situation for a work value case based on the kind of claim made by the unions in this case to increase all rates merely for economic reasons.

Methodical Approach to Wage Fixation

The Commonwealth attempted a detailed methodical approach to wage fixation by filling in of check sheets for each job inspected as the case proceeded and in the end producing a table of relative values for each job. A great deal of debate took place about the appropriateness of 'job evaluation' in the Australian setting. Job evaluation is a technique well known in collective bargaining countries and is normally carried out either on an establishment basis or in relation to a series of establishments owned by the same employer. Its use by us in this case was strongly opposed by the unions and employers. Without forming any conclusion on the meaning of job evaluation or how it is used abroad, it is my view that within the arbitration system a methodical compilation of various qualities which are regarded as relevant to work value would be useful, even if competing parties arrived at different results. I think the parties might consider the possibility of introducing a more methodical and systematised presentation of material in work value cases. This would not detract from the Commission's function of judging the material and coming to its own assessment but it might clarify issues and assist the Commission. As to the exercise conducted by the Commonwealth in this case, while I appreciate the diligence of Mr Bullows in compiling the check sheets, the results he arrived at were in my view subject to so much qualification that I have not used them in reaching my conclusions.

Over-award Payments

The unions presented some material about over-award payments to indicate what is in fact being paid. In addition this material was used by Mr Hawke as being the other side of the coin of his argument about applying prices and productivity increases to 1947 fixations. He said that his general economic arguments were both confirmed and reinforced by the amounts of wages actually paid.

Three observations must be made about the use of overaward payments in these proceedings. In the first place there is no one market value for any of the classifications. The figures submitted by the Boilermakers and Blacksmiths Society about actual payments to boilermakers and welders indicated weekly over-award payments as follows:

	$
New South Wales	11.00
Victoria	10.05
South Australia	6.82
Tasmania	5.00

A similar survey conducted by the Federated Ironworkers Association showed the following average weekly over-award payments:

	$
Sydney	7.21
Port Kembla	7.67
Newcastle	9.26
Adelaide	4.41
Tasmania	5.55
Port Pirie/Whyalla	5.08
Western Districts	5.60

The Electrical Trades Union relied on the figures appearing in the decision of Wright *J.* in the 1966 case[1] as approximately indicating the present position for that Union. None of the figures were put forward as complete or accurate but they are enough to show that there is no one market rate for the classifications under this award.

In the second place the unions' claim was not in the form of a request for market rates and in fact some of the amounts sought are below current market rates as a comparison of the above figures with the unions' claim will show.

The third thing is that even assuming the existence of a clearly definable market value the Commission might well have to reconsider some of the earlier views of the Court expressed in cases such as the *Metal Trades Case*[2] and the *Bank Officers Case*[3], both of which were referred to in the 1959 *Margins Case*[4]. If a tribunal knows that the wages it awards will become actual wages it can talk with some confidence about awarding rates actually paid by reputable employers. If, however, the tribunal cannot assume that the weekly wages it awards will become the wages actually paid, any attempt by it to award a market rate may simply cause the market rate to rise. The existence of full employment makes the old approach to the use of market values much less useful than it was in the days before full employment. If in an industry overaward payments are common, this may be some evidence that award rates may be too low but the Commission must be careful in evaluating the evidence.

Nature of Metal Trades Award

The new approach to wage fixation introduced in June 1967 means that no large award is needed as a vehicle for spreading economic benefits by increases in what used to be the secondary wage. An award of the size of the Metal Trades Award will no longer be necessary for test case purposes because cases such as the 1959 and 1963 *Margins Cases* should not occur again. Once test cases have disappeared there appear to be positive virtues in splitting up the present Metal Trades Award into awards of much smaller size. In principle it would appear desirable that no one award of this Commission should tower above all others. Moreover if in place of one large award there were awards more closely tailored to the needs of particular employers and employees then both would be better served, and the concept of work values reviews marching side by side with annual economic reviews more likely to be achieved because a closer and more detailed consideration of work value would be easier. However useful it may have been many years ago to create one large award to cover the variety of industries now covered by the Metal Trades Award the time may well be coming for serious consideration by the parties or by the Commission to a breakup of the present award.

(1) 115 C.A.R. 93 (2) 37 C.A.R. 176 (3) 34 C.A.R. 843 (4) 92 C.A.R. 793

Nature of this decision

This is a decision about the metal trades now and is based upon the present state of the industry. There was evidence of changes which had taken place, of changes which were taking place and of plans for the future but one cannot predict with certainty what the result of present and future changes will be. What is said and done now should not be read as laying down any immutable principles of wage fixation, any unchanging hierarchy of values or any timeless assessment of the value of the work of individual classifications, although in the absence of special circumstances the rates now fixed should not be changed for work value reasons until another review.

The conclusions I have reached are the direct result of all the inspections made; evidence given and submissions put in this case. I have not considered the work of employees under any other award and anything said or done in this decision should not be automatically applied in any other industry. One thing that has emerged in these proceedings is that job titles can be misleading and, as was pointed out in the *Clothing Trade Case* of 21 April 1967, although similarity of title may appear to establish some *prima facie* relationship, in assessing work values an examination of the actual work may disclose significant differences between two jobs with similar names. It is necessary to make observations of this kind because in recent years alterations in wage rates in this industry have tended to flow almost automatically into other industries. The examination in some detail of actual work done has not been undertaken for many years in the metal trades and the whole proceeding has been quite different from the 1959 and 1963 *Margins Cases*. This must be kept in mind by anyone seeking to use this decision in other industries or other awards.

Outline of case

Extensive inspections were carried out in Queensland, New South Wales, Victoria and Tasmania. A wide range of establishments covered by this award was inspected and the work of many employees in a variety of classifications was observed.

The unions called evidence from one employee, from two union officials and from three experts; the employers called nineteen representatives of management from establishments covering a wide range of metal trades industries. The employers did not call any evidence from small engineering shops which account for probably 30 per cent of the work force covered by this award, and submitted that in such small shops things were probably much the same as they were in 1952. The Commonwealth called an engineer who had accompanied the Commission on all its inspections and the State of Victoria called an engineer who had been on many of the inspections. The Hydro-Electric Commission of Tasmania called an engineer from its service. The evidence was wide ranging, and together with the inspections has given us a good conspectus of the industry, in particular of the classifications for which I would be prepared to fix rates. It is my view that there was sufficient material of all kinds before us to allow the assessment of the work value of approximately seventy classifications but no more. I would have left consideration of the other classifications to the parties in accordance with our statement of 25 October 1967.

A number of general tendencies were disclosed in this industry; namely a movement towards specialisation by employees, especially tradesmen; the introduction of machines which are faster, more complex, more productive, more accurate and more expensive; the use of more detailed supervision and more

sophisticated management methods such as methods engineering and product control, including more accurate and detailed drawings; the introduction of new devices which may reduce physical effort but increase output; and the breaking up of work; paricularly on production lines in manufacture. This can be described comprehensively as the result of industrial engineering.

The extent of these tendencies range from establishments where there is little sign of any of them, to those, particularly in manufacturing, where all the tendencies are observable to varying degrees. Their extent and their effect on employees are difficult to assess, a difficulty which is compounded by the size and variety of establishments covered by this award.

The employers submitted that broadly speaking these tendencies had reduced the skill of employees, which has now in part been taken over by management and by new machines and devices. Similarly responsibility, arduousness and other factors relevant to wage fixation had certainly not increased and may have been reduced. On the other hand the unions submitted, again broadly speaking, that new methods, materials and machines had caused an increase in skill because employees were required to apply themselves to new situations but still had to exercise their old skills. They also submitted that the changes were much less extensive than the employers made out and that if the other factors relevant to wage fixation had changed they had changed in a way which supported wage increases.

It is my assessment of the evidence that although in many large establishments significant changes have taken place, the managerial change is not as widespread or as great as the employers suggest. Even so, there is considerable evidence of new methods and techniques.

Industrial engineering applied in large establishments tends to affect the non-tradesmen more than the tradesmen, but it does affect both. It is designed to create a better product, to obtain it more efficiently and cheaply and to minimise the effort, physical and mental, required of employees. It leads not only to a greater output for the employer but also means that the employee is being used more economically, that unproductive time is decreasing and in some cases that an employee is spending a greater part of his time on the more skilled aspects of his work. Employees may be required to adapt themselves to new procedures and to work with new, complex and expensive machinery for which many would feel some responsibility, despite repeated assurances by management that the responsibility lies with supervision.

Tradesmen

As a result of industrial engineering tradesmen work with more supervision, better equipment which produces better results and they tend to specialise. This is true of many establishments where there is industrial engineering, though from my observations I conclude that some industrial engineering is not very efficient or effective. However, the role of the tradesman and the attributes he is called upon to use, have in some way changed and skills once used often are used less frequently. But the employers still want versatile tradesmen, as a number of their witnesses said. They want men with all-round skill who can talk to production teams including professional engineers with authority and knowledge, who can notice and draw attention to mistakes which employers admit occur from time to time. They want men who can adjust themselves to new machines, new methods and new materials, who on shift work or maintenance can diagnose breakdowns and repair them expeditiously including the exercise of some

ingenuity, even though there may be aids to diagnosis and spare parts may be more readily procurable. They are also looking to tradesmen who will ultimately undertake supervisory duties. In establishments where there is no industrial engineering or where it is minimal, tradesmen are called upon to exercise their skills without all these new methods and aids.

Where there is product control tradesmen may have to make fewer individual decisions, some of the accuracy they formerly needed may have been taken over by machines, jigs and fixtures, but they are still tradesmen applying their trade knowledge to constantly changing circumstances and still working to fine tolerances. Their predecessors could have spent their careers as tradesmen comfortably relying on the training they had in their apprenticeship and in their early years as tradesmen. They could rely upon change being leisurely. This is no longer true. Tradesmen must now be able to adjust more often and more quickly to change. They may need a familiarisation period in which to accustom themselves to the physical layout and methods of work of a particular enterprise. The greater degree of specialisation that employers introduce, the longer it will take tradesmen to familiarise themselves if they move from one establishment to another.

The training of apprentices by the educational authorities and by some large employers still covers a wide area of skill. Teaching is developing and expanding to keep up with changes in knowledge and practice. Many employer witnesses, themselves ex-tradesmen, said tradesmen are not exercising the same skill as they did some fifteen years ago. In my view the technological change which has taken place so far in this country may in some establishments and in some ways have changed the use of skill required of tradesmen but has not decreased its value.

Not all employees treated and paid as tradesmen have received formal training by way of apprenticeship or otherwise. As the bulk of tradesmen have been apprentices, rates for tradesmen have been considered by me on the assumption that all have been apprenticed and are fully qualified tradesmen. This approach was not disputed by the employers.

I have looked at the various tradesmen classifications in a general way. The range of work done varies greatly in different establishments, indeed within particular establishments. Rates have been fixed for the average kind of employee working under average kinds of conditions. No other way would be fair either to employers or employees. Factors taken into account are the qualifications necessary for the job, such as apprenticeship, the training required on the job, the attributes required in the performance of the job such as mental and physical effort and dexterity, innate or acquired; the responsibility for work and equipment and for the safety of other employees, and any conditions of unpleasantness inherent in the job.

The unions submitted that in addition to assessing the value of the factors just mentioned it is also proper to assess the value to the employer of the results of the work done by various classifications. This submission was strenuously opposed. If the unions' approach were adopted less skilled employees working in the direct flowline of production might receive more than skilled tradesmen working elsewhere in an establishment. This would be a revolutionary change in approach to wage fixation in this country but in any case there was no material upon which we could properly make assessments of the kind suggested.

In my view the award rates for tradesmen under this award are too low. At the present time there are a number of tradesmen on the same rate, of whom

the fitter is normally regarded as representative. They have various backgrounds in training, including mechanical, electrical, sheet metal working, boilermaking, welding and moulding. There have been more changes in some of these trades than in others but all in all I think they should be paid the same rate. Because of the broad sweep of this award I would not be prepared to attempt any further refinement of tradesmen's classifications than exist at present.

As my decision is a minority one I consider it better for me not to announce a series of rates different from that of the majority and therefore will publish only one of the increases I would have awarded, namely, $5 to the basic tradesmen. These tradesmen have already received an increase of $2.10 this year, being $1.10 in January and $1 in July. If to this were added the $5 I would grant the total award wage for these employees in Victoria (Elsewhere) would increase by approximately 16 per cent in one year.

Non-tradesmen

Non-tradesmen are more difficult to deal with as a whole because the value of their work is more varied. By and large the new management methods such as product control and more supervision have affected them rather more than tradesmen. Applying to non-tradesmen all the considerations relevant to wage fixation I conclude that the increases ranging from $1.30 to $2.30 in one case which have already been awarded to non-tradesmen in this year have produced adequate award rates for the work which most of them do. This is said in the knowledge that in August next there is likely to be another increase to all employees, including these non-tradesmen.

I would however have awarded increases to twelve non-tradesmen classifications including process workers, but again I think it better not to name the classifications or the amounts I would have awarded. In view of the importance of process work I consider I should give my reasons for concluding that process workers should receive an increase.

Process Workers

Process work is extensive in the manufacturing area and the introduction of flowline production has tended to change its nature. New techniques have been evolved and new machines and devices introduced aimed at improving the product and accelerating its manufacture. They eliminate waste time and waste movements but process workers still work constantly, often at a pace set for them and are required to complete complex and pernickety jobs which require some degree of attention. The work done by some is on components so small that a microscope has to be used. The time taken to train a process worker was stated to range between hours in some establishments to years in one. Some weeks of training are normally required, the process worker must be manually dexterous and in many cases must be able to perform more than one function. They must accept some responsibility for their work and in some instances make the final check of a product. In my view their present award rate is too low. In some cases they are paid weekly rates, in others they work on some bonus or piecework system. In my view all process workers should be treated similarly and any increase I would award would be as a flat rate and not by award included in the calculation of piece or bonus rates.

Females

No special arguments were put to us about the work value of females though they are extensively employed in this industry, particularly as process workers. Although the employers expressed some difficulty about the form which the award has taken about females since the total wage was introduced and although the female rate for, say, a blacksmith's striker is not likely to be of great significance, I think it is preferable that all female rates should be quickly identifiable by employees as well as employers. I accordingly would continue the present form of award, although if the parties wanted to drop some of the female rates as unnecessary I would not object. I would wish in these proceedings to do what was done in June last of awarding to females the same increases as those awarded to males but in view of certain submissions made, I would at this time make no order. I would reserve leave to the unions to apply to the Commissioner about female rates.

Electricity Supply Authorities

Rates for these authorities appear in an appendix to Part I of the award. Some of the classifications in the appendix are special to the authorities while others are also found in clause 4, in which case the rate in the appendix is higher than the rate in clause 4. Various submissions were put both by the State Electricity Commission of Victoria and the Hydro-Electric Commission of Tasmania as to what action should be taken if increases were awarded. An agreement has been reached between the Electricity Trust of South Australia and the metal trades unions whereby rates payable by that Authority are expressed in two parts, one a weekly wage rate and one a special payment. The weekly wage rates for classifications which are also in clause 4 are those in clause 4, and the special payment is the present difference between the rates in the appendix and those in clause 4. The division of rates for classifications which are not common to both clause 4 and the appendix has been worked out by agreement. The agreement also provides that variations in the rates in clause 4 will be reflected in the weekly wage rates but that there should be no automatic adjustment of special payments.

The South Australian approach seems to me to a commonsense one to a difficult problem with a complex history. Looking at all the factors surrounding the fixation of rates for electricity supply authorities I would be prepared to extend the principle of this agreement to the S.E.C. and the H.E.C. in the hope that they could also reach agreement about classifications which are not found in clause 4. I would apply to all three authorities the increases in work value which I would award to employees covered by clause 4. The area of electricity supply could well be removed from the Metal Trades Award and I would suggest that the parties give serious consideration to a separate award for these three authorities.

Economic Considerations

Each annual review on economic grounds of the total wage will exclude consideration of work value because, as its name implies, it will be confined to purely economic considerations. The converse however does not necessarily apply to work value cases. The facts of each work value case will decide whether general economic considerations are relevant. In this case two facts require consideration by us of the overall economic situation. Firstly this award is said to cover same 300,000 or 400,000 employees or some 15 or 20 per cent of all

employees covered by Federal awards, and increases to that number of employees could have general economic implications. There is no other Federal award like it in size. Secondly the history of wage fixation shows a tendency for results to this award to flow into other awards. No matter how hard we may try to prevent any flow from this decision it is my view that some flow is likely to occur.

The only general observations about the present state of the economy were made by the Commonwealth and were in the following terms:

'The economy is reasonably well-balanced at the moment and growing at a good pace. In 1966-67 gross national product at constant (1959-60) prices grew by 5-6 per cent: in the current year the indications are that something like that order of growth is continuing. Activity and spending generally are rising steadily. The labour market is firm—at the end of August the proportion of the work-force registered for employment amounted to 1.3 per cent.

The outlook is for continued growth in demand, stronger than in 1966-67 in the case of the private sector. The Commonwealth Budget for 1967-68 looked forward to a further year of balanced growth in the economy: to this end a firm rein was placed on the rise in public spending since the Government was not prepared to risk excessive demand developing in the economy.

There are, as always, uncertainties in the outlook: the major one at present concerns the question of cost increases. As is now known the increase in average weekly earnings in the year to the June quarter was 8 per cent, a very high increase by past standards and indicative of a very large increase in real wages, given that in the same twelve months period the consumer price index rose by 3 per cent. There is little doubt that the full effects of the cost increases in the past year have yet to be reflected in prices.'

The possible effects of devaluation of the pound sterling add another factor to the general economic situation.

Because my views will not prevail I do not find it necessary to analyse in detail the economic situation. The increases which I would award were arrived at independently of economic considerations and in my view would not have any adverse economic effects. If my suggestion about the break-up of this gargantuan award were taken up economic considerations might not be of significance in alterations to the smaller awards which would take its place.

Drafting and Mechanical Changes

During the hearing an announcement was made from the bench suggesting that changes might be made in the names of classifications, the definitions, the existing slight differences between rates and the form of clause 4 and other clauses. A number of these matters had been raised earlier in the proceedings, particularly by the Commonwealth. After conferring together the parties jointly requested us not to take any action on the matters raised but indicated that they would prefer to be allowed themselves to look into them. Because awards are the working documents of those who use them daily in industry, the joint views of the parties must carry great weight and although this award could be simplified in a number of respects I would take no action on any of the suggestions made by the Commission except to commend them to the parties for their consideration.

Summary

It is my view that there was sufficient material of all kinds before the Commission to permit an assessment by us of the work value of approximately 70 classifications but no more. I would have left consideration of the other classifications to be dealt with in accordance with our statement of 25 October 1967. I would have awarded increases to all tradesmen, the amount of the increase in the case of the basic tradesmen being $5 per week. I would have awarded increases to twelve non-tradesmen, including process workers, but I do not consider it desirable to name the other classifications or the increases I would have awarded because this is a minority decision.

REASONS FOR DECISION OF MR COMMISSIONER WINTER

1. THE BASIS OF THE CLAIMS

In my decision in the *Margins and Total Wage Cases* of 1966 I said:

'For my part I do not accept the immutability of the relationship of the fitter's margin being set perennially at a fixed percentage of the basic wage or statically to any other criterion. Maybe it should be higher; maybe lower. It is necessary to find out. The same is true of all other classifications in relation to their radial positions to the pivotal fitter.'[1]

Although the Commission is presently working within the concept of what is now known as total wage, the problem posed by the current claim is identical in nature to that presented in 1966, although in this case the Commission's stated intention should be clear. In the 1966 case the unions based their claims on the marginal relativities existing in 1947.

In the decision to which reference has already been made I also stated:

'The unions' margins claim is based upon the submission that the margin of the tradesman of the level of a fitter should be assessed at 48.6 per cent of the basic wage, and that all other margins set out in clause 4 of the award should then be increased by the appropriate percentage.

Mr Hawke explained that the claim was made in this form 'because of the varying treatment of various classifications in the award in the period since 1947.'
He went on:

'Because of particularly what was done in 1954, they have not all received the same percentage increase.

(transcript p. 38).'[2]

The full bench, in view of its decision at that time to initiate an investigation on a work value basis of the relativities of the classifications listed in the Metal Trades Award, and because of its consequential decision at that time to defer further consideration of marginal claims, was not then called upon to reach a conclusion upon the pith of the unions' claims.

By a majority decision[3] on 22 December 1966 (Moore *J.* and Mr Commissioner Winter) the same full bench which has considered this matter decided that a claim by the unions for an interim general increase should be met by granting an increase varying from 1 per cent to 2½ per cent of the sum of the margin and the Six Capital Cities Basic Wage.

In this case Mr Hawke, on 26 September 1967, when giving some indication of the unions' claims, said:

'I would make this point which perhaps does go in some sense to submissions, but I do no more than make the point extremely briefly. I remind your Honours and Mr Commissioner of the passage at page 5 of print No B2200 which is the decision in this year's national wage case, where it said in the middle of that page:

> "In summary the adoption of the new procedures will enable the Commission to act flexibly, to ensure that economic gains are reflected in the whole wage each year, to give more reality to its award-making both in economic and work-value cases, and to give proper attention to the low wage earner."

What we have done in this application is to say that if the economic gains had been reflected in the whole wage in the period we are going back to, these are the sets of figures which in respect of marginal elements or the previously known marginal elements, would have been the appropriate level of award remuneration.'

(transcript p. 5458)

As is made clear in my analysis of submissions appearing in the schedule hereto, the unions' claims were manifestly based on prices and productivity movements since the March quarter of 1947, or a 279 per cent increase upon the

(1) 115 C.A.R. 93 at p. 223 (2) *Ibid* at p. 221 (3) 116 C.A.R. 713

1947 margins calculated by the second 'Mooney formula', or a figure of $19.70 for the fitter, or in the terms of Mr McBride's final claim, a wage increase of $7.40 for him.

Of course as well as the passage to which Mr Hawke drew attention, the full bench in this year's *National Wage Cases* also said this:

'We all think it undesirable that in the absence of special circumstances there should be any further economic review before the second half of 1968.'

Certainly that full bench also stated:

'Despite the submissions of Mr Robinson for the employers we will not make any pronouncement as to the future course or nature of the proceedings before the reference bench of which Mr Commissioner Winter's enquiry forms part.'[1]

It is true that the full bench in the *Basic Wage, Margins and Total Wage Cases,* 1966, did say that it had:

'. . . reached the conclusion that it would be unwise to award any general increases until an investigation has been made . . .'[2]

The investigation to which reference is made is, of course, the one which prefaced this decision.

In the light of all the circumstances which I have reviewed I am not prepared, in this Metal Trades Award matter, to consider any argument for increases which is based upon the foundational acceptance of the everlasting rigidity, rectitude and validity of a marginal decision made twenty years ago.

For my part, in dismissing the unions' foundational argument, and in the circumstances of the present, I would even now only slightly paraphrase the quotation culled from last year and with which I commence this decision:

'For my part I do not accept the immutability of the relationship of the fitter's wage being set perennially or statically to any criterion. Maybe it should be higher; maybe lower. It is necessary to find out. The same is true of all other classifications in relation to their radial positions to the pivotal fitter.'

In this case I want to consider things as they are, not as they possibly were twenty years ago.

2. THE REALITY OF THE CLAIMS

Although I dismiss from my mind the nexus between 1947 and 1967 the reality of the claims remains.

The Commission is faced with claims which in essence assert that the wages being paid to those employed in the various classifications within the Metal Trades Award, 1952, are too low by amounts which have finally been precisely stated.

In my view it is immaterial whether or not I find the method of computation of those amounts fallacious or not. The reality of the claims persists and it is necessary to examine and test them within the realm of equity, good conscience and the substantial merits of the case.

The claims having been made, my duty as I saw it was to examine carefully the work concerned, to listen intently to the reasons advanced as to why it was considered that those doing the work were underpaid, and to endeavour to come to a decision that is fair and reasonable.

3. THE IMPORTANCE OF THE INSPECTIONS

Those interested in statistics will find what I hope are the relevant ones in the survey which is within the appendix hereto.

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(1) 118 C.A.R. 655 at p. 660 (2) 115 C.A.R. 93 at p. 102

Suffice to say that a lengthy and reasonably thorough programme of inspections was carried out, at first by me and later by all members of the full bench.

Throughout those inspections I paid careful and watchful attention to all that I heard and saw and made various records of estimates of the value of anything relevant.

My survey covers in some detail the facts elicited by me, or my interpretation of those facts.

It would seem both pointless and tiresome for me to repeat here, even in abridged or condensed form, material that is so readily and fully available in the annexed review.

It should be stated quite forthrightly and unequivocally that I consider the force and effect of the inspections to have been both telling and persuasive.

On a number of occasions throughout this long and important case the employers' representatives have asserted that the inspections were secondary, that the real *force majeure* lay in evidence from the witness box.

This view was advanced by Mr Robinson in Brisbane prior to the first inspection and it was put strongly in his final address. In intermediate periods Mr Cullen stressed it.

Each time the submission was presented it caused me to think a little more and balance the comparative effect of evidence from a witness box—of which I have heard much—against the impact of inspections such as have been undertaken in this exercise.

In his final address Mr Robinson invited the attention of the full bench to a section of one of my announcements (No 2—8 August 1966).

Therein, after indicating that Wright, *J.* had made some highly pertinent observations concerning the proper conduct of industrial inspections, I quoted them.

One of them was (para. 2):

'The purpose of inspections is not to receive or collect evidence. They are undertaken as an aid to an understanding of evidence presented to the Commission through witnesses or documents.'

After I had cited the observations I had then stated:

'The Commission in this matter proposes, in general, to adhere to these requirements. One or more of them may be relaxed only in cases where it is thought that such relaxation will be obviously and genuinely helpful.'

Mr Robinson then submitted:

'The whole of the inspections conducted by Mr Commissioner Winter proceeded on the basis of the paragraph 2 quoted above and the private employers received no notification from Mr Commissioner Winter that the qualification appended to the principles stated by Mr Justice Wright, were to be qualified in respect of the particular principle quoted.'

To commence with Mr Robinson was present at the hearing on 27 September 1966, in Brisbane, when I stated:

'The Chinese have a proverb, "It is better to see once than to hear a hundred times." Perhaps I may be able to agree with that before this exercise is finished.'

(transcript p. 3485)

At a later point on the same day, in discussion with Mr Robinson, the following exchange took place:

'MR ROBINSON: May I make this tentative suggestion, and I will have a look at this during the adjournment, that it would seem if that is the objective which you have in your mind

then the best way in which you could be assisted in this would be by way of evidence in due course when the general purpose and objectives of the submissions to come may become clearer.

THE COMMISSIONER: It would seem to me unless something is clearly uncovered during the course of inspections I would have to depend solely upon submissions of the parties and intervenors.'

(transcript p. 2498)

Later on the same day I said that when I enunciated the rules framed by Wright, *J.* to govern inspections I had indicated 'that they could be relaxed in a case where I deemed it to be desirable'.

Moreover, as I pointed out in my decision of 5 April 1967:

'In connection with Mr Aird's complaint that the fact that during inspections I may have been paying attention to some work being carried out that was not expressly on the classification curriculum for the day, I may say that I have so far proceeded that way and I intend in the future so to proceed.

Had I thought it best I could have carried out inspections without court reporters, in the same way that the full bench operated in the General Motors Holden's case.

In that case work throughout every major plant in the motor vehicle manufacturing field was closely observed.

In that event I would have relied solely on my own notes.

However, I thought that in this exercise it would be most assistance to all if I had recorded that which is being generally observed.

I did not at any time say that I would limit myself in observation to the classifications due on a particular day for express observation.

I am carrying out such investigation as I consider necessary, not that which Mr Aird considers necessary.

As expressed elsewhere the final decision is for the full bench. That body is fully capable of making up its mind as to the worth or worthlessness of my report, and dealing with complaint.'[1]

At the time this tocsin was sounded the inspections had almost two thirds of the race to run.

Since then these aspects were not raised by Mr Robinson.

In that decision I did not intimate that I would confine my attention to the eleven classifications, plus, selected by me.

I said that 'I shall concentrate' on them 'from now on'.[2]

The prelude to the inspection at Monsanto Chemicals (Aust.) Ltd provided a good example of a situation wherein I said the kind of thing I had said elsewhere and earlier.

As a newcomer to the inspections Mr Brodney properly asked a question concerning procedure and quite a discussion ensued.

At a certain point I stated:

(a) 'I think I have indicated on more than one occasion that when on inspection I keep my eyes open, and I do not give any guarantee that I will only concentrate my attention on that which is being pointed out to me.'

(transcript p. 4277)

(b) 'I am making my own summation all the time, which in turn I am not revealing to the parties, but I am endeavouring to gauge to the best of my abilities the relevance of what I am being shown, and I am certainly evaluating it in relation to a wide range and not a narrow scope.'

(transcript p. 4278)

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(1) 118 C.A.R. 31 at p. 49 (2) *Ibid* at p. 50

At this juncture Mr Cullen put it that the 'purpose of the inspection is to enable the Commission to understand the evidence which is put before it.'

My reply was:

'That is one reason.'

(transcript p. 4278)

It cannot fairly or correctly be said by Mr Robinson or anyone else that I did not, at any point, give fair warning and reasonable indication of my methods and intentions. All concerned knew what I was proposing to use for informing my mind.

They were continuously given full opportunity to protest against or to criticise my recourse to that proposition and that use.

In any case other members of the full bench participated in some 25 per cent of the inspections and are in a position to estimate the relative worth of the inspections as against other factors making for proof.

It was made clear that I regarded the inspections as important and I never at any time derogated from that importance just as I have never underestimated the value of tenable, relevant and informative evidence.

The evidence from the witness box was very important in this matter to me. Also the original probative information provided by my seeing, hearing and evaluating work values in comparative examination extending over many months, over wide areas and over many factories and workshops was quite important.

During all this I was analysing, testing and questing with the help of many informed and able people from all parties and from the intervener.

It should be emphasised that I was not, during the inspections, in the position of a person seeking knowledge in order to testify later. I had been expressly commissioned by a full bench of the Commission to furnish a report after such investigation as I considered necessary.

A wide gulf separated my position from the situation which confronted those who were assimilating and estimating the worth of facts for later presentation in evidence.

The evidence of witnesses informed me and closed several gaps.

It should be said that that evidence—and it came from all parties and the intervener—which impressed me most, tended to confirm the lessons of the inspections.

Where witnesses were even partially shallow or restricted, the whole wide compass of the experience of the inspections soon revealed the fact.

It occurs that I would indeed be enmeshed in technicality and legal form without reasonable hope of acting according to equity, good conscience and the substantial merits of the case if I ignored completely what in good conscience seems to me to be the means which to me helped to prove or disprove these matters of fact which had been submitted to the investigation of the tribunal.

It must always be remembered that I was present throughout the whole of each and every inspection and that I was there in my capacity as a member of the tribunal called upon to hear and determine the matter. I did inform my mind on this matter in such a manner as I thought just. The parties and the intervener knew what I was proposing to use for the informing of my mind and they had full opportunity to seek any information they desired. Other members of the tribunal were present during the whole of each and every one of some 25 per

cent of the inspections and had full opportunity to apply their own tests, while the parties and the intervener then had further full opportunity to elicit any further information they desired.

I rely on the inspections as qualified by evidence from the witness box and the supplementary evidence furnished by material.

Generally it should be said that in my view the witnesses and the material did not in any essential disturb the original testimony provided by the inspections.

I find that I cannot, in any major particular, reach the conclusion that that which was made manifest by the inspections was qualified greatly by witness or material, although much of it appears to me to be confirmed.

It should be stressed that the evidence of the witnesses greatly assisted me in reaching firm conclusions concerning the value of what I had gleaned from the inspections.

Mr Bullows, who had given impressive and valuable evidence on behalf of the Commonwealth, had most carefully examined every work process that I had similarly examined during the inspections.

He was almost certainly the only other person besides myself to use the job check lists system of recording information. The only difference between us was that I did not confine myself to one method.

Generally, although I did not agree with all of Mr Bullows' conclusions, the results of his job check lists survey were frequently in close parallel with mine.

Of the unions' witnesses both Mr Dolan and Mr Evans had been present on several inspections, while Mr Hansen was of course present while the furnaces at which he worked were inspected.

Mr Snell, who gave evidence for the State of Victoria and its Instrumentalities, was present during a large number of inspections.

Twelve of the employer witnesses had been present during the inspections at the plants of their companies.

While, in my survey I had reached tentative findings,—tentative because I could not then test them against another opinion—I am now in a position where I can be positive that my survey is only awry in minor detail. There is always a degree of human error, and the survey is not free from it.

However, I am convinced, to the best of my understanding, that the degree of error in the survey is not of appreciable consequence.

Where I consider, after hearing the evidence, that the conclusions of the survey are awry, I will, in this decision make apposite mental correction and suitably adjust my judgment to the facts.

The Evidence And The Submissions

As I propose to deal with the question of over award payments in a separate section hereof, I will not concern myself now with matters relative to it.

As I have indicated elsewhere I have analysed the submissions in précis form.

A. THE WITNESSES

I have prepared a précis of evidence.

THE UNIONS' WITNESSES

Mr R. Evans—Organiser, Electrical Trades Union

Mr Evans' evidence was directed to process workers.

His evidence was directed to showing that process workers were required to be dextrous and diligent and to employ greater concentration than formerly.

He dealt with the question of change in productions methods and referred to the fact that some were required to work on moving pallets, a work method with a moving belt with fixed positions on which the job moves past each successive operator.

This type of work called for a great amount of team work. This operation required the operator to work consistently and quickly.

He stated that a greater use was now made of diagrams, drawings and sketches and process workers were frequently required to use these to obtain information concerning:

(a) detail of set up

(b) lengths and colours of wires

(c) termination points

(d) procedure.

He said that process workers were now frequently required to co-ordinate both hands and one or two feet with consistent observation whereas earlier they worked using eyes, hands or feet independently.

On the job training was more in evidence than formerly and there had been an increase in the variety of tools used.

The pallet line required flexibility, and process workers, because of the constant demand of the production line, had to interchange. Versatility was more evident now than formerly.

The average process worker was now expected or encouraged to check his own work.

The introduction of expensive and delicate machinery placed a far greater responsibility on the process worker for the safe usage of this equipment.

Jobs were now of longer duration.

The use of production engineering, methods engineering research and more machinery had resulted in the process worker becoming part of a production set up costing many times what was involved previously. Time losses of the process worker were consequently many times more expensive than before.

Machinery was doing much of the work previously done by process workers but had not simplified what remained.

Widespread bonus systems indicated the desire of the companies to induce production speed with a satisfactory product standard.

Mr C. Dolan—General Secretary, Electrical Trades Union

Mr Dolan's evidence was directed to the training of an electrical fitter by way of apprenticeship, on the job training and a necessary extension of training while a tradesman because of the needs of industry flowing from technical development.

He also gave evidence relative to the work of an electrical fitter in general terms, in manufacturing, on maintenance and installation and in jobbing shop work.

The evidence generally emphasised the necessity for team work; the technical changes that were occurring in industry; the necessity to work to closer tolerances electrically and mechanically; the importance of skill and knowledge in overcoming machine breakdown and its great bearing on production; and the additional difficulties and responsibilities associated with industrial installation work.

Mr Dolan also intimated that with the introduction of quantity production of much electrical equipment and improvements in technology, many jobs formerly done by electrical fitters are now done by process workers.

Mr Hansen—Furnaceman—electric

Mr Hansen, who is employed by Vickers Ruwolt Pty Ltd, Richmond, Victoria, as a furnaceman—electric said that he had been employed as a furnaceman—cupola for some twenty years. For the last twenty years he had worked as a furnaceman—electric.

The first electric arc furnace was introduced into the plant in 1927. This had a capacity of six tons.

The second, with a capacity of 25 cwt was brought in in about 1937.

The third, known as 'Birlic' was introduced in 1958.

Work was now carried out by and with the three furnaces.

Mr Hansen gave details of his work.

In answer to me he said that when he was inserting new scrap into a furnace he came to within two or three feet of the furnace which was at a temperature of 'about 400 or 500 degrees'.

Mr Lawless—Teacher of Welding—Sydney Technical College

Mr Lawless said that welding was a field in which the specialist operator had to have exceptional skill, ability, foresight and know-how in order to produce welds of the high standards required in this class of work by industry today.

He added that in making a judgment on these attributes of the welder it was necessary to consider many aspects relative to the work which he was required to perform.

He elaborated.

In answer to me Mr Lawless said that a whole variety of conditions related to the environment and external causes to the actual weld could affect it and could affect the run of an electrode to its detriment.

He also said that a welder had to watch every detail on the job he was welding.

Mr H. Selinger, Part Time Lecturer at the University of New South Wales

Mr Selinger was a highly qualified and thoroughly experienced witness.

Details are set out at p. 5530 of the transcript.

Mr Selinger stated:

1. 'Except perhaps for the lowest rung of the ladder of work hierarchy, the more unskilled cleaners and labourers, every member of a production team in modern industry, and specifically in the metal working industry today needs a fair measure of skill either brought already to the job or acquired after employment has begun.'

(transcript p. 5533)

2. 'It had been thought for many years that a division of labour into very small operations would both cut down on instruction time and also increase the working efficiency of the operator.

While some time ago the process worker would not be allowed to handle power tools, this is not the case any more. His work value should therefore be assessed in a somewhat different way.'

(transcript p. 5535)

3. 'In the intervening years responsibilities assigned to process workers have steadily increased on account of being requested to handle more intricate and thus more valuable equipment, more complex operations and thus being in charge of higher product values from work centre to work centre. In turn, this would make for greater losses if mistakes should occur.'

(transcript p. 5535)

4. 'Very often, indicating instruments are introduced instead of fixed gauges and the so-called unskilled process worker becomes more and more akin to what was previously called a machinist.'

(transcript p. 5538)

5. 'Development in machinery is always directed towards simplification of handling besides improvement of production characteristics. These have reached a stage where the general machinist now has to supervise rather than to operate his machine. Frequently, this supervision extends to a set of work stations or bank of machine tools.'

(transcript p. 5539)

6. 'The machinist is now generally expected to be sensitive to impending quality deteriorations and necessitates a lengthy familiarity with the job and a thorough understanding of his machines, good sense of hearing, colour distinction, etc. (whatever might be needed), quick reaction time and, last but not least, the capacity to take responsibility for quality.

Because of the higher mental stress in these duties he will fatigue more quickly than he would have done in his previous work.'

(transcript pp. 5540/1)

7. 'However, in the last decade or so, an explosion of technological knowledge, particularly in the metal working industries, has taken place which places demands on the tradesman's proficiency where formerly it could only be met by what may be called a technician.'

(transcript pp. 5542/3)

8.

'*Mr Heagney:*

Explain what you mean by the term "explosion of technical knowledge"?—The work "explosion" is a description of what is going on with the speed and what we had not expected. We used to have very slow development in technologies from the time of the industrial revolution, if I take this as a bench mark, where a tradesman once he was trained could almost live by what he had learned for his industrial life. He did not have to learn much more.

This has changed. Looking back at the enormous amount of machinery I have seen in tooling, from the carbon steel to the high speed steel, the tungsten carbide steel, the tungsten carbide insert and the ceramic steel, taking the tool bits, every one of these tools affects the feeds, speeds, settings and chip formations. If you would give my grandfather one of these things today he could not operate it any more. There is such a vast development in the understanding of the metal itself; metal cutting has become a science. The machine tools have changed tremendously. Their whole mode of operation, the speed at which they operate, the cuts they can take, the vibrations which are set up by proper tooling are changed. You have the materials which were not known before which in the metal trade industry have to be machined.

We have nylon inserts, plastic inserts, die casts. We use metals in Australia such as aluminium which was almost a rare metal when I came here but now is a common metal which we use every day. There is more stainless steel which is very difficult to machine. All these things he had to re-learn, and similarly other processes. Assembly techniques have changed, tolerances are narrower. He has the gauges and electronic instruments. I know there are courses given all the time where he has to absorb this new material.

(transcript p. 5543)

Mr Danks—Retired, but formerly State Supervisor of Engineering Trades, N.S.W.

Mr Danks gave evidence in relation to design of machine tools, the fitter, the machinist—1st class, the patternmaker and the toolmaker.

Generally his evidence was to the effect that:

1. Machines today are generally designed for greater ruggedness to enable them to cope with the speeds and feeds at the increased rate required for metal removal.
2. Speeds had risen from between 450 and 1,500 revolutions per minute to at least 4,000 per minute upwards.
3. Within the last 10 years cutting tools had advanced to comply with the highest speeds required on modern machines.
4. Multiple cutting tools are used more extensively than years ago to cope with the higher speeds and greater production required of these machines.
5. With the increase of speeds and feeds and the use of new and multiple cutting tools, the care, attention and responsibility of the tradesman have been increased.
6. The engineering tradesman generally is now producing a higher standard of work. This had been brought about by the introduction of new processes, new methods and a tendency to better standards of products generally.
7. In particular more demands were placed on the skills of the machinist —1st class and the toolmaker by the technical developments of the last few years.

THE COMMONWEALTH'S WITNESS

Mr Bullows—Seconded from the Ordnance Factory, Bendigo, to the Department of Labour and National Service as a technical adviser to assist the Commonwealth in this case

Mr Bullows generally gave evidence concerning a number of matters.

He attested that:

1. He had attended every inspection and had kept records.
2. He had made classification ratings for each job or group of jobs inspected.
3. He had made the ratings on job inspection check lists which were produced (Exhibit W6).
4. The check lists were well suited to the purpose for which it was designed.
5. The details of his conclusions concerning the job check lists (see transcript pp. 5664-5751) were correct.

The cross-examination of Mr Bullows was deep and extensive (see transcript pp. 5751-5866).

STATE OF VICTORIA AND INSTRUMENTALITIES WITNESS

Mr Snell—Methods Engineer—Melbourne and Metropolitan Tramways Board

Mr Snell gave evidence concerning the inspections and trade skills.

He stated that:

1. It was his opinion that the changes which had occurred in the electrical industry over the last twenty years had not increased the demands on the trade skill of the typical electrical tradesman and in fact there were areas where these demands had been reduced.
2. Overall it could be said that there had been no significant change in the basic skills necessary to perform the work of a patternmaker.
3. He considered that the skills and responsibilities of the toolmaker were at least equal to those of the patternmaker.
4. Even with the award definitions in their present form there appeared to be no real reason for retaining the classification of turner because the setting up and operation of a lathe is covered by the definition of machinist—1st class.
6. The classifications of fitter and machinist—1st class could be combined for award purposes under one title with the classification termed 'mechanical tradesman'.
7. The development of new machines does not place a higher demand on the trade skills of the mechanical tradesman, although it may be necessary for him to become familiar with the maintenance requirements of the new machines.
8. The inspections had shown that the work performed by a typical employee in any one classification is the same whether that employee works for private industry or one of the State Instrumentalities.

HYDRO-ELECTRIC COMMISSION OF TASMANIA WITNESS

Mr Murray—Power Station and Substation Construction Engineer—Hydro-Electric Commission

Mr Murray gave evidence concerning:

1. The type of work carried out by electrical tradesmen at the premises of certain private firms, visited by him, in the manufacture, testing and repair of transformers was similar to work carried out by electrical tradesmen within the services of the Hydro-Electric Commission.
2. Work seen on inspections at workshops of the Melbourne and Metropolitan Tramways Board was similar to work done within the Hydro-Electric Commission.
3. As a result of his experience of past years he had formed the view that the call made upon metal tradesmen employed by the Hydro-Electric Commission did not differ from that made upon metal tradesmen in private industrial concerns.
4. This view had been reinforced during recent inspections in this matter.

THE PRIVATE EMPLOYERS' WITNESSES

The private employers presented nineteen witnesses and the record of their examination and re-examination covers some 756 pages of transcript (transcript pp. 6117-6873).

It was of some significance that twelve of the private employers' witnesses accompanied the Commission on the inspection relative to the particular firm represented by the witness.

For obvious reasons it is not possible in this decision to analyse in detail the evidence. It will have to suffice for me to sketch in the broad outlines of it.

It should be said however that I have read and re-read all of it, apart from listening intently to it when it was given.

(A) *Mr Amedee—General Manager—Manufacturing—Borg-Warner (Aust.) Ltd*

Mr Amedee testified that:

1. There was a shortage of skilled labour in Sydney.
2. The company employed 177 people as machinists—1st class, but less than 10 per cent of them were qualified tradesmen.
3. The company had carried out a programme of introducing simple operations with adequate tooling and gauging and had provided, where possible, automatic machine tools.
4. More than 70 per cent of the plant was arranged on a flow line production basis.
5. Capital expenditure had increased from $6.4 million in 1957 to $17 million in 1967.
6. The company's machines could be divided into four categories, namely, hydraulics, pneumatics, electrical and mechanical or in combination.
7. While 10 years ago one man could completely overhaul a machine, today no one could possibly be skilled enough to do so.

(B) *Mr Morris—Production Manager, Consumer Products Division, Amalgamated Wireless (Aust.) Ltd*

Mr Morris gave evidence that:

1. There had been a marked increase in investment over the last 15 years.
2. Expansion in most areas of the company's activities had been largely due to new products, new technological developments and a corresponding increase in quality standards.
3. Over the last 15 years transistors, printed circuits, television and changes in P.M.G. equipment had been introduced.
4. Simplification of tooling had occurred.
5. Methods engineers studies had resulted in process workers' time being so utilised that without increase in effort, responsibility or skill a higher productivity had been achieved.

(C) *Mr Palmer—Works Director—Perry Engineering Co. Ltd*

Mr Palmer gave evidence that:

1. Over the past 15 years many factors had combined to compel and encourage the company's increased use of modern production techniques (details were furnished).
2. Progress in the industrial world today is due to the application of technological development that requires an expansion and deeper appreciation of the sciences which in turn has spread the know-how to higher levels of supervision than the competent tradesman. This has resulted in the transfer of some of the collective skills which were grouped within tradesmen's knowledge and the development and application of those skills in another manner.

(D) *Mr Montgomery—Works Manager—McPhersons Ltd*

Mr Montgomery testified that:

1. The Design Department produces assembly drawings and detailed component drawings for the production of machine tools.
2. The detailed component drawings provide all information regarding material, dimension and tolerances.
3. The drawings, together with an operation card, provide the instruction to the tradesman.
4. Over the past 15 years there has been an increasing use of fixtures for holding work and tool setting.
5. Some machinists do not employ the skills of the craft; others do.
6. The same is true of fitters.
7. The ratio of supervisors to work employees has dropped from 16.5 to 1 in 1952 to 10 to 1 in 1967.

(E) *Mr Nuttall—Joint General Manager—Nuttall Engineering Pty Ltd*

Mr Nuttall testified that:

1. Three significant changes in production methods had occurred in the company during the last 15 years:—
   (a) higher quality machine tools;
   (b) greater use of jigs and fixtures; and
   (c) increased use of draughting and production planning employees.
2. The ability to increase production and make higher quality products was seriously restricted because sufficient employees with adequate skill were not available.
3. The only solution was to introduce higher quality machine tools, use jigs and fixtures more extensively and engage draughting and production planning employees.

(F) *Mr Marks—Personnel Manager—Electronic Industries Ltd and Director Radio Corporation Ltd*

Mr Marks gave evidence that:

1. Since 1952 the basic character of the work undertaken by the company had not changed, but it had expanded enormously and the range of products had become more diversified.
2. Many new processes had been introduced and developments had occurred in improved plant layout, stores and manufacturing facilities.
3. Greater demands had been made on the skills and techniques of employees from the supervisory level upwards.

(G) *Mr Ulbrick—Chief Engineer, W. A. Deutsher Pty Ltd*

Mr Ulbrick gave evidence that:

1. In the past 15 years the company has changed from hand operated capstan lathes and single spindle automatic screw machines to multi spindle automatic screw machines.
2. Considerable investment has taken place.
3. Automatic operation had replaced manual operation and physical handling.
4. The skill required from machinists—2nd and 3rd grade was less than formerly.

5. Production tooling and techniques had been developed to a degree where process workers could produce fine toleranced products with little training.
6. The basic skill requirement for engineering tradesmen is still the same as that required 15 years ago.
7. Final responsibility for quality and equipment rested squarely on supervision and management.
8. Total assets per employee was $1,577 in 1952 against $7,692 in 1967.

(H) *Mr Waldron—Superintendent, Control and Switchgear Manufacturing—A.E.I. Engineering Pty Ltd*

Mr Waldron gave evidence that:

1. There had been some changes in the last 10 to 15 years in the skills required of electrical fitters employed on certain work.
2. The company had increased the use of unit-mounted equipment which reduced the work demand on electrical fitters, while in wiring operations there had been a marked reduction in the standards required.
3. On the other hand variety had increased which necessitated familiarity with a wide range of products.
4. There had been no change in the work performed by process workers in the last 10 to 15 years except that occasioned by improvements made in the methods and equipment used.
5. Increased use of methods engineering of equipment and work processes had reduced excess physical movements.

(I) *Mr Johns—Manager, Structural Division, Johns and Waygood Ltd*

Mr Johns gave evidence that:

1. The introduction of improved modern equipment over the last 10 years has tended to make work less demanding on employees while producing a better quality product.
2. More extensive use of method study tended to reduce the responsibility of the man on the shop floor to some extent and make for easier work.
3. In the last 10 years the ratio of supervisors to productive labour had about doubled.

(J) *Mr Carthew—Director, Gordon Bros*

Mr Cathew gave evidence:

1. Since 1958 the toolroom had built up jigs, fixtures and special tooling from about 500 to 4,800 in 1967.
2. This had relieved the fitting section of the greater part of the marking out of components for drilling and had assisted machinists—1st and 2nd class to produce accurate work more consistently.

(K) *Mr Smith—General Manager, Luke Muras Ltd*

Mr Smith gave evidence:

The use of detailed drawings and better planning of work flow had lessened the responsibility of a number of employes.

(L) *Mr Noel—Standards Superintendent, Kelvinator (Australia) Ltd*

Mr Noel testified that:

1. The domestic appliance industry is one of continual change in models, volume of output, and personnel.

2. This characteristic, together with a shortage of skilled labour and rising costs, has made it more necessary to design production tasks to the abilities of a floating semi-skilled and unskilled labour force.
3. The achievement of consistently high quality work has been made possible by pre-planning, by improved production techniques including purchase of the most highly developed machines, and by detailed instruction methods.
4. These factors have transferred much of the responsibility for quality from the operator to the machine and to supervision.

(M) *Mr Gibbs—Factory Manager, Joseph Lucas (Aust.) Ltd*

Mr Gibbs testified that:

1. The supervision of tradesmen had increased over the last 6 years.
2. Mental and physical effort from process workers has been reduced by the efforts of the Work Study Department.
3. In recent years inspection control has been improved.

(N) *Mr John—Director, M. B. John and Hattersley Ltd*

Mr John gave evidence that:

1. Some of the jobbing moulder's skill had been eliminated in recent years because of better patterns, better moulding tackle, more closely controlled sand properties and machine aids.
2. Technical skills are placed on the staff man and not on the foundry worker.
3. Capital investment per employee had risen from $650 in 1954 to $3,500 in 1967.

It should also be recorded that, in answer to the Commission, Mr John gave valuable supplementary evidence concerning the work of classifications of foundry workers.

(O) *Mr Pennell—General Manager and Director, L. Horscroft Pty Ltd*

Mr Pennell gave evidence that:

1. In the early 1950's the company found it difficult to get tradesmen.
2. This made it necessary to examine all aspects of operation.
3. Batch production methods, jigs, fixtures and gauges were introduced and applied, many machine tools were replaced, and drawing standards improved.
4. The degree of responsibility of the individual tradesman has been reduced.
5. The ratio of supervisors to tradesmen was 1 to 8.4 in 1952, whereas in 1967 it is 1 to 5.8.

(P) *Mr Beveridge—Engineering Superintendent in charge of maintenance and construction, Monsanto Chemicals (Aust.) Ltd*

Mr Beveridge gave evidence that:

1. Changes in plant, methods and machinery had caused changes in the skills, knowledge and degree of responsibility required of maintenance fitters since 1952.
2. With the availability of modern machine tools capable of producing finer tolerances, the fitter is supplied with components in most cases ready to assemble.

3. Where it is true that the maintenance fitter in the Plastics area is required to work on a greater variety of process equipment than in the early 1950's, it is not essential for him to have any detailed knowledge of the actual process.
4. The maintenance fitter now required by the company still performed the same basic functions as he did in 1952.

(Q) *Mr Ragen—Senior Erector, Babcock and Wilcox (Aust.) Pty Ltd*

Mr Ragen gave evidence that:

1. In the last 15 years he had noticed certain changes which had affected the work of:
   (a) boilermakers
   (b) fitters
   (c) riggers
   (d) tradesmen's assistants.
2. The main changes in the industry in which he was engaged had been an increase in the physical size of boiler plant with corresponding increases in pressures and temperatures inherent in the operation of such plant.
3. Certain types of pressure welding required a fairly high degree of trade skill and efficiency.
4. Fifteen years ago the boilermaker was required to carry out a much wider range of duties and have wider knowledge.
5. Today the tradesman worked under closer supervision and was supplied with greater detail on the drawings from which he works.
6. Welding equipment and electrodes had greatly improved.
7. Pressure work had become increasingly important in the erection of boilers and other associated facilities over the last fifteen years.
8. Newer boilermaking skills had replaced older ones.
9. The duties and responsibilities of fitters had changed little in the last fifteen years.
10. The rigger of fifteen years ago was more skilful and more knowledgeable than the rigger of today.
11. The work of a tradesman's assistant had not changed a great deal in the last fifteen years.

(R) *Mr Pye—Works Metallurgist—T. S. Malleable Pty Ltd*

Mr Pye gave evidence that:

1. The company had introduced new and modern machinery during the years to enable a higher productivity rate to be attained.
2. The overall effect on the work of foundry employees was to make the work less arduous and easier to perform.
3. Generally, speaking, the newer equipment had meant that less skill was now exercised by the employees.

(S) *Mr Williams—Works Superintendent—Melesco Manufacturing Co. Pty Ltd*

1. Since 1955 the company had expended approximately $382,500 on plant and equipment.
2. While much had been spent on production requirements, it had also meant that the work generally had been made easier to handle and skill had either been reduced or kept constant.

It will be seen that I have not herein dealt with the cross-examination or re-examination.

That is not because I have not considered it, or have not been swayed by it but simply because one cannot record everything.

All phases of the evidence have been considered and weighed.

B. SUPERVISION

There is little doubt but that the numerical ratio of supervisors to persons employed has, in the production field, increased.

However, I am far from convinced that this fact brings in its train the effect attributed by the employers.

In the first place in many areas of industry it is the machine or machine line that determines the pace of production.

The supervisor exerts some control over this by ensuring that there is a continuity of and an even flow of labour to service the productive capacity of the machine or machine line.

While production is in full swing the supervisor has little time and small opportunity to do anything that affects the skill, concentration or responsibility of the employee. He watches the machines or machine lines and ensures that there is smooth operation.

During away from production training periods the supervisor or training officer can and does impart knowledge, correct errors and improve the skills of employees.

But all this makes an employee more skilful and responsible and increases his worth to the employer.

I am satisfied that the improved ratio of supervisors to employees is due to the intense pressures induced by the need to limit machine 'down-time' and production line dislocation to the irreducible minimum and only secondarily can or does have any effect upon work value.

Even then I greatly doubt whether such effect significantly detracts from that work value.

Indeed by improving the standards of the employee the improved supervisor ratio tends to be responsible for an enhanced employee worth.

In the province of the tradesman, I cannot see that increased supervision has achieved any noticeable change.

Tradesmen, and not supervisors, apply their skills—skills which in my view minister to greater tradesman responsibility.

The evidence made it clear that the supervisor does nothing to interfere with or derogate from the skills or responsibility of the tradesman.

This became particularly clear in the evidence of Mr Palmer, Mr Nuttall, Mr Waldron and Mr Beveridge (see pages 6249, 6266, 6268, 6268A, 6271, 6360, 6513, 6515, 6521, 6524, 6526, 6542, 6751, 6753 and 6757) relative to the electrical tradesman, but their testimony and that of other employer witnesses clearly established that modern supervisory techniques have done absolutely nothing to reduce the work value of a tradesman.

On the other hand the march of technological development has done much to increase and amplify it.

C. INDUSTRIAL ENGINEERING DEVELOPMENTS AND TEAMWORK

Mr Robinson submitted that the inevitable consequences of industrial engineering developments have been a reduction in concentration, a reduction in skill, a reduction in mental effort and a reduction in responsibility for a major part of the Metal Trades Award work force.

In relation to this Mr Robinson submitted:

'But we do say that, in respect of classifications generally, the Commission should indicate its acceptance of the general pattern of submissions made by employers, and the evidence which has been submitted on the industrial engineering developments, because this is a matter of principle, and the evidence as to general reduction in work value flows from it.'

(transcript p. 7412)

Early in his final address Mr Robinson submitted:

'It remains our primary submission that with one exception the evidence shows a reduction in work value demand.'

(transcript p. 7313)

Later he submitted:

'I had said to the Commission if we were to interpret the evidence literally it would require a reduction in award rates to the majority of employers and we have been painstakingly taking the Commission through the reasons why this is so.'

(transcript p. 7409)

On the inexorable logic of Mr Robinson's own arguments, if the Commission decided that there had not been a general reduction in work value because of industrial engineering developments, the majority of employees within the scope of the award could be entitled to an increase in award rates.

It was put by Mr Robinson that industrial engineering developments sprang from huge investment and resulted in a vast programme of work simplification.

Generally, this work simplification was said to stem from new supervisory ratios and techniques, from better design and planning, from improved managerial control, from the introduction of special purpose and automatic machines and machine lines and from broken-down work processes in which components rather than units were manufactured.

I have already dealt with the question of supervision.

My experience during the inspections showed me that while better design and planning had certainly achieved very efficient production, it had not resulted in any work simplification that had reduced relative skills, aptitudes, responsibilities of, or demands upon employees.

There was clear indication, for instance, of close co-operation between designing engineer or draftsman and tradesman.

There was clear evidence that tradesmen either corrected or had the opportunity to correct drawings and designs.

At A.E.I. Engineering Pty Ltd I saw an electrical fitter working on wiring an involved motor control and process control board designed and being made for use in a steel mill. The following was said:

MR MCBRIDE: Does he get any wiring layout diagram or does he do all the work from the schematic diagram?

MR WALDRON (Superintendent of Control Gear Factory and later an employers' witness): No, the operator works only from the schematic diagram. The actual routing of the wire is done at the fitter's (electrical) discretion. There is a standard sort of layout developed over a period of time which he learns but the routing is at the fitter's discretion.'

(transcript p. 4044)

The facts recorded at the McColl Electric Works inspection (pp. 4417/8) and referred to in my survey are indicative of what in fact happens fairly widely. There is teamwork.

Improved managerial control in my experience is widely devoted to consideration of and effective improvements in plant design and layout, in production, in machine efficiency and in work processes.

In short an efficient managerial control is alert to any factor which cheapens the unit cost of production.

It has other functions and has, or should have, other aims, but they are outside of present scope.

The introduction of special purpose and automatic machines and machine lines have greatly changed the face of production processes and have greatly altered work processes.

However it is a very moot point as to whether altered work processes, in the work carried out under this award, have made for more simplified work processes in the terms of such processes requiring lowered concentration, reduced attention, less mental demand, contraction of skill or diminished responsibility. Greater production speeds flowing from industrial engineering developments have brought new and often greater demands.

Indeed, apart from a fall in many areas of laboriousness, there is fairly substantial indication of a rise in the level of most of these work factors.

Undoubtedly in the field of those process workers who are engaged in making miniature electrical or electronic components in particular, and to a lesser degree in other ranges of process work, this is undeniably true.

To the electrical tradesman industrial engineering developments have meant an increase in responsibility and concentration and a demand for new skills and knowledge, particularly in the electronic field.

In the province of welding and boilermaking generally the same is true.

New welding techniques, the development of pressure vessels of greater size capable of withstanding immense pressures and new dangers associated with construction or maintenance welding in difficult or hazardous situations bring new work demands.

In the realm of the fitter, machinist—1st class, patternmaker and toolmaker the same holds true.

New developments in aluminium and stainless steel, for example, have not lessened skill, responsibility or other work factors in the sheet metal field, but have positively increased them.

The jobbing moulder faces new technical problems that are not all relieved by the type of consideration referred to in evidence by Mr John.

Consideration of Exhibit M60—Curriculum, Sydney Technical College, Moulding Trade—gives some indication of the problems now facing the moulder in industry.

The inspections made it clear to me that jobbing moulders brought a high degree of skill to their work and that considerable responsibility was reposed in them.

Commr Winter]

So far as the furnacemen and dogman and/or crane chasers are concerned it appears to me that this work has been undervalued in the past. I have come to this conclusion basically from the inspections, but nothing I heard from the witnesses dispelled this.

In fact I gained confirmation.

Skill and responsibility are theirs in appreciable measure and certainly industrial engineering developments have not diminished these factors but heightened them.

In the large modern and often congested plant a dogman and/or crane chaser must exercise considerable care and accept a positive degree of responsibility.

I found Mr Selinger's evidence to be constructive, sound and generally expressing reality.

In his evidence Mr Selinger stated:

'Except perhaps for the lowest rung of the ladder of work hierarchy, the more unskilled cleaners and labourers every member of a production team in modern industry, and specifically in the metal working industry today needs a fair measure of skill either brought already to the job or acquired after employment has begun.'

(transcript p. 5533)

The concept of 'teamwork' raised by Mr Selinger in evidence, and enunciated in submission form by Mr Brodney, appears to me to go close to the heart of some of the problems facing the Commission.

I have quoted Mr Brodney's submissions at some length in my analysis and I do not intend fully to repeat them.

Where he says:

'No longer is it possible to assess the value of the work of one person only by reference to his own activity; it is necessary to go to the team in which he works.'

(transcript p. 7126)

he appears to approach the type of consideration that is necessary in the industrial world of today and may be vital in the economic world of tomorrow.

This question of teamwork came into high relief during exchanges between Mr Justice Moore and Mr Robinson:

'MOORE, J.: I would think in this new concept of team work, Mr Robinson, you would need to have a tradesman in your team who was able to make his own contribution as well as your technicians make.

MR ROBINSON: A flexible tradesman?

MOORE, J.: Yes, that your team would work better if the tradesman were an all round skilled man than if he were not.

MR ROBINSON: Your Honour, I think that is so. One has to, I think, take the issue in a series of steps. The flexible indentured tradesman does supply probably the means, the nucleus for supervision promotion, because he has the knowledge of each one of the machines in the particular area in which he is operating.

I do not quite follow Your Honour's point about team work, as being a new phenomenon.

MOORE, J.: It was my understanding that part of your case, Mr Robinson, was that there was developed in the metal trades as part of this introduction of industrial engineering a greater supervision, that everyone worked as a team from the engineers down to the tradesmen, there was some discussion both ways, some sort of planning. Indeed, we heard this on inspections, that the tradesman was in discussions as well as the engineer. In that context I suggest the all round tradesman would be more useful.

MR ROBINSON: Yes, Your Honour, there is no question about that. Indeed, I think the evidence shows that in the production engineering departments themselves they have selected a better class of tradesmen to be the try-out section, and so on, to make the first tooling and to be the means of testing the production engineers' principles to see whether they are effective.' (transcript pp. 7383/4)

It would seem that in considering the matter of the value of the work done it is necessary also to consider the question of worth to the employer.

Mr Aird upbraided the Commonwealth for the use of the phrase 'the employees' worth to the employer'.

He said:

'One or two of the phrases used in the Commonwealth's reference to cases should be mentioned.

The loose expression sometimes used—"the employees' worth to the employer"—cannot be permitted to reopen the door to the use of the production/productivity arguments because of the difficulties of double counting against national economic increases and because, as it will be developed later, it could create a new hierarchy of relativity perhaps contradicting the hierarchy flowing from the nature of the work and its responsibility or call on the employee.'

(transcript p. 7167)

Mr Aird also at this point dealt with Mr Brodney's submission concerning teamwork:

'Another phrase occurring in the Engineers case re "Team work" requires careful consideration either absolutely or in its context in that case. In that case the team work of professionals in one discipline and the supervision by higher grades of the one discipline was held apparently to detract little or not at all from the responsibilities of the nature of work performed by the lower grade of professionals. It will be remembered that Mr Brodney referred to the factor of teamwork in his submissions on Friday.

The team work, in the productive or overall planning sense, of this industry is not within the one discipline nor the award coverage, and flows upwards through supervising tradesmen, leading hands and foremen, through technicians to professional engineers, drafting grades and general management control.'

(transcript p. 7167)

Insofar as I am concerned I have banged the door shut with respect to productivity in a case of this nature, in the absence of 'a very special position'.

However I do believe that the concept of 'the employee's worth to the employer' is a very important and valid one so far as this Commission is concerned.

We live in a rapidly changing world.

Part of this change flows from technological change applied to industry.

Industrial change which affects people *en masse* inevitably affects society.

The inspections at Borg-Warner (Aust.) Ltd. and the evidence of Mr Amedee posed the problem squarely.

The inspection at the Borg-Warner plant, with its efficient flow line system, its highly automatic machines and its integrated production methods and the evidence of Mr Amedee brought into focus perhaps to a greater degree than any other experience during this case the issues of modern technological development and apparently simplified work processes, opposed to social and economic factors: which factors are only considered herein in the sense of philosophical entities enabling clearer understanding of the problem.

At this plant in the fitter, electrical fitter and machinist—1st class ranges inspected there were clearly evident demands for skill and responsibility in full measure.

However, it was here that in certain work classifications 'industrial engineering developments' had come to flower in the way that the theory presented by Mr Robinson envisaged.

Process workers, and machinists 2nd and 3rd class were doing work that in its broken-down elements was simple, while a host of ingenious, complicated,

efficient and expensive machines purred and chattered their way in an impatient agitation of production.

It was in relation to this plant that the doctrine of teamwork was most apparent. There was in fact most intimate teamwork between man and machine.

All grades of labour and all types of machine appeared to unite to achieve a common goal, production, through a common unified effort.

This was perhaps particularly apparent to me because months before the inspections in this matter commenced I had visited this plant when management and men had been torn in industrial dissension and the destructive results were very evident.

It was obvious during these inspections that a much better atmosphere prevailed and the plant was functioning smoothly.

The spirit and the fact of teamwork had prevailed.

Mutual common sense, good management and trade union understanding had combined to achieve first rate production.

The important thing is that without this human teamwork success could not have been achieved.

The machines by themselves would have been inert and impotent.

It occurs that there are two sides to estimating work value.

There is the side wherein one determines the value of the work by estimating and setting a price on such factors as skill, concentration, responsibility, aptitude, knowledge, demand, laboriousness, and training, etc.

The other is to consider the worth of the employee to the employer.

While value and worth are in certain senses synonomous I use 'value' in the sense of money value, whereas in order to draw distinction I employ 'worth' to denote something deeper.

Whereas value as I must apply it in considering work value relates to work which is of a specified value, worth may be estimated in terms of value of something but also in terms in respect of its qualities, or of the estimation in which something is held, or of its usefulness or utility.

To the employer the value of his employees may be tested by recourse to his payroll statistics, but their worth may be discovered in times of a rush of absenteeism, or of an epidemic of, say, influenza, or of an industrial dispute involving a lengthy strike.

Inactive and costly machines, equipment and plant bring home the real worth of employees.

A fair work value for an employee, an appreciation of his worth to the employer and the teamwork of all grades of employees in integration with sound and progressive management, liberal capital investment and efficient and forward-looking plant and equipment—these are the essential constituents of a successful manufacturing industry.

It is obvious that if the Commission is going to accept the validity of this concept (and I believe it should) it must be held to relate to this industry and not to a single employer.

The case of Borg-Warner (Aust.) Ltd has been somewhat intensively examined but only because it provided the best example seen in this case of relevant industrial engineering developments in a particular setting.

The concepts of work value of the employee, his worth to the employer and industrial teamwork are equally relevant and equally capable of application to all employers and employees within the industry.

Whether this is so or not can only be determined by the kind of intensive, extensive and wide examination that has been undertaken in this industry.

This examination, both in inspections and through witnesses, has shown that there is justification for the acceptance of the three concepts in combination of work value, employee worth and teamwork of the employers and all their employees.

D. INDUSTRIAL PROGRESS AND ITS CONSEQUENCES

Arising out of consideration of industrial engineering developments it is manifest, from the evidence, from the inspections and from the submissions, that there has been both great growth and appreciable progress in secondary industry within the metal industries covered by the Metal Trades Award.

These features have been due in part to increased population and in part to technological change.

The inspections made it evident that machine tools of fine quality and calibre are being made in increasing quantities in the metal industries.

The products of the machines and of the employees operating the machines have largely attained a quality level of some distinction. This is being reflected in several ways.

There is no doubt but that a high level of capital investment in the metal industries is one potent factor making for technological change, particularly in the techniques of mass production.

It is undeniably true that methods engineering has contributed much to the quiet revolution that has occurred.

This is now developing and will unquestionably continue to evolve and expand into new forms—in the natural way of all revolutions.

It is equally true that a considerable degree of the burden of progress and development has been placed on the employees within these metal industries.

To conclude, solely because back-breaking labour has been largely removed by the march and by the processes of the machine, that work has deteriorated or degenerated into a mere matter of pushing buttons, twisting switches and waiting for the completion of a process cycle is to be a victim of unobservant eyes and superficial thinking.

The inspections gave the answers to all that.

It is clear that the work force covered by the Metal Trades Award, or at least that part of the work force which is inherently within the real processes of the metal industries, is the other half of the management-labour team.

Without both constituents of the team busily working for a win, everything fails.

Commr Winter]

Leaving aside for a moment the team concept, the inspections provided clear indications of the strain, dexterity or ambidexterity, concentration and physical and mental co-ordination of brain, eyes, ears, hands and feet required in the precesses of modern mass production.

Of the five senses, three were in constant demand.

This of course was brought out in that areas where machine mass production processes are at their restless, productive peak—in the domain where the process worker is employed.

It was also evident elsewhere.

The evidence and submissions of the private employers went deeply into consideration of the modern tendency towards specialisation in secondary industry.

This tendency is undoubtedly true and evidence of it was frequently seen during the inspections.

As a countervailing factor there was also clear indication of a wide degree of interchange on machines and processes.

None the less the tendency towards specialisation of work was apparent.

I cannot accept as valid the contention that specialisation in industry of itself connotes deterioration of work demand or work value.

To do so would be to reject the evidence provided in full measure by the society in which we live.

Who knows of a specialist doctor who because of specialisation is paid lower fees?

What is true of the specialist doctor is true of all the professions.

It is certainly equally true of the specialist entertainer, the specialist sportsman, and the specialist in the armed forces.

What employer would pay a specialist member of his staff a lower salary because of his concentration upon a particular aspect of important activity?

Should is be assumed that the specialist in what used to be known at the manual work force is the only specialist in our society who should be paid less because of his special attributes, or because his employer has found it more profitable or more efficient to make him a specialist?

The fact is of course that the specialist machinist—1st class, welder—special class, fitter, electrical fitter, machinist—2nd class or process worker, for instance, is often more helpful to the employer when he does specialise.

Mr Wilson, Joint Managing Director of Willow Ware Pty Ltd, brought certain aspects of this out quite clearly.

Firstly, in reply to a question from Mr Justice Gallagher:

'If a man becomes married it is usual for him to come back and he will develop a speciality on certain machines because he is usually here longer.'

(transcript p. 4450)

Another example was afforded at the same factory when inspecting the automatic lug seamer.

Mr Wilson said:

'We have only about six operators (process workers) competent to work this machine to a reasonable tolerance.'

In answer to Mr Justice Gallagher he stated:

'This is a sensitive machine and more susceptible to damage. The competence required is in the pressure of their hands as they actuate it. The competence is gained by experience and teaching and we pay these operators higher wages than the others.'

(transcript p. 4452)

The inspections brought to light other examples of this character.

The fact of the matter is of course that the development of machine tools and mass production processes have extended and developed the scope of all activities surrounding them, not least of all that of the employees coming most intimately and most constantly in contact with them.

E. AUTHORITIES AND OTHER CASES

Both Mr Robinson and Mr Aird dwelt for some time on the important General Motors Holden's Case.

It is appreciated that in the majority decision in that matter significant principles were laid down.

Nevertheless that case and this bear little real resemblance.

In that case the unions had created a dispute against one company which has interests and conducts industrial activities in more than one State.

In this matter the Commission in full bench is concerned to discharge a commission that flowed from a decision of a full bench in national wage cases of last year.

In this case the Commission is endeavouring to chart its way through many difficulties that flow from the past.

These difficulties have largely or almost wholly arisen from the fact that the parties have never embarked on a course designed to establish the facts on a reasonably comprehensive work value basis.

I more than suspect that many classifications within the award have never faced a work value examination.

The work value examination in this case has certainly not been comprehensive, but it has been as reasonably representative as time and disputation allowed.

Had more patience been shown in certain quarters it would have been possible to delve deeper.

However, one questions whether, while this mammoth award remains in its present proportions, there can be a really comprehensive work value exercise undertaken with respect to it.

That is all to indicate the wide valley that separates this case from the General Motors Holden's Case.

Mr Robinson made much of the fact that the unions in the General Motors Holden's Case had accepted that there had been a reduction in work value in certain areas.

He sought to apply equally the principle of 'industrial engineering developments' to this field.

There is one significant difference between certain areas of the Vehicle Industry Award and the Metal Trades Award.

I have stated that industrial engineering developments, so far as my experience takes me, in the Metal Trades Award came to flower in the plant of Borg-Warner (Aust.) Ltd.

This plant caters largely for the vehicle manufacturing industry. I have drawn a distinction between this plant and all others inspected.

If industrial engineering developments, in the implication intended by Mr Robinson come to flower at Borg-Warner (Aust.) Ltd, they indeed come to fruition in certain areas of the vehicle manufacturing industry.

Earlier I emphasised the essential singularity of Borg-Warner (Aust.) Ltd, insofar as the inspections in re the Metal Trades Award were concerned.

In reality Borg-Warner (Aust.) Ltd is closer to the vehicle manufacturing industry than to the metal trades industry.

With respect to Mr Aird's submissions concerning the aircraft industry and the decision of Mr Commissioner McCreadie of 28 November, 1966, it should be stated that I informed all concerned, early in these proceedings, that I would not in this matter be concerned with nor influenced by any other award or any decision made concerning any other award.

This was primarily a work value inquiry into matters within the scope of one award—the Metal Trades Award.

It seemed to me that the whole intention of the full bench which initiated the proceedings in this matter would have been stultified if I had earlier permitted excursions into other fields or if I now were persuaded to stray into them.

Although I have examined the history of the development of the various classifications within the award, I have come to the conclusion that whatever the Commission does in this matter will set a new pattern and that, only because of this likelihood, in this decision the past should largely be ignored.

For myself I have been concerned with now; with what is happening within the province of the Metal Trades Award in the present; and with what are the proper levels of wages to be set here and now in relation to what I have heard and seen and measured.

For these reasons I have not greatly concerned myself with historical reasoning, with historical fact nor with historical authority. Neither have I immersed myself in a study of perhaps contemporary but to me certainly extraneous and foreign issues lying in other awards, or in decisions making them.

THE INSTRUMENTALITIES

A. The State of Victoria

Mr Aird submitted that what was sought in regard to the State Electricity Commission of Victoria was a decision which would indicate the work value component of the wages paid to employees of that Commission.

This would be decided by this Commission as it saw fit and any residual should be identified as a loading.

Mr Aird said that he did not wish to add anything more to that.

Later in response to a series of questions from Mr Justice Moore, Mr Aird stated:

> 'I am reminded as well, of course Your Honour realises that I have made these comments in relation to the S.E.C. as such, but I make them generally for those for whom I appear—that as a matter of policy, for the State of Victoria and instrumentalitic, we want the work identified, that it is the same—and in a sense it fits in with the submission I make to the Commission that State public authoratives pay beyond the work value award rate in one form or another.' (transcript p. 7235)

Mr Aird generally traversed the grounds of the unions' claims and submissions; reviewed the claims themselves; widely attacked the Commonwealth's submissions and evidence, but accepted the evidence of Mr Bullows where he expressed the view that the work in certain award appendix areas was the same as that covered by clause 4; and substantially agreed with the terms of Mr Robinson's opening address for the private employers.

Mr Aird spent quite some time dealing in particular with the submissions of the Commonwealth.

He indicated that the State of Victoria was opposed on true work value grounds to any increase.

He concluded that it may well emerge that the real value of Mr Bullows evidence had been adversely affected by the difficulty in separating the technique he was called upon to employ and his view formed as an expert in the normal way, 'and so far as he was an expert'.

Nevertheless, as indicated earlier he accepted Mr Bullows evidence where it accorded with his submissions.

He submitted in the perspective of the Commonwealth submissions that the State of Victoria had at all times indicated its opposition to the check sheet job evaluation approach.

Mr Aird stated that the unions had not attempted, during the inspection of Victorian instrumentalities, to show that there was a difference of work between that seen and that covered by clause 4 of the award.

With respect to the Commonwealth's submissions concerning the state of the economy, Mr Aird stated that two of his submissions had to be considered together:

(a) that there was no justification for an increase; and

(b) nevertheless in the processes of arbitration the Commission should be free and unfettered in its assessment of work value and its assessment should not be subject to qualifications such as those of the Commonwealth submission concerning magnitude and flow.

Mr Aird put it that in his view acceptance by the Commission of the Commonwealth's submission in this regard would create other industrial problems in the future as to whether the wage assessment was at the appropriate level at the time.

As well as opposing increases Mr Aird opposed retrospective operation in the event of increases.

B. The Electricity Trust of South Australia

Mr Ferdinandy informed the Commission that the unions and the Trust had been able to reach agreement on a number of points.

These had been incorporated in a signed document and the Commission was asked to give effect to the agreement.

The Trust was opposed to the creation of further special classes of tradesmen and submitted the relationship of base grade tradesmen should not be disturbed.

C. The Hydro-Electric Commission of Tasmania

Mr Marks submitted that there should be no increase in rates of pay presently payable by the Hydro-Electric Commission (the H.E.C.).

If this Commission did not accept that primary submission any increases granted should be added to the rates presently existing and which existed prior to the granting in September of this year of an amount of $1.40.

He said that the evidence revealed no work changes and he opposed the creation of new special classes of tradesmen.

THE COMMONWEALTH

Mr Woodward's more important submissions were that:

1. The case was a pure work value case and that economic considerations provided no motivation for whatever decision emerged.
2. Because this was the first real work value case the Commission had the opportunity to lay down procedures and principles for other similar cases.
3. The parent award concept should not be preserved.
4. There could be no flow from a work value review.
5. Systematic methods should be used in work value assessment.
6. A large element of judgment is involved in fixing wages.
7. There could be no truly scientific method of evaluating jobs.
8. While only 26 classifications had been inspected, if the knowledge obtained from check lists already marked was used, check lists for all other classifications could be completed.
9. The economy was reasonably well balanced at present and growing at a good pace.
10. In considering weightings in connection with the examination of a job regard should be paid to socio-economic considerations.

I felt impelled to ask Mr Woodward a question:

'I have given a good deal of attention to the sort of things that are discussed in the Commonwealth submission. One of the focal points of my thinking took me to ask what happens to the social and economic structure if a rigid tabulation leading to wage fixation is applied to an industrial situation in which an operator replaces a skilled tradesman hitherto carrying out an intricate function and that operator simply presses a button to achieve the desired production effect. It seems to me that type of situation goes to the heart of the industrial problem with which we are, if not currently, confronted. In fact, I think during the inspections we saw reasonable evidence of this tendency. Is that so?'
(transcript p. 5900)

Mr Woodward replied:

'I think the first answer I should give is that we do not suggest anything in the nature of a rigid arithmetic approach to this problem. By no means. We have stressed already several times the importance of human judgment as the ultimate deciding factor in this case. We say what you have here is a systematic guide and assistance to that human judgment but, in our submission, there would be no better way of having that assistance, that guide to the appropriate decision to be made in the position you have put to me than to break up the work, the old and the new, into the different factors that were involved. It might well be found whereas the work was previously more arduous and perhaps called for more initiative, that now the situation was different and there was greater responsibility for the equipment that was being used than had been the case in the past.

The Commission could then be in a position of having to decide on what weight those factors had to be given, and all that we say is by using our sort of approach that we propose that that would be done on a systematic and ordered way and would not amount to what

perhaps might, with respect, be called a hit or miss method. It would be a proper consideration of the different factors that went into the job before and that go into it later and having done that you would not finish up with an arithmetic answer; you would finish up with useful guidance on which we have to base an ultimate human judgment. That is the way we would put the matter to the Commission.'

(transcript p. 5901)

It appears to me that much more must be done than to relate or confine 'socio-economic considerations' to matters of weighting of job factors in an evaluation exercise.

Although this may provide a partial answer it occurs that something much more fundamental is required.

In this series of industrial inspections the Commission has had opportunity to evaluate to some degree the causes and effects of technological, or technical, change.

It seems to me that now there is much that is in a state of flux, and it is not possible at present to see everything that is pertinent to this problem with absolute clarity.

For the present it seems that the adoption of a compromise and a link between the concepts of the work value of an employee, his worth to the employer and teamwork is the best solution. It is too early to attempt to establish rigid principles.

This is not to venture into the province of economic theory but to get to grips with reality.

It is necessary to be alert. If the skills of a tradesman, for instance, degenerated into a state where his work for the day consisted of pushing a few highly polished buttons, and his work was assessed and valued on that basis, a system of work factor weightings would be of no avail.

The economic consequences, particularly for employers wishing to sell the goods they make, would be appalling.

In connection with the Commonwealth's submission that economic considerations provided no motivation for any decision it appeared that this was directed to the basis of the unions' calculation of their claims.

It was understandable, in view of the nature of their claim, that the unions did not take exception to Mr Woodward's submission.

However Mr Cullen objected:

'At this stage we would object to the relevance of introducing economic factors into this case. On p. 3 of his submissions Mr Woodward said "We have a pure work value case". The submissions he is making at the present time on capacity to pay are based I gather on a conspectus on the state of the economy and are not relevant to the present proceedings. We would object to the tender of the document and in fact to the whole of the submissions which he is currently making.'

(transcript p. 5923)

Mr Aird and Mr Marks supported Mr Cullen's objection.

Mr Cullen went on to say that 'the Commonwealth supports our submission that economic factors have no place in this case'.

In persisting with his request that he should be allowed to read the third section of his principal submissions (Exhibit W18) concerning capacity to pay, Mr Woodward submitted:

'Let me say immediately, however, that we agree that economic factors—and we have said this already in our submission, as has been pointed out—should not be taken into account in work value cases.'

(transcript p. 5926)

In his final address Mr Robinson did not refer to the question of economic factors, except of course quite understandably to attack the basis of the unions' claim.

However Mr Aird returned to the assault when he put his two pronged submission that there was no justification for an increase coupled with the contention that in the processes of arbitration the Commission should be free and unfettered in its assessment of work value.

In my view it would not be proper for the Commission on the basis of the experience of this one 'first real work value case' to lay down rigid principles or exact procedures for other work value cases.

It occurs that it is far too early to do that. Other award areas undoubtedly have their own peculiarities and problems. It seems that the Commission has no grounds for concluding, and is not entitled to assume that the shoes that might fit the Metal Trades Award are necessarily the shoes that will fit all others.

After a number of exercises of this character have taken place the position might be different.

It follows that, for my part, I am of the view that the parent award principle should not be preserved.

In my decision in *The Australian Tramway and Motor Omnibus Employees' Association v. The Commissioner for Government Transport of N.S.W. and others*(1) I directed attention to the difficulties that the parent award doctrine imposes.

As I see it, it would be best if each award were self contained without dependence on any other award. That may not in every particular be possible but it should be the goal.

The question of flow to other awards is separately considered herein.

Insofar as my decision is concerned it is considered that a large element of judgment is involved in fixing wages.

It is conceded that there is no truly scientific method of evaluating jobs.

A systematic method of recording assessments of work value has been tried by me in this exercise and I have come to have some appreciation of it.

In my view judgment must be the conclusive and final determinant in wage fixation, but a systematic method of recording assists.

In my survey of the inspections I have dealt extensively with this question, I have pointed to the difficulties, the weaknesses and the strengths. Much remains to be done in this field, but I believe that persistence with the experiment will assist all.

My reservations are largely directed to the question as to whether job evaluation as practised elsewhere can ever be the conclusive factor in compulsory industrial arbitration when a nation wide matter is under consideration.

However, systematic recording of assessments is another and more promising field. More research, more experiment, more discussion and more education into the subject are needed and are worthy of encouragement.

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(1) 116 C.A.R. 675

OVER-AWARD PAYMENTS

In my decision in the *Margins and Total Wage Cases* of 1966 I stated:

'Nevertheless, it is apparent so far as wage or salary payments are concerned, that once one, in a case of this nature, steps outside of the circle of light cast by the Commission's special knowledge of that which is prescribed by its own awards, one gropes falteringly in the near darkness of uncertainty.

Apart from their value in affording a means of spot-checking or test-checking the market level of wages, or their use in establishing the 'secondary wage' of low wage earners, I would disregard over-award payments.'(1)

In a decision I gave on 27 April 1965, concerning employees of contractors engaged in Latrobe Valley projects, I stated:

'The Commission has carefully weighed all the relevant factors inherent in the submissions and evidence presented. It has come to the conclusion that this is not a matter in which it should be swayed by statements in relation to over-award payments. The word 'statements' was used advisedly as evidence was not adduced in this instance.

. . . . . .

There have been occasions . . . when the Commission, as constituted by me has determined for good and cogent reasons that consideration of over-award payments was a potent factor. A decision may well rest upon foundations that differ greatly according to circumstances and facts.'(2)

In this case Mr Hawke submitted that in an economy such as ours the most direct method of ascertaining the value of something was to ascertain the price that was being paid for it.

The Commission, he suggested, should in a case of this type utilise information relating to the level of over-award payments because what was being paid was the most direct measure the Commission was going to have available to it of what was the value of the work being performed.

In this case I was not satisfied with the material presented by the unions with respect to over-award payments.

This is not a direct or implied criticism of the real and appreciable attempts to present weighty material but rather a recognition of the difficulty involved.

Clearly, time, co-operation and tested techniques are necessary to enable the preparation of material that could be accepted as being persuasive in an industry wide case of this nature.

Although, because of my rejection at that time of the unions' submissions concerning over-award payments, I did not then comment upon the material presented, I should say that I found the type of survey carried out and presented by the Electrical Trades Union in the *Basic Wage, Margins and Total Wage Cases*, 1966, very reliable. I have subsequently had opportunity to test it.

For one reason or another that was not possible on this occasion.

Mr Robinson submitted that over-award payments merely demonstrated that there was capacity to pay what was being paid and no more.

He indicated that he accepted Mr Dolan's evidence concerning over award payments. Mr Dolan gave evidence that there was not a substantial difference in the over-award payments now being paid to those shown in the over-award survey presented by the Electrical Trades Union in the 1966 *National Cases*, but there had been increases to them.

Mr Robinson directed the Commission's attention to the Commonwealth Statistician's survey of 1965 which covered on a scientific basis some one million employees.

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(1) 115 C.A.R. 93 at p. 228 (2) 109 C.A.R. 637 at p. 649

In the three group that were regarded as relevant to the metal trades the order of over-award payments was $6.50 for all classifications.

He said that he did not contest that over-award payments of that magnitude were being paid.

This is a case very different from the 1966 cases in which I held the view that over-award payments were irrelevant.

In those cases one bench was considering a basic wage application, while another was considering margins and total wage applications.

The two benches sat in joint session and were then separately considering matters that ranged over the whole economy and over the whole of the work force covered by Federal awards.

In this case one bench is considering a matter concerning the Metal Trades Award 1952 and those who are affected by it.

I hold that in these circumstances it is quite proper for the Commission to consider the evidence of Mr Dolan and the Commonwealth Statistician's survey of 1965 as being among the relevant factors to be considered in deciding questions of work value.

The Past and the Present

All that I have read and heard confirms the fact that there has never been a comprehensive work value survey of the work being done within the classifications covered by the Metal Trades Award.

In 1921 Mr Justice Higgins certainly did a thorough review but the award he was then concerned with was a very different proposition to the award of today.

Since then there have been partial work value surveys, but always either economic factors were decisive or the survey was limited in scope.

In 1952 there was certainly not a comprehensive work value survey and I cannot with any confidence take a datum-line from that year as providing a basis from which to attempt to measure change.

In my view, the findings flowing from this case should be considered as establishing new foundational measures.

Admittedly, only a minority of classifications have been seen during the inspections in this matter.

Nevertheless they, supplemented by the evidence, furnish a reasonably solid basis upon which to build.

Definitions

While I am of the view that many of the existing definitions are loose, I consider that it would be inadvisable for the Commission to attempt to alter them without prior consultation with the parties.

As an example only, the definition of patternmaker is not a definition at all, while I have dealt with the weaknesses of the welding definitions in my survey.

I consider that the parties should be advised separately to overhaul the current definitions and then to confer about them prior to a later approach to the Commission.

Redundant Classifications

Although attempts were made on several occasions by the Commission to secure from the unions and the private employers information concerning redundant classifications, such attempts were futile until the closing stages of the case when the unions furnished details.

The unions explained that they could not be assured that the classifications were in fact redundant but that to the best of their belief they were.

The private employers submitted that at the late stage of proceedings the Commission should proceed to determine the classifications in their present form.

They complained that they had not had the time to examine in detail those classifications raised by the unions. The matter, in their submission, should be left to other proceedings.

The Commission has no alternative but to leave the matter to other proceedings.

However, it should be said that the attitude of the private employers in this regard is very disappointing.

They have far better facilities than the unions for knowing or finding out what classifications are redundant.

They cannot say that they have not had time.

They have had many months with several reminders.

New Classifications and New Designations

My review makes it clear that the inspections convinced me that there was justification for the establishment of certain new classifications:

1. Machinist—special class
2. Electrical fitter—special class
3. Process worker—1st class
   Process worker—2nd class
   Process worker—3rd class.

Although the evidence of Mr Bullows pressed for certain classifications of assemblers with which I did not agree his evidence thoroughly supported the establishment of special classes of machinists and electrical fitters and two classes of process workers.

While the theoretical justification for the introduction of some of the proposed classifications is firm, there are clearly some practical difficulties in the way.

As none of the principal parties is enthusiastically vocal—except for the private employers concession concerning the electrical tradesman operating in the electronics field—I consider that this matter should not be decided at this point but should be among the questions in which leave is reserved to the parties to bring such questions later before the Commission.

Although it is believed that all would benefit from the deletion of the designations of electrical fitter and/or armature winder and electrical mechanic and the substitution in lieu of the designation 'electrician' I am content to leave further consideration until later.

I cannot however see any justification for the retention of the words 'and/or armature winder' following 'Electrical fitter'.

It is considered that they should be deleted.

Reduction in Number of Rates

It is considered that the present total of some 54 wage rates could without any great difficulty, hardship or inconvenience to anyone be compressed into a total of some 33 to 35 rates.

It is ludicrous in my view that there should now be retained wage divisions which differ in some cases by one cent per working day.

Unless opportunity is taken at this point to correct the position, illogical, hoary and unsatisfactory differentials of this nature may remain for a very long time.

The desire expressed by both the unions and the private employers against violation of present relativities of this nature presents some impediment.

However the unions and the private employers have clearly accepted relativity disturbance.

It is for instance implicit in sectors of the unions' claim, while Mr Robinson's answers to me during his final address left me in no doubt.

My view is that the only real impediment is innate conservative reaction against proposed change.

This important question of the number of rates should be further considered by the Commission.

Splitting the Award

There is some warrant for dividing the Metal Trades Award into various segments, each to constitute ultimately a separate award.

The award has had a Topsy-like growth without pruning or restriction.

The sixty-three specific branches of industries and callings embraced by the award through its incidence provide adequate information as to why the award, in its modern setting, has become at once cumbersome and somewhat portly.

It is not proposed that anything can effectively be done immediately, but it is suggested that all concerned be advised that the Commission considers that a reorganisation of the Metal Trades Award is desirable, and that the Commission intends to proceed with such reorganisation.

The parties will then have full opportunity to consider the position and make such preparation as seems desirable.

Apart altogether from the obvious arbitral and administrative difficulties associated with the award as it stands there is one other palpable and appreciable advantage to be gained by a division of the Metal Trades Award.

Although the Commission always has regard to the public interest, the effect of any decision involving large general increases could, with the award in its present condition, have some secondary effect.

It is appreciated that the Commonwealth in its submissions stated that qualifications would have to be attached to the doctrine of capacity to pay where a claim was related to a particular industry and where there was no possibility of repercussion elsewhere.

In this matter the Commission is concerned with a particular industry.

Insofar as repercussion is concerned the Commission is herein fixing wage rates for the Metal Trades Award only.

If the award were divided into several segments the impact of any secondary effect would be cushioned.

Nevertheless, as Mr Aird put it:

'The Commission should be free and unfettered in its assessment of work value.'

There is one qualification that I would impose.

I would serve notice in particular upon all concerned with such electricity generating and distributing authorities and instrumentalities that are within the Commission's authority that it is intended to set about establishing a separate electricity supply authorities award as soon as possible.

Other possible segmentation could result in the establishment of the following separate awards:

1. Shipbuilding (Metals) Award
2. General Engineering Award
3. Foundry Award
4. Electrical Trades Award
5. Sheet Metal Trades Award.

It is stressed that these five suggestions are only offered as logical developments, others occur as possibilities.

Fixing All Rates

On 25 October 1967, Mr Justice Moore read a statement prepared by him on behalf of the full bench.

In part the statement said:

'As soon as we reasonably can after the hearing has concluded we will aim at announcing the rates for the 26 classifications seen on inspections and also for such other classifications as we find practicable.

We cannot of course inform the parties before that decision what precise number of classifications it will cover, but it will not include a rate for storemen and packers, consideration of which has by agreement been deferred.

. . . . . .

Despite the fact that we cannot be more specific, we ask the parties to commence now to apply their minds to what will happen after we have announced our decision on those classifications.'

(transcript p. 6499)

The statement proceeded to indicate that subsequently the Commission would require the parties to confer and within 14 days thereafter to convey certain information to the Commission, after which a decision would be made as to whether or not we would require argument concerning the classifications about which the parties could not agree.

On 8 November 1967, Mr Heagney raised the matter of certain classifications that were not among the 26 that were mentioned in Commonwealth Exhibit W22 and said that he felt that he would be raising them with the employers during the conference period.

The following exchanges then occurred:

'MOORE, J: You will remember that in that announcement we specifically did not confine ourselves to the 26 classifications; and I would have thought, speaking for myself, it would be highly desirable for you to let us know what these other classifications are to which the overall formula does not apply—if I can use that expression—and also what you are claiming for them.

MR HEAGNEY: I will undertake to do that.

MOORE, J: And, if I may say generally, I think it would be wise if all representatives of unions did the same thing.'

(transcript p. 6992)

I have given deep consideration to all the problems likely to be encountered if the Commission does not fix all wage rates.

To recapitulate, we have already intimated to the parties that we would aim at fixing not only the rates for the 26 classifications seen on inspections but also for such others as we found practicable.

If we did not fix the rates for all classifications we would require the parties to confer concerning those for which we did not fix rates and report back to us within 14 days therafter.

We would then decide whether we would hear further argument concerning those rates about which the parties could not reach agreement.

The whole processes might take some considerable time and not materially add to the knowledge and facts already within the grasp of the Commission.

The private employers presented evidence directly upon 75 classifications while the Commission by means of questions directed to the private employers witnesses elicited information concerning other classifications.

Mr Robinson's Exhibit R40 specifies 30 other classifications which are restricted in application to particular employers.

This exhibit also lists 15 classifications in which a sufficient number of persons is engaged as would have warranted the calling of evidence if time had permitted.

These 15 classifications are:

Number	Classification
22, 101	Refrigeration mechanic or serviceman
31	Annealer or case hardener
39	Forge furnaceman
40	Forge furnaceman's assistant
41	Hammer driver
52	Driller using stationary machines
60	Welder—2nd Class
88	Electrical fitter's and mechanic's assistant
126	Sheet metal worker (2nd class)
132	Guillotine operator (as defined)
146	Spray painter (on one coat work)
250A	Extruding machine operator (as defined)
250B	Extruding machine operator (other)
271	Grinding machine or emery wheel operator
274	Lagger First six months experience Second six months experience Thereafter.

Mr Robinson put it that the 75 classifications concerning which evidence had been given would, in conservative estimate, cover 70 per cent of private industry employees under the award.

He said that the private employers had covered a wide stratum of classifications and a wide stratum of divisions of the award.

The Commonwealth proposed that, while only 26 classifications had been inspected, if the knowledge obtained from the check lists already marked was used, check lists for all other classifications could be completed.

As the Commonwealth accepted the facts that a large element of judgment is involved in fixing wages, and that there could be no truly scientific method of evaluating jobs, it would appear to follow logically on its own submissions that the Commission could properly use its judgment in determining all classifications.

Moreover my decision of the 5 April 1967, in this matter[1] reveals that the Commonwealth considered in the circumstances then applying that the investigation could proceed and conclude by the detailed examination of twenty-five classifications.

From all these considerations it would be best for the Commission to fix all wage rates now.

I have reflected deeply upon this and I have come to this conclusion after weighing evidence, considering the inspections, examining the submissions and meditating over the various contingencies.

Economic Factors

I have largely dealt with these issues either in rejecting the economic bases of the claim or in considering the submissions of the Commonwealth.

Mr Woodward agreed that economic factors should not be taken into account in work value cases.

The private employers objected when it was considered that the Commonwealth was proposing that they should be taken into account, Mr Aird and Mr Marks supported the objection of the private employers, while the unions, in view of Mr Hawke's submission, could only 'lie doggo'.

In deciding that broad economic factors should not come into consideration, I am nevertheless conscious of the facts:

(a) that the Commonwealth stated that the economy was reasonably well balanced at present and growing at a good pace;

(b) that overall public interest must be studied; and

(c) that monetary and fiscal measures lie readily adjacent to the hands of the Commonwealth.

Of course the Commonwealth did submit that the doctrine of capacity to pay had to be qualified when a work value case within an industry was being considered, provided that there was no flow into other award areas.

So far as the question of flow is concerned, I am basically dealing with the subject under 'Repercussive Effects'.

However it seems that I should state at this point that one cannot foresee nor completely control the future so far as repercussion in any degree is concerned. Unforseen factors or other forces may come into being.

One may only prescribe.

It must not be forgotten that the Commonwealth also submitted:

'Equally clearly, judgments can comprehend socio-economic factors, such things as the significance to be attached to skill and the need to encourage workers to acquire skills.

(1) 118 C.A.R. 31

In this area the difficult questions of the value to the employer and the employer and the community of the work done in a classification and the recompense to the employee for, e.g., acquiring skills, the mental and physical effort involved or the circumstances in which the work has to be performed.'

I certainly contemplated socio-economic factors in philosophical terms in relation to our problem and to that of the community.

All in all, I am satisfied that in this case the Commission is justified in disregarding factors relating to the capacity to pay principle.

The Commonwealth, as the statutory intervener, was the only interest to raise the question, and then only in a strictly qualified manner.

I am aware that public interest always remains for consideration as an invisible intervener, even if all are silent. Real public interest warrants an increase.

The United Kingdom has devalued sterling and the Australian Government has decided not to devalue the dollar in conformity.

These decisions were made after the conclusion of submissions in this case and at this point it is not possible to estimate clearly the effects, although they may well be transitory, whatever their nature.

Repercussive Effects

In 1966, when announcing certain matters on behalf of the Reference bench, Mr Justice Wright, the Presiding Judge stated in part:

'For the Reference bench I make the following announcements regarding the Metal Trades Award which is the only one under its consideration:'

The important fact is that His Honour was there emphasising that the Metal Trades Award was 'the only one' under the consideration of the Reference bench.

Consequently, as I see it this finding relates only to the Metal Trades Award 1952.

The decision has been arrived at after an investigation extending calendar-wise over sixteen months and in concentrated fashion over some six months.

In the period prior to my colleagues joining me in inspections I turned a deaf ear to those who would refer me to other awards. I was concerned only with the Metal Trades Award and I shunned comparison.

It seemed to me that the whole purpose of the investigation was to consider wage rates with respect to this award.

As a consequence it is only logical to me, and, it would appear, in consonance with the spirit and terms of the pronouncement in the *National Wage Cases*, 1967, if it were made evident that there should not be any automatic flow from this decision to other awards.

Wage rates in most other awards is a matter for other Commissioners. I consider that it would be impertinent and improper for me to play a part in attempting to bind them to the wage levels determined herein or to any others.

The one qualification that seems to me to be essential, and indeed to have full warrant from the pronouncement in the *National Wage Cases* of 1967, is that as a prerequisite to any determination elsewhere there should be a case conducted which is considered on a work value basis.

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

[*Commr Winter*

Rates for Females

The Pronouncement by the Honourable the President Sir Richard Kirby, on behalf of all members of both full benches sitting in the *National Wage Cases*, 1967, stated, *inter alia:*

'Our adoption of the concept of a total wage has allowed us to take an important step forward in regard to female wages.

We have on this occasion deliberately awarded the same increase to adult females and adult males. The recent *Clothing Trades decision*[1] affirmed the concept of equal margins for adult males and females doing equal work. The extension of that concept to the total wage would involve economic and industrial sequels and calls for thorough investigation and debate in which a policy of gradual implementation could be considered.'[2]

On 7 November, 1967, I asked Mr McBride just what proposal he might be making with respect to rates for females.

'COMMISSIONER WINTER: On the same type of approach as that mentioned by His Honour; certainly your answer to him enlightens me in that you will finally be dealing with general problems but perhaps it would be to the advantage to all concerned if I indicated it would be of some assistance to me, and I think perhaps to other members of the bench, to know just what proposal you might be making with respect to rates for females.

We have, throughout the inspections examined the work of males and females uniformly and particularly process workers.

We have seen one female classified as a machinist second grade. There certainly have been some classified as machinist third grade. I would like to know whether you intend making submissions on that angle or not.

MR MCBRIDE: When we had the conference when the programme was formed after announcement No. 6 you may remember this question was raised before you and we said we were not in this case arguing equality of rates.

COMMISSIONER WINTER: That is a different matter.

MR MCBRIDE: I might be misunderstanding your question but what we said then was because we were not arguing equality of rates we did not want to be stopped looking at a female process worker and that was the understanding we would be looking at the work of the classification irrespective of the sex of the operator.

As far as I know the unions' attitude has not changed. We have not asked for this case to be a test case on female rates or equality of rates . . .'.

(transcript p. 6920)

On 10 November, he answered me:

'Mr Commissioner Winter asked the question about the expression of the female rates in the order. This is a difficult question but I would like to point out a few historical facts which I think might explain our attitude.

The original application filed in November 1965 was generally for an increase of margins in clause 4 at that time and generally speaking we had provided for females to receive 75 per cent of the male rate. I say generally speaking because the Commission knows tradesmen get the full amount and there was this flat rate up to third class machinist for the female process worker but generally speaking females under the Metal Trades Award at the time we filed our application got 75 per cent of the male rate.

Since the filing of that application the Commission in the total wage decision has come out in favour of the principle of equal pay. It is not a positive pronouncement at this stage but there is certainly a hint and since this decision was made the ACTU interstate executive has met and has decided to take a test case on equal pay. It is obvious such a test case cannot be completed before the end of this work value case.

In view of this all we ask the Commission for at the moment is the granting of the application we filed in November 1965, without prejudice. I cannot stress too strongly we are certainly not opposing the granting of equality in this case but it is apparent to us that the Commission's decision to bring down a final order in this work value case before the end of the year did not allow time to argue the principles of equal pay. We do point out that the logs of claims creating the dispute the Commission is now dealing with did ask for equality of rates for males and females.'

(transcript p. 7100)

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(1) 118 C.A.R. 286 (2) *Ibid* 655 at p. 660

In considering the matter Mr Robinson stated:

'At the outset may I say that we in general terms support the attitude adopted by Mr McBride. These proceedings obviously are inappropriate for a discussion of the question of female rates in general or the question of equal pay for work of equal value or whatever other form of equal pay the unions might eventually claim.'

(transcript p. 7423)

Mr Robinson also submitted that the Commission 'should revert to the well established practice of expressing these female rates on the basis of a flat rate as it was done for 36 years up to June of this year.'

(transcript p. 7428)

It may be seen from my survey that the inspections revealed that female employees were doing work that was in every way the equal of that done by males within the ranges observed.

Generally the observation covered the fields of process work, machinist—3rd class and coremaker, although other isolated instances were seen where the validity of equality of work performance held true.

Indeed there was some ground for considering, in conformity with Mr McBride's submission that with respect to the process workers working in the domain of the miniature in electronic and electrical component processing, the female was more valuable than the male in certain classifications.

However, as was made evident by my questions to Mr McBride, in this setting the Commission was not considering all aspects of equal pay.

The Commission had to decide, in the event of increases being granted, whether identical increases should be awarded to males and females.

Whatever may have or may not have been the correct decision if the parties were in dispute it is clear from the submissions of the unions and the private employers that there is no dispute, in so far as this case is concerned.

The unions appear to be in some difficulty concerning the original application filed in November 1965, but it was pointed out that in the log of claims sustaining the application equal pay was sought.

Accordingly in the presence of agreement the Commission has no alternative.

The increases for females will be seventy-five per cent of the increase for males.

It is considered that it will be best if the Commission continues to express rates for females in the Metal Trades Award in the manner now prescribed.

In view of the Union's declaration that it is intended shortly to launch proceedings designed to test certain matters relative to the comparative wages paid to males and females, there would be little point in reserving leave in connection with any question relative to wage rates for females insofar as comparison of their wage rates with those of males is concerned.

This would still be so even in the absence of agreement between the unions and the private employers as equal increases for males and females are not sought in this case.

Fact and Inference

Although it has not been practicable to see work in sample done by employees with respect to the whole range of classifications, nor, for various reasons, has it been possible to hear evidence from witnesses concerning all of such work, inspections and the evidence from witnesses were sufficiently representative to permit of firm conclusions being drawn.

This was rendered both possible and eminently workable both by deductive methods, in the sense of drawing inferences from the general to the particular, and by inductive methods in the sense of inferring a general principle from particular instances.

Furthermore, the very number of existing classifications, by their wide variety of designation even more than by their multiplicity, tend to confuse one and disguise the essential fact that there is great similarity of close function between many of them.

The number of classifications have grown and developed because of mutual convenience and because of policies of rigid job demarcation or specialisation, imposed by union or employer.

It is not even necessary to know a great deal about the Metal Trades Award to become at least partly convinced of this.

Even a cursory reading of the designations of the 300 or so classifications set out in the award will soon betray the truth.

To know the metal industries reasonably well is to become more firmly convinced of the essential basic similarity of many classifications.

I am quite satisfied that the range of the inspections plus the width of evidence from the witness box, together provide ample justification and reason for the Commission to fix the rates for all classifications now.

At the time of the announcement on 25 October 1967, on behalf of the full bench by Mr Justice Moore, I was of the view that it might be best if the Commission determined wage rates for somewhere between the twenty-six classifications seen on inspections and the complete range.

However, later and deeper considerations have influenced me in the direction of taking the course of fixing all rates.

Firstly, the announcement made it obvious that the Commission was not necessarily confining itself to fixing the rates for any particular number of classifications.

Secondly, after giving some thought to the possibilities inherent in a decision that limited its decisive role to, say, twenty-six classifications, I came to see that there were left open all doors of possibilities: such as, for instance, continued failure of the parties to agree upon the basis of a twenty-six or more classifications fixation, and in such event the likelihood of long continued argument.

Thirdly, I remembered that there had been precious little reconciliation of views between the principal parties during the course of this case, although several conciliatory attempts had been made to induce them to move in that direction. There is not in this any direct or implied criticism of the parties.

It is simply a recognition—as they had the good and common sense to realise—that the issues between them were so deep and important that there was no room for compromise.

Out of these three thoughts, plus the added important consideration that in any case the full bench had in fact and through the processes of logic and understanding relating to fact, sufficient material to enable it justly to fix fair and reasonable wage rates for all classifications, came the conviction that all wage rates should now be determined.

Commr Winter]

Instances of permissible inductive inference may be cited by pointing to the fact that the variety and number of inspections, and the width of evidence from witnesses, in connection with particular instances in the General Engineering Division (fitter, machinist—1st, 2nd and 3rd class, patternmaker and toolmaker) were such that it was possible to draw clear inductive inferences concerning the work value of those in other classifications in the division, particularly when now uncontested but long established relativity patterns existed.

Similar inductive inferences could be made for the same logical reasons concerning the Welding, Foundry, Sheet Metal ((a) Sheet Metal Section) and Ironworking and General Divisions of the award.

Admittedly, the Commission only had the instances of the electrical fitter and/or armature winder and the electrical mechanic to depend upon to draw inductive inferences concerning the important Electrical Division.

Still, when the attention that has been paid to these classifications is considered, the designations of the classifications in the division carefully examined, and the existing and unchallenged relativity pattern studied, it may be seen that the task of fixing all rates from consideration of the electrical fitter and of the electrical mechanic is not rendered too difficult.

Identical considerations would apply with respect to fixing rates in the Smithing Division from knowledge gleaned in this case of the work of a smith—other; and in the Boilermaking and Steel Construction from the work of the boilermaker and/or structural steel tradesman and the marker off.

The divisions to which explicit reference has been made embrace the great bulk of employees covered by the Metal Trades Award.

They undoubtedly represent the vital heart and most of the rest of the body of the award.

It must be remembered that Mr Robinson, when making submissions concerning the 75 classifications covered in the private employers' evidence, stated that in conservative estimate these 75 classifications would cover 70 per cent of those employed under the award by private industry.

Moreover, having formed tentative conclusions from inductive reasoning it was possible to test certain things by deductive inference—from the general to the particular.

Above all it cannot be denied that the General Engineering Division—the real heart of the award—with six key classifications having been the subjects of lengthy inspection and revealing evidence from the witness box, was given wide and general attention.

From similar circumstances applying to the Welding, Foundry and Ironworking and General Divisions, it is possible, from the generally unchallenged relativity patterns, to form a general conclusion or law.

Then, by a process of deductive inference, tests can be made of the accuracy of inductive inference with respect to classifications in other divisions.

It has been said that we live by probabilities as there are few certainties in life.

By direct perception of facts, by understanding of them gained from evidence and by drawing deductive and inductive inferences from them, I am satisfied that fair and reasonable award wages for all classifications within the award may be now determined.

Possibility of Error or Anomaly

In the event that unperceived error or anomaly may occur, full protection should be afforded as I consider that leave should be reserved to all concerned to apply subsequently to the Commissioner concerned for correction of error or anomaly unwittingly caused.

I would suggest however that mere dislocation or disturbance of a relativity pattern would not of itself provide sufficient ground for any variation from the wages determined herein.

Leave Reserved

In my view leave should be reserved to the parties or any of them to bring to the Commission as constituted by the Commissioner concerned:

1. Any matter wherein it is considered that the decision herein has created an anomaly or has brought about an anomalous situation.
   It should be made quite clear however that mere disturbance of an hitherto existing wage relativity will not of itself be considered sufficient ground to move the Commission.
2. Any question relative to:
   (a) the designation of any classification;
   (b) a reduction in the number of wage rates now prescribed by the award;
   (c) any consequence that may flow from the implementation of (b) hereof; and
   (d) the elimination of redundant classifications.
3. Any question concerning the transfer to the appendix to part 1 of the award of any classification now set out in clause 4.

THE DECISION

(A) General

For all the reasons that may be evident or that are expressed heretofore it is considered that wage increases should flow to those employed in many classifications of the Metal Trades Award, 1952.

The evidence of the witnesses, the material, the submissions and the inspections all support a finding that, in general, work values of employees in the metal industries have increased. I so find.

Secondary factors support such a conclusion.

In the first and most vital instance I am satisfied well beyond any reasonable doubt that the skill and responsibility of tradesmen working within the scope of the Metal Trades Award is, by award standard, seriously undervalued.

There is far too narrow a gap between the wages of the tradesman and those who have not acquired tradesman qualifications through training and experience.

The claims are rejected with respect to classifications numbers 196, 292, 76D, 195, 252M, 252N, 252P, 291 and 76C.

The classifications other than those of tradesmen and those just considered should be increased by amounts ranging from 10 cents per week to $4.10 per week.

The increases for females, where applicable, should be at 75 per cent of the increases for males.

The increases should apply to apprentices and juniors in proper proportion.

The wage rates to be paid shall be those set out in the schedule handed down with these reasons and marked 'A'.

It is fair and reasonable that an increase of $7.40 per week be awarded to the fitter and to other classifications of tradesmen who are presently receiving identical award wage rates.

Certain other classifications of tradesmen will receive greater increases than $7.40 per week.

It should be stated that I am satisfied, from a number of factors making for proof, that the toolmaker should be on the same wage level as the patternmaker.

I reject claims for increases with respect to a number of classifications which comprise groups of employees which do not seem to me to contribute any work factor of peculiar significance to the metal industries.

For instance those within classification 292, 'Employee not elsewhere classified' and classification 291 'Other employees with not less than three months experience in the metal trades industry', do not appear to me to be within the confines of a concept relating to a combination of work value, worth to the employer, in the significance with which I have applied, it, and teamwork.

All three constituents of the concept may be present in minor degree but not with particular industry significance.

Those within these grades of labour, so far as work factors relating to skill, aptitude, responsibility, or worth flowing from experience are concerned, would not have demands placed upon them nor would they be making a work contribution that would, in principle, be any more relevant to the metal industries than to any other industry.

To concede that those within these classifications should receive increases on the bases accepted herein would indeed be to agree that this decision should have wide and general application almost instantly and automatically. Increases will in general flow to those in classifications which are not embraced within the tradesman groups nor emcompassed by such considerations as are held to apply to those in classification No. 292 'Employee not elsewhere classified'.

The increases vary in amount, are not applied on any system of percentage calculation, and are assessed only in minor degree on present relativity considerations.

Where it has been found, for good and cogent reasons which are supported by established facts, that disturbance of present relativity is warranted, such change is made.

(B)—Electricity Supply Undertakings and Other Instrumentalities

In so far as the Electricity Trust of South Australia is concerned, Mr Ferdinandy informed the Commission that an agreement had been reached between the unions and the Trust.

He also furnished the terms of the agreement and sought to have the Commission issue an order embracing the terms of the agreement.

It is suggested that the parties should prepare a draft order for my approval and signature in my capacity as Commissioner assigned to the metal industries.

So far as I am concerned my general conclusions herein concerning the increase in work values of employees within the scope of the Metal Trades Award apply with equal validity to the employees of the State Electricity Commission of Victoria and the Hydro-Electric Commission of Tasmania who are covered by the same award.

The same would be true with respect to other instrumentalities represented by Mr Aird.

Undoubtedly similarities of work exist between the work done in electricity supply authorities and that carried out in other areas covered by the Metal Trades Award.

On the other hand there was clear indication that some ranges of work in the electricity supply authorities were not done elsewhere.

Other sectors of work differed in degree.

I have not, in this case, heard or seen anything which would cause me to review the position now established that the electricity supply authorities are in a special position warranting particular consideration for their employees.

The reasons which actuated me in coming to my earlier decisions concerning the electricity supply authorities were fully explained and exposed in my decisions. The same was true with respect to the decisions of Mr Commissioner Hood.

My view is that increases which are to go to employees of the State Electricity Commission of Victoria or the Hydro-Electric Commission of Tasmania should be awarded on the basis of the value of their work as employees of electricity supply undertakings to the extent that it was disclosed by this inquiry.

(*C*)—*Over-award Payments*

I stated earlier herein that the inexorable logic of the private employers' submission concerning the alleged fact that the reality of the situation was that existing work values justified a reduction in wages, although this was not pressed, imposed acceptance of a principle that if the Commission found that generally work value had increased then a wide general increase should apply.

Similarly the unions' submissions concerning the measuring rod of value provided by the level of over-award payments, has its own inexorable logic content.

The unions submitted that:

'what is being paid—as revealed by over-award payments—is the most direct measure you are going to have available to you of what is the value of the work being performed.'
(transcript p. 6885)

Although the level of over-award payments has not been in any way decisive it has been one of the factors that I have taken into consideration in this case.

That it has not been decisive is easily shown by Mr Robinson's reference to the fact that the 1965 over-award survey by the Commonwealth Statistician showed that there was then an over-award payment with respect to the Metal Trades Award of the order of $6.50 per week—for all classifications. Interestingly, Mr Robinson gave the corresponding 1966 figures as $6.20.

The inexorable logic of the unions submission in this regard is that if, in general or in any particular, the decision of the Full bench is that wages be increased to or above the current level of over-award payments, then the direct measures of the value of the work being performed is exceeded.

If the current level of over-award payments be held to express the real value of the work being performed then the level of such payments should be diminished by the amount awarded hereby.

Consequently, by the unions own submission, there should be complete or partial absorption of the current over-award payments in the increases now awarded by the Commission.

While employers are free to act as they wish concerning the amounts of wages they may desire to pay over and above the minimum set by this Commission, it should be made clear that they are under no compulsion to retain over-award payments at their current levels.

Certainly it would not be expected that any employee's take-home pay be reduced.

Perhaps attention should be drawn to the private employers' submission that over-award payments showed capacity to pay what was being paid and no more. Since it is the intention of the Commission that employers may generally apply over-award payments against the increases awarded, these increases are not designed to strain capacity to pay.

Although the Commission will not, and indeed cannot, prevent employers making such over-award payments as they may desire, it is clearly their responsibility if, as a result of failure to apply over-award payments, at least partially, against increases, capacity to pay is thereby strained.

Date of Operation

The claim for retrospective operation should be refused.

The variation of the award should operate as from the beginning of the first pay period to commence on or after the 22nd day of January, 1968, and should remain in force for a period of three years thereafter.

Final Thoughts

This case was initiated by the Commission within the framework of disputes between the unions and the private employers.

It now appears that the step taken by the Commission provided the only satisfactory means of moving towards a satisfactory settlement of the dispute.

The experience has brought home the reality and truth of the pronouncement of the Honourable the President, Sir Richard Kirby, *C.J.*, made on behalf of all members of the full benches in the *National Wage Cases* of 1967, when he stated:

(a) 'We are sure that in work-value cases the fixation of total wages will bring to award-making both greater flexibility and greater reality.'(1)

(b) 'In summary the adoption of the new procedures will enable the Commission to act flexibly, to ensure that economic gains are reflected in the whole wage each year, to give more reality to its award making both in economic and work-value cases, and to give proper attention to the low wage earner.'(2)

These extracts are quoted only for their work-value and flexibility implications, but I have inserted the quotations in full to avoid distortion in the second one.

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(1) 118 C.A.R. 655 at p. 658 (2) *Ibid* at p. 659

SCHEDULE TO REASONS FOR DECISION OF MR COMMISSIONER WINTER

THE SUBMISSIONS

The Union's Preliminary Submissions and Claims

Following the conclusion of the inspections (see my review in the appendix) the hearings for the taking of evidence and the presentation of submissions commenced in Sydney on 21 September 1967.

For the Unions, Mr Hawke submitted that all evidence from all parties should be presented and tested prior to submissions being made.

Mr Robinson contended that it would be highly impractical for the Commission to adopt the course proposed by Mr Hawke.

Mr Woodward, while not opposing Mr Hawke's proposition, pointed to the difficulties adoption of it would impose upon the Commonwealth.

Mr Aird put it that his clients were exactly in the same position as the Commonwealth, while Mr Marks on principle objected to Mr Hawke's proposal.

The Commission largely accepted Mr Hawke's submission.

The Commission's decision was:

'We have given consideration to the submissions made and our main concern is to see that there is a minimum of prejudice. The circumstances surrounding these proceedings are quite unusual and what we are deciding to do can be of no relevance in any other proceeding.

The unions are seeking to change the arrangements made in Melbourne but we think that these proceedings are so important that the application made by Mr Hawke should be treated on its merits. In all the circumstances we think that justice will best be served to all concerned if the following programme is adhered to:

1. The unions to present their evidence this week and next week in Sydney.
2. In the sitting week commencing Tuesday, 3 October, the Commonwealth to present the whole of its case in Sydney.
3. In the sitting week commencing Tuesday 10 October, Mr Aird's clients, Mr Marks' clients and Mr Ferdinandy's clients to present their whole cases in Melbourne.
4. On Tuesday, 17 October, Mr Robinson to commence his evidence in Melbourne.
5. Following the completion of Mr Robinson's evidence, the unions to address.
6. At the completion of the unions addresses Mr Robinson to address.
7. The question of a final but brief reply by the unions can, if necessary, be ruled upon later.

We are still determined to finish this case by 23 November at the latest. We believe that the above programme which will now control the Commission's proceedings will fairly do justice to all concerned and will ensure the target date is achieved.'

(Transcript p. 5373)

Mr Justice Gallagher intimated that if any party could show that it was prejudiced the Commission would listen to its submissions.

Mr Hawke, on 26 September 1967 gave some details of the unions' claims.

He said:

'I would make this point which perhaps does go in some sense to submissions, but I do no more than make the point extremely briefly. I remind your Honours and Mr Commissioner of the passage at page 5 of Print No. B 2200[1] which is the decision in this year's national wage case, where it said in the middle of that page:

> "In summary the adoption of the new procedures will enable the Commission to act flexibly, to ensure that economic gains are reflected in the whole wage each year, to give more reality to its award-making both in economic and work-value cases, and to give proper attention to the low wage earner."

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[1] *Ibid*

Commr Winter]

> What we have done in this application is to say that if the economic gains had been reflected in the whole wage in the period we are going back to, these are the sets of figures which in respect of marginal elements or the previously known marginal elements, would have been the appropriate level of award remuneration.'
>
> (Transcript p. 5458)

In outlining the claims, Mr Hawke explained that the amount was obtained by assessing the impact of economic factors since 1947.

He said that the basic economic factors which were taken into account were those of prices and productivity.

By linking the consumer price index (which became available as from the September quarter of 1948) with the C series index there was established a conceptual figure for the March quarter of 1947 of 52.6.

It could thus be seen that the consumer price index had moved from 52.6 in the March quarter of 1947 to 140.6 in the latest quarter of 1967, which represented an increase of 167.3 per cent.

If the total marginal remuneration of the tradesman of 52s at March 1947 was taken, there was obtained, in terms of an adjustment for prices, a figure of 139s or $13.90.

This was secured by multiplying by a factor of 267 representing 167.3 per cent increase.

To that figure was then applied the movement in effective productivity as far as that could be ascertained back to the 1947 period.

The movement in internal productivity from 1948-49 to 1965-66 was, he said, 44.7 per cent. When adjusted by the terms in trade this became 41.4 per cent.

The figure of $13.90 was then adjusted by a factor of 141.4 per cent to take account of changes in effective productivity.

The result was $19.70, which became the figure for the tradesman.

Mr Hawke said that the amount of $19.70 was a 279 per cent increase on the $5.20 of 1947. This was an adjustment back of 379 and when that was applied to the particular margins one was able to obtain the specific claims contained in Exhibit M 12.

By application of the same factor to other margins then the specific claim would be established.

Mr Hawke submitted that if economic gains had been reflected in the whole wage in the period under review the figures quoted would be the appropriate level of award remuneration in respect of the previously known marginal elements.

The unions proceeded with evidence.

Storeman and/or Packer

After the Commission decided, by agreement between the principal parties, that the classifications of storeman and/or packer and tool and/or material storeman should be stood over until after the conclusion of these proceedings, the unions proceeded with evidence.

The Commonwealth's Submissions

On 6 October 1967 Mr Woodward presented the submissions for the Commonwealth.

Substantially the submissions were reduced to writing (exhibit W. 18).

The following is a synopsis of the more important submissions:

1. The present proceedings have historic importance in the record of wage fixation in this country.

2. This is the first major review for a very lengthy period of one of the most important awards in the Australian system of industrial jurisprudence.

3. The decision could point to a method in keeping with the sophisticated industrial society in which we live, a method which recognises that there are now available well tried and established methods of assessing the relative value of jobs.

4. The Commission in its implementation of total wage and by decision that initiated the curent inquiry had taken up the challenge and had shown that it was not tied to past habits and practices.

5. The Commission had realised that our methods of wage fixation required adjusting to the needs of a full employment society and a state of rapid technological change.

6. This case was a pure work value case, a case entirely different from the 1954, 1959, 1963 and 1965 margins cases which essentially turned on pure economic grounds.

7. In this current case economic considerations provided no motivation for whatever decision was come to.

8. Because this was the first real work value case presenting the opportunity to the Commission to lay down procedures and principles which would aid the hearing in future of other work value cases it desired to direct its own attention strongly to those matters.

9. Certain references were made to authorities stemming from judgments in relation to work value.

(Transcript pp. 5871-5876)

10. The following principles should be applied in work value cases:

'(i) Work value cases essentially involve the examination and assessment of the content and characteristics of a job including skills, responsibility for working without supervision or for supervising, responsibility for equipment, the products and the work and the safety of others, the extent to which initiative is involved, sensory and physical demands, working conditions, etc. that are an inherent part of a job.

This, of course, merely states what in a general way has been the habit of industrial tribunals in this country over the years. It is indeed the practice wherever wage determination is practised.

(ii) Work value is not assessed on the basis of a single quality such as skill, but on the complex of factors that bear on the performance of work. Skill is, of course, of great importance at least in the case of manual workers and it has always to be distinguished from manual dexterity. It is something of a completely different order.

(iii) Not to be taken into account are the skills, qualifications or characteristics of particular employees performing the jobs. This point was made in the *Engine Drivers' Case*[1] in which Higgins, *J.*, characterised the secondary wage as "remuneration for any exceptional gifts or qualifications not of the individual employee but gifts and qualifications necessary for the performance of the functions."

(iv) Before examination of a job commences the various factors to be examined and assessed should be established. And so should the various weightings to be given to each factor. In considering weightings regard would be paid to socio-economic considerations. Currently there would be little argument that in our society skill would be given a higher weighting than would other factors.

Desirably, before the work value review of any award is commenced the parties should agree on the factors to be examined and the weightings to be given each factor. If there is not agreement, the matter should be determined by arbitration. None of this occurred in the present case and this must not be lost sight of. This is important and we will subsequently have more to say on the matter.

This particular point that the factors and weightings should be determined at the threshold of a case represents a new approach to work value studies. However, the real novelty is only that what is proposed means bringing a systematic method to work value reviews, a method which will be understood by and known not merely to the parties but to the Arbitrator. We will come back to say more of this later.

(v) All classifications under review should be assessed in terms of all factors.

(vi) Level of skills can only be determined by an examination of the duties and functions of each classification.

(vii) The actual period of training cannot be regarded as the criterion of the level of skill. The significance of training and experience is very relevant but it is the content and character of the training and the experience that count. Forms of training compressed in time can be more effective than training spread over a longer period. There can be no special attachment to formal or on the job training *per se*. In some situations on the job training is considered sufficient. There is an infinite variety of means of training.

(viii) Work value cases must be conducted on an award by award and classification by classification basis. There just is not any room for the test case approach.

(ix) It is not necessary that every single classification should be the subject of thoroughgoing investigation. In many situations when enough classifications have been examined in detail, sufficiently valid judgments may be possible as to where others should fit in the hierarchy.

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(1) 7 C.A.R. 132

(x) In work value cases, where the award covers more than one classification, comparisons of work value of the classifications can be made only within the award under review. If only one single classification is under review, comparison should be made between the classification as it exists and as it existed at the time of the last work value examination.

(xi) If, as does the Metal Trades Award, an award includes classifications covering quite dissimilar types of activities, each of these activities has to be examined in its own context and there can be no assumption that present relativities should be maintained merely because of the accident that the one award covers these quite dissimilar types of activities.

(xii) Work value is not to be assessed by reference to changes in the purchasing power of money. This principle lies behind the Commission's refusal in recent cases to restore margins to some pre-existing relationship with the basic wage. Moreover, the observations of the President in the *National Wage Cases* of 1967 that "in future Commissioners will be able to fix total wages on a work value basis in the knowledge that at each annual review any adjustment which should flow from general economic factors including price movements will be made to all total wages" are directly relevant.

(xiii) In work value cases the applicant must either establish that circumstances have changed since the making of the award so that existing rates are no longer just for particular classifications or establish that the previous decision was incorrect. This principle was referred to by Mr Justice Kelly in the 1947 *Printing Industry Case*.

Naturally, the longer the period of time since the last review, the greater are the chances that changes have occurred. But just as there is no reason to assume that any particular classification will alter in work value either upwards or downwards, so there can be no question of regular or automatic reviews of work value on the assumption that there has been some general trend in work value calling for uniform adjustment. The annual economic reviews will take care of this. Certainly technological change does not carry the implication that wage rates call for regular upwards review.'

(Transcript pp. 5877, 5878 and 5879)

11. The following principles should bear on wage determinations:

'(a) There must necessarily be some starting point—some base upon which the wage structure of the classifications which is related to the classification hierarchy emerging from the work-value study, will be erected. Normally the practice has been to use as the base the lowest classification of unskilled work in an award. And we see no reason to depart from this practice.

(b) No matter how meticulous may be the care that is given to the methodology of assessing job factors and the weightings given them, there can be no mathematically precise relationship between the order of work-value significance and the wages fixed for each classification. It is not too early to emphasise this in our submissions, especially in relation to this present case, because in this present case there was agreement neither on the job factors nor the weightings to be used. And what is more it would seem that the assessment sheets put forward by the Commonwealth have not been consistently used by any of those represented at the Bar table except the representatives of the Commonwealth.

(c) As is so obviously true in all aspects of wage fixation, judgment has to be applied. This is not to say that assessment of job factors and the weighting of those factors are therefore a waste of effort.

(d) Clearly judgment is to be distinguished from acting on impressions. Clearly, as we will endeavour to show, certain considerations should be eliminated when judgments are being formed. Equally clearly, judgments can comprehend socio-economic factors, such things as the significance to be attached to skill and the need to encourage workers to acquire skills. In this area are the difficult questions of the value to the employer and the community of the work done in a classification and the recompense to the employee for e.g. acquiring skills, the mental and physical effort involved or the circumstances in which the work has to be performed. As the Commonwealth sees it, the acquisition and use of skill counts for most.

(e) There can be no valid reason for assuming that relative values of work will remain constant: indeed there is every reason in these days of technological change, for starting from the assumption that the relativities between classifications will change. Thus, the very last thing one could expect from a work-value examination would be that all rates in an award would march forward on a broad front, e.g. by means of a fixed percentage increase.

(f) It is hardly necessary to mention that the productivity of a particular industry has no relevance to work-value cases. One needs to go no further than the recent G.M.H. case for authority for this proposition.

(g) It is equally clear that there is no room in work-value cases for an argument that skills have generally become undervalued. Doubtless, plausible sounding arguments could be put forward in support of such a principle, but the first of many stumbling blocks must be the Commission's stated intention of conducting annual reviews on general economic grounds. Clearly there can be no room for other review cases intended to be of general application in addition to the normal annual reviews. To take any other view would lead to a doubling up of general reviews with the whole wage structure subjected to overall wage

increases. So we submit that any arguments of general application should be reserved for the general case. Any other approach would be at odds with the basic principle that work-value cases must be confined to the award under review.

(h) Scarcity factors, we submit, have no place in assessment of award rates.

(i) There should be no departure from long standing practice that variations in wages should always be prospective.

(j) In fixing rates for classifications in the award under review, the scope for considering rates paid for classifications under another award is severely limited. This, of course, goes back to the point we made earlier—that no one engaged in wage fixation can work in a vacuum.'

(Transcript pp. 5880/1/2)

12. That certain considerations (see transcript pp. 5886/7) have led to tribunals being chary about applying the market rate of wages.

13. The Commonwealth sees no logic in continuing to preserve the parent award concept in the future because the origin of a particular classification was of no consequence.

14. There could be no flow from a so-called parent award if that had been the subject of a work value review and no flow to the parent award if a derivative award had been the subject of a work value review.

15. It was a case of burying heads in the sand to regard 'job evaluation' as something not to be entertained or even talked about.

16. By and large past methods do not meet the needs of todays industrial society. There has never been employed a systematic method in identifying job characteristics in recording, and evaluating their significance.

17. Systematic method should be brought to the assesment of work value.

18. No method of work value assessment should itself produce a money wage for the job under examination. It should establish a hierarchy of classifications.

19. When a tribunal comes to the point of fixing wages a large element of judgment is involved.

20. There can be no truly scientific method of evaluating jobs, since the identification of factors in work value, the allocation of degrees of importance to those factors and the assessment of particular jobs in terms of those factors, are all essentially matters for human judgment.

21. That the evidence of Mr Bullows and in particular his marking of the check lists and the weighted results deduced from them posed the following questions:

'(a) should there be the new classifications we have suggested, i.e. Machinist Special Class, Metal Fabricator Special Class, Electrical Fitter/Mechanic Special Class, Mechanical Assembler/Fitter, Electrical Assembler/Fitter, Process Worker (Higher Grade).

(b) are the electrical fitter/mechanic and the boilermaker relatively undervalued in relation to some other tradesman;

(c) are, for example, the dogman and/or crane chaser and the die setter (L.P. Hand) relatively undervalued;

(d) are the duster and the radio tester relatively overvalued;

(e) generally is the hierarchy resulting from the scoring and appearing in the classification check sheet summary to be accepted?'

(Transcript p. 5918)

22. Only 26 of the 300 odd classifications have been inspected. The bench would have before it enough material, evidence and so on, to enable it to fix the rates for the classifications inspected. But what of the rest?
23. The Commonwealth submitted that a start could not now be made on a new round of inspections.
24. Using the knowledge obtained from the check lists already marked, check lists for all other classifications should be completed without actual inspections.
25. The economy was reasonably well balanced at the moment and growing at a good pace.
26. The outlook was for continued growth in demand stronger than in 1966-67 in the case of the private sector.
27. The full effects of cost increases in the past year have yet to be reflected in prices.
28. The question of capacity to pay is a doctrine whose application is not confined merely to economic reviews of the wage structure. The doctrine has application to every case before the Commission.
29. Qualifications would have to be attached where a claim was related to a particular industry and where there was no possibility of repercussion elsewhere.

The Instrumentalities

On 10 October 1967, after Mr Aird, Mr Ferdinandy and Mr Marks had submitted that they should be allowed to present evidence only at this stage followed by later submissions, and after hearing counter submissions, the Commission made the following decision:

'We have given full consideration to all the submissions put to us this morning. Our original ruling as to the State of Victoria and the Supply Authorities was based on an understanding of a submission made by Mr Aird which he now indicates was made upon assumptions which have subsequently been proved incorrect. It is our desire and intention that, although we are anxious to finish this case as expeditiously as possible, no party should be prejudiced or should appear to be prejudiced.

In all the circumstances we now rule that all the evidence from the State of Victoria and the Supply Authorities will be called this week. The case of the private employers will still commence next Monday.

The submissions of the State of Victoria and the Supply Authorities will be postponed until after the unions' submissions which follow the employers' evidence. On what we have been told we would expect the submissions of the State of Victoria and the Supply Authorities to be completed in approximately two days.

With respect of the matter raised by Mr McBride as to the Supply Authorities, it seems to us reasonably clear what their general case will be, but if at the appropriate time the unions consider they have been prejudiced by this rearrangement of submissions, they may make an application for a reply to the Supply Authorities.

We add that the alterations in procedure sought this morning were made in contemplation of the case concluding by the announced date of 23rd November. We have acted on that basis and we now ask the parties to submit by Thursday morning for our consideration, after consultation between themselves, a tentative timetable covering future sitting days and places of hearing.'

(Transcript p. 5971)

Subsequent to this ruling evidence was taken on behalf of the State of Victoria and its instrumentalities and of the Hydro-Electric Commission of Tasmania.

The Private Employers

On 16 October Mr Robinson opened the case for the private employers and commenced to lead evidence from a number of witnesses.

The Instrumentalities

On 2 November 1967, prior to the commencement of the unions' submissions, Mr Aird submitted that even in the circumstance of no increase to classifications common to clause 4 of and the appendix to the award, he would still ask that the Commission identify the portion of total wages that the State Electricity Commission of Victoria was called upon to pay that was attributable to the work value of the work being performed within the classifications.

In addition he said that he wanted to show what should happen in regard to the increases granted by me to certain employees of the State Electricity Commission of Victoria in October 1966, and how they would show up against work value increases that the Commission might decide upon.

He tendered an exhibit to illustrate his submissions (Exhibit A.11).

The Unions' Submissions

Mr Hawke opened the unions' addresses by presenting newer effective productivity figures applicable to the union exhibit H 11 tendered in the 1967 *National Wage Cases.*

He said that the calculations were concerned with what had been happening to basic economic factors since 1947.

They indicated the increases for economic reasons which one would normally expect to be applied to the marginal elements of the wage.

He put it that if the total wage had been implemented in 1947 instead of in 1967, then as a fact the notional marginal component would by now be the amount or the order of the amount which was now claimed.

He continued:

'Because what we are asking—the very basis of our claim—is that for those economic reasons (your phrase) the reward for this component of the wage should be of the order that we claim. That is necessarily, logically what is involved in the proposition at p. 4.

It is not that we have plucked some year and some relativity out of the air. We are taking the logic of what has been said by Your Honours and Mr Commissioner, saying "Let us go back to this point of time, let us apply the economic reasons"—your phrase—"to this notional marginal component"—and one has to speak of it in that way now—"apply it to that and you will see what the components should be now." That is the basis of our claim.'
(Transcript p. 6881)

In saying page 4, Mr Hawke was there referring to page 4 of Print No. B 2200—the print conveying the pronouncement in the *Total Wage Cases* of 1967.

He continued by emphasising that to talk about the value of work without looking at the output associated with that work through time would be to engage in a meaningless exercise.

The application reflected this belief and was in fact a measure of the change through time, of the value of the work performed in the community.

It was admitted by him that it could be said that the calculations upon which the claim was based related to the economy as a whole and not merely to the metal trades.

In this connection Mr Hawke referred to the Commission's decision in the 1963 margins judgment.[1]

In his submissions in relation to over-award payments he first invited attention to the 1959 margins judgment[2] and to the 1963 margins judgment.[3]

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(1) 102 C.A.R. 138 at p. 146 (2) 92 C.A.R. 793 at p. 805 (3) 102 C.A.R. 138 at p. 141

He said that in an economy such as ours the most direct method of ascertaining the value of something was to ascertain the price that was being paid for it.

In a case of this type the Commission should in fact pay attention to and utilise information relating to the level of over-award payments, because what was being paid—as revealed by over-award payments—was the most direct measure the Commission was going to have available to it of what was the value of the work being performed.

Mr Hawke submitted that the logical date of operation of any decision made by the Commission would be the beginning of the first pay period to commence on or after 11 July 1966.

On 7 November when Mr McBride commenced his address he tendered as an exhibit (M 23) a document which set out the rates claimed by the unions.

The rates appearing therein were:

Number	Classification	Claim
		$
283	Process Worker (all divisions)	41.05
15	Machinist—3rd class	43.30
268	Furnaceman—electric	46.35
14	Machinist—2nd class	46.70
5	Fitter	52.40
13	Machinist—1st class	52.40
87	Electrical fitter and/or armature winder ..	52.40
58	Welder—special class	54.10
26	Toolmaker	57.35
20	Patternmaker	57.35

The Unions' Reply to the Commonwealth's Submissions

Mr McBride, in dealing with the submission of the Commonwealth, referred to the proposals of Mr Woodward concerning job evaluation, particularly where (transcript p. 5894) Mr Woodward had said:

'In this present case, we have all been feeling our way. If our proposals are adopted, a plan would be at hand for future cases and so future proceedings would be shortened. In any case few, if any, awards are as complex, as the Metal Trades Award.'

Mr McBride commented that with the unions only having seventeen hours in which to make submissions in a very complex matter they did not consider that they should be called upon in these proceedings to talk about some method of job evaluation in future proceedings.

In further response to the Commonwealth's submission Mr McBride further submitted that:

1. The unions had approached the case on the understanding of how the Commission had approached margins cases, namely that the Commission would exercise an act of judgment; that precise rules could not be laid down; and that the Commonwealth, in its job evaluation submission was trying to lay down precise rules.
2. The Commission had in margins cases exercised judgment. He referred to the 1963 margins judgment.[1]

([1]) *Ibid at* p. 140

3. Mr Justice Wright, in his judgment in the *Basic Wage, Margins and Total Wage Cases* of 1966, had said:

> 'In the multitude of complex considerations submitted for our consideration on behalf of parties and interveners durign this long hearing any pretence on my part of confident exactness would be patently absurd. In my view the estimation of a fair and reasonable increase in the basic wage rates must be what in other cases I have joined in calling a matter of impression and judgment.'(1)

4. If the basic wage must be set by impression and judgment then more so must margins be set in impressions and judgment.
5. Evidence presented by the Commonwealth with respect to classifications No. 92—'Electrician in charge of plant and/or installation' and No. 108—'Radio tester' was based on a misunderstanding of the real position (transcript pp. 6901/2).
6. While the union did not oppose the proposition that there should be a special class electrical tradesman classification introduced they had not asked for it.

   If it was introduced the definition should first be a matter for consideration by the parties.
7. There was not enough information before the Commission to permit of the introduction of a classification 'Electrical assembler'.

Mr Heffernan made the following points in reply to the Commonwealth's submissions:

1. The job evaluation exercise was undertaken by one man, Mr Bullows.
2. Mr Woodward was placing heavy reliance on that one man to accept without question all of his assessments.
3. It was wrong to rely heavily on Mr Bullows' evidence for a number of reasons:
   (a) he had admitted (transcript p. 5785) that he has had no practical experience in the industries making domestic appliances, cans, refrigeration equipment and air-conditioning components, nor had he made a study of work processes in such industries;
   (b) he had told Mr McBride (transcript p. 5756) that he was not an expert on the Metal Trades Award;
   (c) the methods he used did not take into account the historical nature of some classifications in the award; and
   (d) in some cases where he suggested changes in relationships he relied too much on a detached approach to the problems associated with work values (for example in his assessment of a duster he relegated the classification to a minor position despite the fact that only one employee was seen on one minor inspection).
4. While Mr Bullows had agreed with certain union submissions concerning the type of work, responsibility and training required of process workers today (transcript pp. 5785, 5788, 5789, 5790 and 5792), he had still, in his attempt to grade process workers, relegated the ones in the sheet metal can making to the minor grade.

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(1) 115 C.A.R. 93 at p. 113

5. It would be 'industrial dynamite' so far as the Sheet Metal Workers' (etc.) Union was concerned to establish two grades of process workers because of the discontent it would cause.

Mr Heagney submitted with respect to the Commonwealth's proposals:

1. The techniques of job evaluation cannot be applied in a logical sense in the metal trades industry because of the vast variety and styles of industry.
2. Job evaluation is generally found in collective bargaining societies where, without exception, industrial unionism exists.
3. There is not a conflict of union attitudes or union differences as to the way classifications should be treated.
4. That he was emphatically opposed to the introduction of two classes of process workers as it would create factory jealousies and quite an amount of difficulty for both management and union.

Mr Horsburgh made the following submissions with respect to the Commonwealth's proposals:

1. That the Amalgamated Engineering Union was far from happy with the intrusion of the Commonwealth into the area of the award itself.
2. It was considered that the two main parties, with the assistance of the Commission, were quite capable of dealing with the problems of the award for which they were directly responsible.
3. With respect to the job evaluation considerations, while it presented little difficulty where a system of collective bargaining existed, it would raise some awkward problems under the system of compulsory industrial arbitration which operates in Australia.
4. There was no necessity for the insertion of new classifications, as this would create additional problems for both the unions and the employers.
5. If the employers now wished to distinguish between degrees of machining or fitting skill they could do so quite readily by means of variation in over-award payments, or merit payments.
6. There would appear to be inconsistency in regard to the Commonwealth submissions concerning capacity to pay, as the Commonwealth apparently considered that there was sufficient capacity to pay $50.50 to a waterside worker under the new permanency scheme, yet suggested only modest increases, to tradesmen, varying from rates of $44.30 in Brisbane to $47.20 in Sydney for a fitter, as maxima.

Mr Scott presented the following reply to the Commonwealth's submissions:

1. The Commonwealth claimed that insufficient was seen of the boilermakers, smith-other, marker-off and others, yet also claimed that it was in a position to make assessments by way of the check lists.
2. The evidence had shown that much of these assessments had been based on personal opinion
3. This kind of work value review had little significance when trying to assess the value of many different types of work carried out by those in a single classification in the large number of industries covered by the Metal Trades Award.
4. The proposed establishment of new classifications was opposed.

Mr McLagan made the following points in reply to the Commonwealth:

1. The Commonwealth had taken an attitude of trying to dictate the procedure which the Commission should follow.
2. The unions saw this exercise not in the form of an inquiry but as an industrial dispute between the unions and the employers.
3. The particular union felt that it was quite proper for the Commonwealth to give evidence with respect to national economic factors.
4. However, the persistence of the Commonwealth in endeavouring to impose its ideas as to how the case should be conducted quite superseded what was considered to be its rights.
5. The opinions of the major parties to this dispute—the unions and the employers—should outweigh with the Commission the theories of the Commonwealth.

Mr McBride answered the Commonwealth in the following manner:

1. The approach of the Commonwealth to the question of process workers provided an excellent example of inexperience.
2. At the inspection at T.E.I. process workers were seen setting up, winding machines, winding coils, wiring racks, adjusting coils and wiring up special components yet practically all these jobs were covered by the one job check list submitted by Mr Bullows.
3. If ten lists had been presented perhaps an idea could have been gained as to how an assessment was made of the process worker.
4. The suggestion of two grades of process workers was strongly opposed because of its impracticability and the difficulty of framing suitable definitions.

Mr Brodney submitted that:

1. The Commonwealth had said (p. 5877) that work value cases involved an examination of the content and characteristics of a job.
2. This was the critical error of the Commonwealth's case.
3. The value of work was not found in anything inherent in the job but by reference to what the employer gets by the performance of the work and what obligations the employee assumes. Reference to the job was misleading.
4. The Commonwealth's submission (p. 5878) proposed that factors should be weighted. This too called for judgment.

The Unions' Submissions Concerning Various Classifications

The unions then proceeded to make submissions concerning the various classifications selected by me for concentrated inspection in my decision of the 5 April 1967, and with respect to some other classifications.

Electrical Fitter and/or Armature Winder

Mr McBride submitted that:

1. The unions had shown the electrical fitter engaged in manufacture, maintenance, installation and jobbing work.
2. In addition the unions had taken the Commission to three technical colleges where electrical fitters were trained in electrical skills.
3. Upon the question of supervision and responsibility inspections at a number (thirteen) of plants had revealed the real situation (see transcript pp. 6911/12 for plants named).

4. If the employers approach was contrasted with that of the unions it would be seen that they had inspections at two plants—Email and A.E.I.

   Although large numbers of electrical fitters were there employed the employers had 'wanted to stick to one or two jobs'.

   These inspections were casual and impersonal as the men whose work was inspected were not even introduced to the Commission.

5. The employers witnesses under cross-examination had made acknowledgments concerning the skill, mental effort, degree of supervision and acquired knowledge.

   (transcript pp. 6915/17)

6. 'To sum up the employers evidence about electrical tradesmen we had three men who spoke specifically about the electrical fitter: there was Mr Palmer who is not electrically qualified and who has ten men at his plant and who compared their work to other press manufacturers, Mr Nuttall who is not electrically qualified and who had one employee and Mr Waldron who had 40 under his control in a company that employs 80. He made no mention of the other 40 working for this particular company or that the 40 he spoke about were representative of his company. He admitted he knew practically nothing about electrical fitters working for other companies. If we throw in what came out of the inspection of EMAIL as part of the employers evidence, we looked at the work of one man in a plant where there are 65 electrical fitters employed and there has not been one word that the work of this man was typical or representative.'

   (transcript p. 6917)

7. The private employers' evidence covered only a very small range of the electrical fitter's work, essentially manufacturing.
8. The unions wanted the Commission to fix rates for work being done in 1967 and not to make assumptions about Mr Conciliation Commissioner Galvin's assessment in 1952.
9. The employers had called three witnesses in relation to electrical tradesmen, two of whom were not electrically qualified.

   These two had dealt with electrical fitters in an incidental way.

   The unions would have been happy to present the one electrically qualified employers' witness as their own.

10. The claim should be granted in consideration of the case that had been presented and in view of the employers inability to weaken it.

Sheet Metal Worker—1st Class

Mr Heffernan submitted that:

1. Rates fixed for the fitter and the electrical fitter should apply also to the sheet metal worker—1st class and to other sheet metal tradesmen classifications.
2. There was no evidence to suggest that the present relationship between the various tradesmen should be altered.
3. There were three relevant inspections.
4. Although the work seen was of high quality it only represented a small section of the sheet metal trade.

5. The sheet metal industry touched or embraced air-conditioning, aircraft manufacture and maintenance, commercial refrigeration, agricultural implement making, domestic appliance manufacture, radio and electrical industries, the general engineering industry, the ship building industry, lift manufacture and installation, kitchen equipment, the building industry including architectural sheet metal work, rolling stock manufacture and repair, metal furniture manufacture and the motor vehicle and allied industries.
6. It was therefore suggested that there would have to be a more exhaustive examination of the industry than it had been possible to undertake during this enquiry before the sheet metal workers' place in the hierarchy of the Metal Trades Award was disturbed.
7. The sheet metal apprenticeship was of the same duration as that of the other trades (Syllabus tendered—exhibit M.27).
8. An employers' witness under cross-examination had made acknowledgments concerning the skills of the sheet metal worker—1st class (see transcript pp. 6746/50).
9. Mr Beveridge was the only employers' witness to deal with the classification.
10. During the course of the inspection at Dickson and Johnson Pty Ltd, Mr Dickson had presented a booklet which at page 1 indicated that there were 600 ways of using stainless steel.
11. Stainless steel (which was harder to work) and aluminium were now being used more extensively and in greater variety than in the past.
12. This development had caused changes in the industry.

Other Sheet Metal Classifications

Mr Heffernan submitted that:

1. *Duster* (*No.* 185)

(1) This classification should retain its position and relativity with that of tradesmen.
(2) Dusters were exposed to the risk of silicosis and lead poisoning.

2. *Die setter—press operator working from plue prints or plans* (*No.* 130)

(1) The classification was first inserted in the award in 1942 on application by the union which claimed a tradesman's rate.
(2) It was still considered that the classification should be equal to those of tradesmen.
(3) Relativity to the electrical fitter had declined by 2.9 per cent since 1947.

3. *Die Setter* (*No.* 129)

(1) The classification went into the award in 1930.
(2) Relativity to the electrical fitter had declined by 8.1 per cent since 1947.

4. *Die setter and/or machine setter and/or leading press hand* (*No.* 150)

(1) The classification went into the award in 1930.
(2) The only subsequent alteration was made by Mr Justice O'Mara in 1944.
(3) As revealed by inspections at Containers Ltd and Gadsden-Hughes Ltd machinery was much more complicated.

(4) This fact was recognised by Containers Ltd (see exhibit M.20).

(5) Relativity to the electrical fitter had declined by 8.1 per cent since 1947.

5. *Guillotine operator (as defined)* (*No.* 132).

(1) The classification was inserted in the award on 14 March, 1946 on an application by the union which sought equality with tradesmen.

(2) The present rate is identical with that of a machinist—2nd class.

(3) Relativity to the electrical fitter had declined by 2.9 per cent since 1947.

Rigger and/or splicer (*No.* 284)

Mr Heagney submitted that:

1. I had given a decision on 6 April, 1966,[1] wherein I had indicated that I was not satisfied that my decision was to my satisfaction.
2. I had therein stated that the Commission had been 'cribbed cabined and confined by the nature and scope of the application and by the existing situation.'
3. In my first announcement in this matter (18 July 1966—transcript p. 2424) I had stated:

> 'I should be expected to possess sufficient knowledge of work values with respect to certain classifications of work as to be able to express such value in current monetary equivalents without further inspection (for instance, it would be both unrealistic and an outrageous waste of everybody's time for me to carry out further inspections concerning the work of what is now known as a "rigger and/or splicer" either for the purpose of informing myself of what the "rigger and/or splicer" does whilst at work, or of estimating the worth of such work in order to express its monetary value in relation to that of other occupations).'
>
> (Transcript p. 6988)

4. In view of this statement and also because of the fact that Mr Robinson had brought evidence on the duties of a rigger and/or splicer the unions felt compelled to comment with a view to assisting the Commission.
5. The classification was placed improperly in the relevant wage levels of the award and should be moved.
6. The claim for a rigger and/or splicer was $52.40, identical to that of a fitter, with a first year rate to apply in South Australia and Victoria.
7. A number of other factors should be considered (see transcript pp. 6992-6996).

Dogman and/or Crane Chaser (*No.* 261)

Mr Heagney submitted that:

1. The amount claimed for the dogman and/or crane chaser was $46.70, or equivalent to that claimed for the machinist—2nd class.
2. Developments such as new mobile equipment, new types of power stations and a general enlargement of the fabricating industries indicated the change in the nature and scope of the work.
3. The classification had been observed during inspections.

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(1) 114 C.A.R. 39

4. I had said (transcript p. 2442) that the application for new rates for the classification of dogman and/or crane chaser would be joined to this matter.
5. A number of other factors should be considered (see transcript pp. 6998-7003).

Furnaceman—electric (*Nos* 70 *and* 268)
and Furnaceman—cupola (*No.* 69)

Mr Heagney submitted that:

1. Inspections were made.
2. The evidence of Mr Pye and Mr John had dealt with the position of furnaceman—cupola.
3. Each furnace required different skills to operate and different responsibility.
4. The introduction of 'duplexing' or the use of electric furnaces in front of cupola furnaces has increased the duties, skill and responsibility of cupola furnacemen at St Peters and Alexandria (Thomson and Scougall Industries Ltd).
5. Furnacemen were required to make up charges from scrap and control the furnace during heats.
6. 'Mr Hanson's evidence commenced at page 5460 and he sets out the duties of furnaceman electric from the making up of charges for the furnace, the method of charging a furnace, the care to be taken and the proper placing of heavy and dirty scrap during charging, the system of charging used on Monday mornings and for the remainder of the week, the positioning of the electrodes to ensure an arc, the responsibility of the furnaceman during the running of the furnace, the fettling and repair carried out on the furnace after each pour, the repairs carried out on the lining of the furnace at the weekends, the changing of the electrodes as required and finally the annual demolishing and relining of the furnaces.'

   (Transcript p. 7007)
7. Mr John had admitted (transcript p. 6707) that due to the frequency of pouring of and recharging of the furnaces the furnacemen have to be in the furnace area all the time.
8. He also agreed (transcript p. 6710) that furnacemen were now looking after a wider range of furnaces.
9. At each of the foundries inspected the introduction of electric furnaces meant greater control of steel quality was obtained and greater tonnage output achieved. This had occurred since 1952.
10. At T.S. Malleable and at M. B. John and Hattersley furnacemen were called upon to operate two different types of furnaces.
11. The work of furnacemen had not been previously assessed by the Commission.
12. The work warrants a higher rate due to responsibility, care, other features associated with the job and also because of the change in furnace methods leading to larger furnaces and greater output.

Dresser and Grinder (*when using portable machines*) (*No.* 66 *and* 262)

Mr Heagney submitted that:

1. The work performed within the classification was seen on inspections.
2. Details of the inspections showed that the dresser and grinder had some skill and responsibility (transcript pp. 2551, 2552, 2628).

3. The evidence of Mr Palmer disclosed (p. 6314) that the classification now had a higher productivity.
4. The work does call for some skill and responsibility and the wage now paid is too low.
5. The work as seen during the inspection at McIlwraith Industries Pty Ltd was one of the most difficult that was observed during the whole of the inspections.

Process Worker

A. Mr Heffernan submitted that:

1. The inspections showed that skill, responsibility and the use of tools came into consideration.
2. The process workers' role in the metal trades industry was vastly different now to what it was when the classification was inserted in the award.
3. The classification was originally designed to provide for the employment of people on single purpose, automatic or semi-automatic machines by sub-division of hand labour into specialised repetitive processes.
4. The intention at the point of introduction was to assist the metal trades industry to recover from the economic depression of the 1930's by reducing costs of production.
5. There had been great changes since those days.
6. Mass production methods had developed to a stage where many commodities which were once manufactured by tradesmen were now manufactured by process workers.
7. The changes in the methods of production or the type of goods produced by tradesmen have been very noticeable in the post war years, particularly in the domestic appliance industry.
8. Process workers are in the main responsible for production.
9. Machinery now in use was more complicated than previously.
10. In many cases there was a need for intense concentration on the part of the process worker not only because he had to perform several functions instead of one, but also because of the high rate of production.
11. Another new development is that process workers in the metal industry were required to work as a team and not as individuals.
12. As a consequence they were required to become more versatile and they had to learn to perform many tasks or functions instead of one.
13. They were often required to inspect and examine the commodities they produced, which in fact was a form of participation in quality control.
14. This imposed additional responsibility and stress on process workers involved in the mass production of the various articles.
15. There had been a marked change in the type and variety of tools used by process workers.
16. They now used hand tools not listed in the definition and in many cases use tools powered by air or electricity.

17. In some factories process workers were required to use equipment for record keeping and inspection purposes.

18. Generally speaking, as the result of changes that had taken place in many sections of the metal industry process workers were no longer unskilled workers.

19. They were in fact semi-skilled and played an important part in the production of commodities for the home and overseas markets.

20. The classification was much abused and had been seized upon by the employers to cover many aspects of work for which it was not originally intended.

21. The important feature of Mr Selinger's evidence was that he described the changes that had taken place in factories engaged in mass production.

22. He had referred to the growing tendency for process workers to use power tools (transcript p. 5535) and stated that increased work value for process workers was based on the factor of greater responsibility for:

    (a) damage to equipment;
    (b) product quality;
    (c) continuity of production; and
    (d) injuries to others and self.

23. Mr Selinger had also expressed the opinion that intensive training was needed nowadays and that the process worker's responsibilities had increased on account of being required to handle more intricate and thus more valuable equipment, carry out more complex operations and being in charge of higher value products from work centre to work centre.

24. It was considered that the evidence of Mr Selinger was strengthened by most of the experiences of the inspections. He cited cases (see transcript pp. 6933-9648).

25. In concluding his submissions with respect to process workers:

> 'We want to indicate at this stage it is quite significant there has not been rebuttal evidence from any of the employers from any of the factories where we inspected members of this organisation at their work. None of the statements that our members made during the inspections have been contradicted per medium of rebuttal evidence, and in particular from the can-making industry there has not been one witness called by the employers which indicates to us anyhow that the statements made and the evidence obtained as a result of the inspections have not been challenged.'
>
> (Transcript p. 6958)

B. Mr Heagney submitted that:

1. The work of the process worker had never been looked at on a work value basis, even in 1930 when the classification was inserted into the award[1] by Beeby, *J.*

2. The fact that there was a general trade depression at that time and that automatic, semi-automatic and single purpose machines had been introduced in some industries, had greatly influenced Beeby, *J.* both as to the reconstruction of the award and in the marginal rates he awarded.

3. In fact the award wage today, apart from economic factors, was the wage of 1930.

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(1) 28 C.A.R. 923

4. Provision was finally made for the use of process worker in all divisions of the award.
5. 'Importance should be attached to this, because in 1930 the classification was introduced into the award to meet the movement into the metal trades industry of techniques of mass production; that in the general engineering and electrical fields the classification was introduced—a classification that had never been looked at or assessed but was then by award movements, without reasons, suddenly taken into all divisions and made applicable to any division of the award: if an employer felt that the work than an employee may do fitted the rather vague definitions of process worker, then he could be so employed. This was done without the work being assessed.'

   (Transcript p. 6977)

6. This was done when the award was under review during the war, but history did not disclose information as to why it happened.
7. Evidence of Mr Selinger, of an employer witness and the experience of the inspections showed (see transcript pp. 6980-83) that process workers:
   (a) are interchangeable;
   (b) have a responsibility for qualilty;
   (c) are required to have greater concentration, greater dexterity and greater skill as a result of the introduction of faster machines and higher feeds and speeds;
   (d) are required to work at an increased tempo because of the introduction of production planning in order to achieve greater output;
   (e) carry out far wider assembly processes than when the classification was first introduced; and
   (f) operate much more valuable and complex equipment.
8. By the very nature of this inquiry this is the first time the Commission has been able to get a proper understanding of the work performed by those within the classification.
9. The claim should be granted.
10. Inspections had been made of employees who were in what may be considered the wire section.
11. During these inspections it became evident that quite an amount of the work in this section did not fall within the definition.
12. Arrangements had been made with the private employers to discuss the question of establishing a wire division in the award.
13. It was asked that rights to reopen this question be preserved if agreement could not be reached.
14. A decision of the Public Service Arbitrator (Determination No. 225 of 1966—Exhibit M.45) in relation to process workers following a work value exercise, had shown that a number of new features had become apparent since the classification had been introduced.
15. The Public Service Arbitrator deleted the classification of process worker from the determination and included a classification of operator, setting a rate of $5.60, which increased, virtually, the rate of a process worker employed in the Department of Supply by $2.00 per week.

C. Mr McBride submitted that:

1. An examination of the classification showed that:
   (1) Large numbers are employed.
   (2) The majority are females.
   (3) Large concentrations are to be found in factories where electrical components are manufactured.
   (4) It was in the electrical components and equipment factories that large volume production takes place.
   (5) It took place because of the comparatively large markets for these components.
   (6) Components manufactured by process workers are constantly changing because of technological change and developments. For example: miniaturisation; printed circuits; transistors; and change in fashions or markets for domestic appliances.
   (7) The standard of equipment manufactured by process workers under the Metal Trades Award was equal to world standards and the cost of production enabled competition on world markets.
2. In the area between batch production and volume production the process worker played a vital part.
3. There must be in this field need for flexibility; the need to do jobs which just cannot economically be broken down.
4. The inspections had shown a dramatic change since the days of the 1930's when process workers were referred to as unskilled.
5. Now today they were working with microscopes and working with wire one thousandth of an inch in diameter.
6. In view of the history of the process worker in the Metal Trades Award, in view of what had been seen on inspections, and in view of the evidence, if ever a classification cried out for proper assessment it was the process worker.
7. The history of the classification had shown that while it had never been properly considered, the duties had changed vastly since the 1930's.
8. The inspections and evidence (which were reviewed in detail by Mr McBride—see transcript pp. 7090/7097) had shown that the claim was justified and should be granted.

Machinists 2nd and 3rd class.

Mr Heagney submitted that:

1. The evidence and the inspections that were carried out were quite limited.
2. This was mainly due to the fact that the changing techniques in the metal manufacturing industry and the change from colony type of manufacture to the flow-line system had had quite an effect on the numbers now employed in these classifications.
3. The continuance within the award of these classifications was of extreme importance as it appeared from evidence that the amounts set for machinists—2nd or 3rd class are the amounts which employers look to when setting rates for new types of machines that are introduced into a wide section of the metal industry (see transcript pp. 6619, 6621—Mr Smith).

4. If the experience of the inspections was considered in relation to these classifications it would be found that machines now operating generally have higher speeds or feeds than machines of say 10 years ago.
5. This was supported by the evidence of Mr Danks and Mr Snell (see also transcript pp. 4240, 4306, 4462, 4501, 4916-20, 5031 and 5076).
6. Mr Amedee had agreed that a machinist—2nd class could have been operating one machine in 1957 and had now moved up into a series of machines and also had agreed (transcript p. 6158) that he would be using more effort in operating several machines than with the one machine.
7. There was still a wide range of work being done by machinists—2nd and 3rd class.

Mr Horsburgh submitted that:

With regard to the Machinist—2nd class (No 14): The examination of this classification was somewhat limited during the inspections in comparison with the inspection of other classifications, but a general increase was claimed based on the 1947 relativity. (Mr Horsburgh supplemented this submission by references to the inspections (see transcript p. 7030).)

Smith, other (*No.* 45)

Marker off (*No.* 55)

Welder—special class (*No.* 58)

Welder—first class (*No.* 59)

Mr Scott, in general, submitted that:

'One does not need to dwell on the importance given to the need for adequately trained metal workers or tradesmen nor to the public drives undertaken to recruit them from overseas, nor to the governments and employer organizations' desire to encourage young people to accept apprenticeship training to meet the needs of industry. These are widely known and accepted as important to the needs of industry. There has been a continual increase in the value of production from the industries in which metal workers are employed and in which, logically, they are entitled to share.

The existence of over-award payments as shown in the survey submitted as an exhibit is not new and has been commented upon in proceedings of this nature on previous occasions. The survey figures however, confirm the views of the unions that the employers recognise the need to make such payments as shown by the evidence of Mr Perry, Mr Johns and Mr Williams who, in answer to questions, described over-award payments being paid by them.

The existence of such over-award payments and the wide area in which they are paid demonstrates that the minimum wage levels set by the Commission are far below the rates accepted in practice by the employers.

It is important to increase these minimum standards to protect the interests of those not receiving such over-award payments and to more correctly reflect the true value of the labour of the metal worker and tradesman in industry.

If the Commission proposes to increase margins then we submit that the granting of such increases should not alter the existing relativity of the tradesmen's classifications.

The evidence and submissions presented by the union confirms their claim that the value of a tradesman is not valued in the existing margins and that there has been a constant increase in the value of other work, that the investigations into work value support the submissions of the union and firmly establishes the correctness of the claims of the union for increased margins which should be granted in full by the Commission.'

(Transcript pp. 7057/8)

(Mr Scott dealt comprehensively in analysis of the inspections and evidence (see transcript pp. 7043-7056)).

Jobbing Moulder and/or Coremaker (*No.* 72)

Plate and Machine Moulder and/or Coremaker (*No.* 75)

Shell Moulding Operative (*No.* 75A)

Female Coremaker (*No.* 75AA)

Mr McLagan submitted that:

'In respect to the wages that the Commission may set as a result of its investigations, the union feels that the inspections and evidence that have been given to the Commission have clearly established that there have been quite significant changes in the metal trades industry since 1952, but it is also apparent that technological changes that have occurred have demanded that the workers generally have had to adapt themselves to these changes, and that the workers have developed new skills and techniques which have meant that the trade skills of the tradesmen and other workers have improved under the demands of technological advances.

With regard to members of this union who are employed in the foundry industry, foundries are establishments in which there has always been a highly developed degree of team work. The jobbing moulders and/or coremakers and machine moulders and/or coremakers are the key personnel. The evidence has clearly shown that over the years there has been a remarkable increase in production figures and in some establishments some mechanisation to enable greater production to be attained.

Also the evidence shows that there have been technological advances, the most notable being in the realm of chemically cured sands. These developments created a challenge to the ability of our members to adapt themselves to the new techniques. The evidence clearly shows that jobbing moulders and/or coremakers and machine moulders and/or coremakers are now using their moulding skills much more consistently than they were in 1952. They have developed new skills to enable them to handle technological changes, that have been seen on inspections and spoken about in evidence.

The work of these people I represent in this dispute is of greater value to the employer now than in 1952. There is no doubt of this in Mr Palmer's mind that that is so and also in Mr John's mind. The moulders union submits that the value of the work of our members has increased and we ask the court to grant the claim as set out in the union's application.'

(Transcript pp. 7084/5).

(Mr McLagan also thoroughly dealt with questions arising out of the inspections and evidence (see transcript pp. 7061/7083)).

Fitter (*No* 5)

Mr Horsburgh submitted that:

> 'To sum up, from the inspections concerning what we were able to see of the work of a fitter, we submit that the fitter is generally a qualified tradesman having served an apprenticeship of five years at his trade, with the majority having received additional technical school training. He is engaged on maintenance and servicing of machines, plant and equipment over a wide range, as indicated during our inspections, and uses his trade knowledge and experience to keep the machines, plant and equipment, functioning correctly, with a minimum production loss through breakdown.
>
> Fitters are also employed in building, assembling, erecting and installing new machines, plant and equipment in a very wide range of industry, in fact wherever machines are operating.
>
> The trade of fitting requires a person trained to work from drawings and plans who can apply the manipulative skills of his trade and requires the use of a wide range of hand tools, and sound basic knowledge of mechanism and engineering principles to provide the background for the more manual aspects of this trade.
>
> This combination of skills and a broad range of industrial knowledge gives the fitter a wide application in industry. For example fitters are expected to have the mobility to change from close tolerance bench work to situations involving large items of plant and equipment for the various types of maintenance required in general industry. Erection and installation work requires, in addition to the hand tool skills involving the use of saws, chisels, files and similar cutting tools and measuring tools, a knowledge of handling methods and ability to co-ordinate the various sub-unit assemblies into their correct arrangement. A fitter performing maintenance work needs to have a sound knowledge of machine movements and must be capable of tracing faults and solving any operational problems associated with plant and equipment on which he is working.
>
> A fitter is often required to do machine tool work in conjunction with his general fitting duties and to have a knowledge of welding, particularly if employed as a fitter/welder. Hydraulic and pneumatic control units are now being used more extensively than some years ago and a fitter must be capable of adjusting and servicing machines fitted with this type of control gear. The rapid advance of expensive and complex machines, plant and equipment over the last 15 years required additional skills and accuracy by tradesmen fitters working on the installation, assembly, maintenance and service of these machines.'
>
> (Transcript pp. 7026/7)

(Mr Horsburgh supplemented this submission by detailed submissions concerning the inspections (see transcript pp. 7023/26)).

Machinist—1*st class* (*No* 13)

Mr Horsburgh submitted that:

> 'Summing up as a result of our inspections we submit the machinist first class is a tradesman who usually has served an apprenticeship and in the course of his work normally does his own setting up, works to close tolerances and can usually operate all the machines listed in the definition of machinist first class in the Metal Trades Award. His work is closely

allied to the fitter for which trade he produces most of the machine components for assembly. In addition to the usual machines, the machinist first class is expected on many occasions to be able to adapt himself to the requirements for setting up and operating various types of special service machines such as centreless grinders, crankshaft grinders, honing, lapping and profiling machines.

The machinist tradesman must have the ability to plan work from blue prints and carry out the operations through the correct sequence of cutting and finishing on a variety of materials. The machinist tradesman often specialises as a tool setter and carries out the operations of setting fixtures and cutters for process work. On the more modern and expensive machines in operation today the machinist first class is called upon to work generally to closer tolerances with higher feeds and speeds with consequent higher production than say 15 years ago.'

(Transcript pp. 7029/30)

(Mr Horsburgh supplemented this submission by further submissions concerning the inspections (see transcript pp. 7027/8)).

Patternmaker (No 20)

Mr Horsburgh submitted that:

'Summing up the pattern maker, he is a tradesman who has served an apprenticeship, works from drawings and is usually the first tradesman who received the drawings from the draftsman when castings are required. The pattern maker when first confronted with a drawing must be able to visualise every part of the job, create a plan for shape to suit the moulder, engineer and draftsman. Accurate views of the job are set out by him depending which view will be to the greatest advantage in making the pattern. He must have a general knowledge of all machining practices. The allowances for machinists must be made in turn where necessary in accordance with the type of metal used in the casting. He must have a sound knowledge of moulding and foundry work. (a) properties of metal must be known with the allowances for contraction and stresses within the metal which might distort the final casting. (b) provision for runners, risers, heads and chills must be made in appropriate sections to allow for liquid shrinkage. (c) a general knowledge of sands must be understood for contraction and finish of the final casting. The pattern maker constructs the pattern in accordance with the number of castings off, size and most efficient way of moulding, that is whether solid boxed, legged, segmented, frame, strickled, made from wood, fibre glass, metal, plastic, or a combination of the lot.

Each individual part of the pattern is carved or machined and fitted together so as to arrive at an accurate and complete pattern. This incorporates the art and skill of using hand tools to a fine degree of accuracy. All pattern making hand tools are supplied by the pattern maker. In accordance with his work he is called upon to use all woodworking power machines such as wood lathes, thicknessers, sanders, saws, pattern millers besides on occasion mill lathes and millers to within fine limits.'

(Transcript pp. 7031/2)

(Mr Horsburgh supplemented this submission by references to the inspection (see transcript pp. 7030-2)).

Commr Winter]

Toolmaker (*No* 26)

Mr Horsburgh submitted that:

> 'To sum up the toolmaker classification. The toolmaker is a highly qualified tradesman who has undergone an initial training in the basic skills of fitting and machining and who has then adapted these skills to the particular requirements of toolmaking. He is called upon to work from drawings and to do accurate precision work on a wide variety of press tools, moulds, jigs and fixtures used in the mass production of many components in a wide range of industries.
>
> Apprentices who wish to become toolmakers are usually selected because they display evidence of having the aptitude and temperament for this exacting work. Toolmaking demands unusual patience on the part of the tradesman and ability to work to extremely close tolerances using power machine tools and hand tools similar to those used in fitting and machining.
>
> The two main types of work performed by toolmakers are the manufacture and maintenance of metal cutting tools, gauges and/or templates, jigs and fixtures and the various forming tools such as cavity moulding dies, drop forging dies and press tools. The work entails the use of precision measuring equipment for controlling the accuracy and surface finish required for this class of work.
>
> A tool maker also requires a knowledge of materials, their reactions to the applications of drawing, bending, stamping and heat treatment processes. Toolmakers in the course of their work used specialised machines such as jig borers and duplicated type die sinking machines. With the rapid advances of manufacturing in Australia the toolmaker is a key classification in producing accurate tools, jigs, dies and fixtures so essential to this development.
>
> In the past 15 years tools, jigs and fixtures manufactured in Australia have been improved in producing components of uniform standards and have greatly increased the production rates of the products. This has required more complex, complicated and accurate tooling from the toolmaker.'

(Transcript pp. 7035-7)

(Mr Horsburgh prefaced this submission by detailed submissions concerning the inspections).

The Unions and Some General Questions

Mr Brodney devoted his submissions to consideration of general questions.

He submitted that:

1. The unions were aware of the anomalies, inconsistencies and illogicalities of the Metal Trades Award.
2. They were grateful that the questions contained in the statement read by Mr Justice Moore on behalf of the full bench were raised and they would continue to discuss the questions with a view to dealing with them.
3. The date of operation of any order made by the Commission should be the date of the decision in the 1966 interim marginal increases, namely 22 December 1966.
4. That was the date of the finding by the Commission that there was some entitlement to increases.

5. Further the finding, being of an interim character, must import the idea that it would be less than what might otherwise be awarded in final assessment.

6. The following, while not covering the whole of his submissions, were sufficient to indicate the broad approach on some of the more important matters:

'1. The unions seek an increase in the margins in clause 4 of the award without any but minor alterations in the structure of the clause.

2. The private employers oppose any increases. As a matter of practice they do not ask for any reductions even though they contend that their case would justify decreases.

3. The ASE submits that there are no circumstances relevant to work value assessment which justify decreases but on the contrary there are many circumstances which justify substantial increases in all margins.

4. The employers rest their case upon a narrow traditional and outmoded view of work value. They think it is something to be measured only by a few factors such as skill, responsibility and onerousness.

5. We will submit that work value must now be given a wider meaning than this. We will ask the Commission in the light of our submissions to re-state its views on assessment of work values. Such a re-statement will, we submit, justify a substantial increase in margins.

6. The ASE will submit that the standards which the existing margins express are no less than 60 years old. The final act of judgment to be made by the Commission must, it will be submitted, reflect today's attitudes on industrial justice.

7. No comprehensive assessment of work value has been made to the extent that any occasional assessment has been made. Such assessment is unsatisfactory because of the limited view of work value taken in making that assessment.

8. The engineering industry is so extensive and diverse and in such a state of change that the same test of work value cannot apply equally to all classifications if industrial justice is to be done to all classifications.

9. Subject to minor alterations the existing classifications and definitions should not be altered in this case. A case should be specially set up to alter the structure of clause 4. That, of course, carries with it the broad thinking involved in the joint statement that Mr McBride and the employers presented to the court. This was written two days ago before I had seen the statement, but it amounts to the same thing.

10. The Commission should declare that the job evaluation scheme proposed by the Commonwealth is inappropriate for the Commission's function of settling disputes about margins and will neither adopt the scheme in the present case nor commit itself to do so for the future.

11. If the Commission finds that margins ought to be increased it will give effect to its findings notwithstanding the Commonwealth's submission as to capacity to pay.

12. Budget Policy, as indicated in Exhibit W23 at III, being to strengthen the economy and give greater scope for private spending gives rise to a proper assumption that this will be achieved—but perhaps I have stumbled there—I will rephrase it. The submission for the Commonwealth was that the indications were that the economy would be in such a shape, and the employers indicated an intention for such private spending on capital goods that there would be that development; but my submission is that, accepting that, there is firstly no need for any discounting or postponement in this case of a grant of increased margins.

    If industry expects, as shown in paragraph IV of W23, to spend such sums, it is submitted that they can also spend money on doing industrial justice to their employees.

13. Having regard to the requirement that the contemporary standards must be applied in assessing the value of work to be performed, the Commission should not be deterred from establishing higher standards on account of the contention made in W23, page 8, that because wage costs have been pushed up beyond any reasonable estimate of the growth of productivity over the period—I will elaborate that, as with the other matters, later.

14. If the Commission seeks a point of reference in the history of the awards, the most satisfactory point will be the Second Mooney Variation. The calculations made on the basis of the 1947 fixation will provide a starting point on a reasoned basis. The form of the calculation made and presented by Mr Hawke last week is a form of calculation which has been found useful in other connections. Consequently there seems no reason why that type of mathematical thinking should not be applied in this case.'

(Transcript pp. 7108/9/10)

7. In considering the employers' case:

    (1) There seemed to be four main considerations which moved them:

        (a) the shortage of skilled labour;
        (b) the need to reduce costs in the face of local and overseas competition;
        (c) the labour turnover; and
        (d) the requirements of volume output.

    (2) There was a group of developments embodied in the employers' evidence:

        (a) 'all involved increases in the number, size, age and like of new machinery, and production, and they point to this, that there is the introduction of the new as against the old machines. Secondly, there are more accurate and better quality machines; thirdly, there are new and better attachments to both old and new plant; fourthly, there are better measuring devices—one witness even suggested the development of the science of measurement is the coming thing; fifthly, there was new special

purpose equipment; sixthly and finally, there was new equipment and various degrees of automatic operation often associated with various controls, button pushing and electrical devices for starting and stopping.

(Transcript p. 7123)

(b) 'The second broad development to which the employers referred was the logical layout of plant to secure smooth flow and transfer of materials. I would have thought we may have heard a little more about the transfer problem of materials but I think only one employer witness actually used the work, the transport of materials and products; and then of course associated with that are the proper organisation in the plant, the various services like gas, electricity, water and so forth.'

(Transcript p. 7123)

(c) 'Then thirdly, the development to which they pointed was the introduction into the engineering industry of classes of professional and sub-professional specialists who not only organise the plant in sections but organise it as a whole.' (Transcript p. 7123)

(3) The contention made by the employers from all this was that by taking all these features together the value of the work had not increased but on the contrary had decreased.

(4) On this point the employers made three broad groups of submissions:

(a) 'They say firstly that each employee is given more information, more advice, more and better direction, more and better control, more and better supervision; and from these three results less independent action, less skill for the actual work whether he is a tradesman or not. But as Mr McBride pointed out, they do not recognise apparently any difference in this respect between the production worker and the tradesman.'

(Transcript p. 7123)

(b) 'Secondly, the employers refer to the push button problem, that many employees, particularly production employees, do no more than start and stop a machine. As one puts it, 'The machine does the lot.'

Of course it becomes a form of complete mis-conception, because that is an impossible situation and it totally disregards another development to which I will have to refer.'

(Transcript p. 7123/4)

(c) 'The third group of considerations the employers advance is that all employees have less responsibility in the performance of their work; that they are not asked, nor are they wanted to know much of what they are doing.'

(Transcript p. 7124)

(5) That was the aim and substance of the employers' case and could not form the basis of action to vary the award in terms of work value because:

'First of all it is too general to meet the variety of employment conditions throughout the industries and callings. By that I mean the industries and callings set out in the Incidence clause of the award and in the classifications in clause 4.

Secondly, tradesmen with craft knowledge and skill are not only still required, but are increasingly important, in the production operation and maintenance, both preventative and repair of plant and equipment.

Thirdly, the specialisation by tradesmen does not, as suggested, reduce his value but on the contrary increases it.

Fourthly, the adult non-tradesman, by his training, experience and application to the jobs he is required to do, has become increasingly valuable.

Fifthly, the machine operator is in a like position.'

(Transcript p. 7124)

(6) 'We are not denying the introduction into the engineering industry of the professional worker or the sub-professional, the production planner, the draftsman; we say they have come in, and this new managerial development has resulted in a reconstitution of the process of production in the factory. This has established the closer-knit unit of production, in the team, and that the value in the team of each worker is enhanced by the very fact that he is working in a team.

This is a cardinal point, in our submissions, for out of team work each man in the team becomes more valuable and that applies as much to the professional designing engineer as to the tradesman and to the button pusher, if he may be taken as the lowest rung; and instead of one having a conception of a hierarchy from top to bottom, we must have a conception in which there is a group of participants in the social process of production within the plant.

You have to keep in mind here that the technical developments in modern society have overcome, within the productive unit, the atomisation of society. We are all individuals but in a productive unit we become socialised.

I mean not socialised in our political or other relations but within the factory we are social units and it is from this fact that the value of the man becomes enhanced. The process worker's value is enhanced because he is in that team. If there is any doubt about it let there be a strike and see whether the absence of the employee lets the plant work. On the other end, take away the tradesman, nothing happens. If the maintenance fitters are not there and a malfunction develops in the button pushed operating machine, the press, no production; with the modern complex if the professional engineer is not there to design the plant appropriate to what the customer of the machine manufacturer wants the process fails therefore we have got to introduce into our conception of wage fixing this new approach. No longer is it possible to assess the value of the work of one person only by reference to his own activity; it is necessary to go to the team in which he works.'

(Transcript pp. 7124/5/6)

(Mr Brodney supplemented these submissions by wide discussions into alleged relevant authorities stemming from case history and also in some detail enlarged upon his general submissions (see transcript pp. 7110-7147)).

The State of Victoria and the Instrumentalities

A.

Mr Aird submitted that:

1. Some of the instrumentalities for whom he appeared were complete parties in every sense.
2. The union claim was an economic one based on the circumstances of 1947.
3. In Mr Hawke's address reliance was placed upon 1947 as carried forward by prices and productivity and he had claimed that the work in question had become more valuable.
4. The *prima facie* justification for further recognition of the tradesman was offset by the overwhelming effect of the general evidence that there was improvement in the case of operation and accuracy of machines and tools used by tradesmen and that there was now greater supervision and greater management control.
5. If one looked at factors of machine accuracy and greater supervision it was clear that they had a more immediate and telling effect on the process worker level than perhaps they had on the tradesman.
6. In relation to Mr Heagney's contention concerning the fact that the process workers' rate was fixed in 1930 in circumstances of depressed industry, it was clear that when in 1937 the process workers' margin was increased from 60 cents to 80 cents (or 25 per cent) that represented a far greater relative advance for the process worker than for the tradesman.
7. The Commonwealth Year Book for 1966 showed, by way of (p. 335) the retail price index, that in 1930, when the process workers' margin was fixed at 60 cents the price index stood at 162.
8. In 1937 when the process workers' margin was increased by 25 per cent the price index stood at 145.
9. The process worker then had received the double benefit of a 14 per cent price decrease added to a 25 per cent wage increase.
10. With respect to the Commonwealth's submission, while his clients were opposed on true work value grounds to any increase, they would not want the Commission's decision impugned by the suggestion that it fixed a rate having regard to the Commonwealth's proposal that a correct work value fixation might have to be modified in order to prevent flow by industrial pressure from the magnitude of the increase.
11. This would lead to endless argument as to what the rate might otherwise have been, and the perpetuation of the 1947 economic adjustment argument itself.
12. It had to be accepted that the attempt to apply job evaluation techniques was and is experimental, unaccepted by any party.
13. The techniques were suitable mainly to single factories and perhaps single industries in economies with no system of overall economic adjustment of wages to a work value arbitration case in the Australian setting.

14. Phrases such as 'the employees worth to the employer' and 'team work' coming within the framework of the Commonwealth's submissions should be discounted.
15. It was not possible to completely exclude some aspects of comparative wage justice.
16. The over-award factor was an unreliable guide.
17. With respect to the Commonwealth's submission concerning the conspectus of the state of the economy, the Commission should consider together submissions he had made:
    (a) that there is in any case no justification for an increase;
    (b) nevertheless the Commission should be free and unfettered in its assessment of work value; and
    (c) its assessment should not be subject to qualifications concerning magnitude and flow because thereby would be created other industrial problems.
18. During the inspections conducted on behalf of his clients the unions did not attempt to show a difference in work between the classifications covered by the appendix and those appearing in clause 4 of the award.
19. Mr Bullows in evidence had accepted this sameness of work.
20. This sameness of work was real. (This submission was supplemented by Exhibit A12).
21. What was sought was a decision which would indicate so far as the State of Victoria was concerned, the work value component of the wages paid.
22. Retrospectivity should not apply.

(Mr Aird analysed cases that had been before the Commission and its predecessor and that were in his view relevant and he examined in detail the relevant inspection and evidence.)

B.

Mr Ferdinandy submitted that:

1. The Electricity Trust of South Australia (the Trust) and the unions represented had discussed the problems arising between them and the parties had been able to reach agreement on a number of points.
2. These points had been incorporated in a written document signed by the parties (Mr Ferdinandy read the document).
3. The parties having come to an agreement all that remained was for the Commission to give effect to the agreement by making the appropriate order.
4. If there were any procedural difficulties it was suggested that this would be an appropriate case in which the Commission might move on its own motion pursuant to section 24 of the Act.
5. The Trust was strongly opposed to the creation of further special class tradesmen.
6. The reason for this opposition was that in the view of the Trust the duties of tradesmen calling for different degrees of skill or involving different degrees of responsibility were so intermingled within their daily duties that the creation of the special class would produce three problems:
    (1) 'In our submission it would be virtually impossible to formulate a definition which drew a clear and firm dividing line between the two classes;

(2) There would be a series of disputes between the employers and the unions concerning individual tradesmen or small groups of tradesmen and relating to the question of whether or not they were entitled to higher classification because of some aspect of their work; and

(3) We say that in the end it may well be that all tradesmen would end up in the special class and that of course would then defeat the very object of creating such a class.'

(Transcript p. 7247)

7. Irrespective of the question as to whether or not more special classes of tradesmen are created the relationship of the base grade tradesmen should not be disturbed.

(Mr Bride acknowledged that the terms of the document, as read by Mr Ferdinandy, truly represented the agreement reached).

C.

Mr Marks submitted that:

1. The attitude of the Hydro-Electric Commission of Tasmania (the H.E.C.) was that there should be no increase in the rates of pay presently payable by the H.E.C.
2. The money amounts applying to each of the classifications within clause 4 of the award, and which were common classifications to those in Division III of Part III of the Appendix to Part I of the award (the appendix) appropriately represented the proper work values of those classifications whether work was covered by clause 4 or by the appendix.
3. If the Commission did not accept the primary submissions any increases granted should be added to the rates presently existing and which existed prior to the granting in September of this year of $1.40 increase, which increase is now under appeal.
4. If the appeal were dismissed the $1.40 should be absorbed prior to any increase being added to rates presently being paid by the H.E.C.
5. He supported the submissions of Mr Aird as to the nature of the claim.
6. The evidence before the Commission revealed no material changes in the skill or responsibility of employees or in the nature of the work or the conditions under which it is performed.
7. With regard to the proposed special class tradesmen the submissions of Mr Aird were adopted in their entirety.

(Mr Marks made detailed submissions concerning the inspections and evidence and invited the Commission's attention to the authority of what he deemed to be relevant cases).

The Unions' Reply Concerning the Instrumentalities

Mr McBride, in reply to Mr Aird and to Mr Marks submitted that:

1. As Mr Aird had not within the last two days raised the question of absorption, it appeared that the State Electricity Commission of Victoria (the S.E.C.) had abandoned a desire for absorption.
2. The attitude of the S.E.C. was that whatever increases were granted flowed immediately to the S.E.C.

3. This was the only way Mr Aird's submission could be understood, and represented a change from what Mr Aird had said when he tendered Exhibit A11.
4. In answer to Mr Justice Gallagher, that Mr Aird had tendered A11, but had made no comment on it during his address, that that was the point.
5. It was obvious from the state instrumentality inspections that a substantial amount of the work seen was work that was not the same as that done under clause 4 of the award. (Mr Bride furnished examples) (p. 7 300).

The Commonwealth's Reply

Mr Woodward, in addressing the Commission, submitted that:

1. Changes in the value of money could not be properly taken into account in a work value case such as the present one where the value of the work had not been looked at for some considerable time (Mr Woodward furnished reasons).
2. The Commission could not in this case place any reliance on so called 'market rate' arguments based on over-award payments for the following reasons:
   '(i) There is no evidence of any one 'market', or even of any clear 'market' which could be used as a guide for any minimum wage fixation. No 'market rate' is shown by union exhibits on the subject.
   (ii) There is no sufficient evidence to show what form current over-award payments take.
   (iii) There is no sufficient evidence as to the reasons why different over-award payments are made.
   (iv) The evidence did establish that some over-award payments were the direct consequence of organised union pressure but there is nothing standard about the rates conceded.
   (v) Incentive payments are made for above average performance and thus have no relevance for the fixation of minimum wages.
   (vi) The only over-award payments which might be relevant would be those paid because it was generally recognised that award rates for a particular classification or job were too low to represent true work value. There is no evidence to identify such payments or even to show that any existing over-award payments are in fact made for this reason.
   (vii) The question of absorption is of course vitally relevant to the whole question of over-award payments. In view of Mr Hawke's answer to Moore, *J*'s question at pp. 6887-8 of the transcript, we can do no better than to remind the Commission of the words used by Wright, *J.* in the 1966 *National Wage Cases* decision. Although is was made in that context—i.e. the context of a *National Wage Case* decision—His Honour's words are equally applicable to the present hearing:

> 'If one could be assured, as the Western Australian and Queensland Arbitration Commission were evidently assured in recent Metal Trades cases in those States, that pressure would not be exerted in the field to resist the absorption of the increase in over-award payments one could, I think, seriously consider an increase in award rates greater than those now

proposed, but to contemplate a greater increase with almost certain knowledge that non-absorption will be the rule rather than the exception would, I consider, be reckless.'[1]

That was part of His Honour's judgment.

(viii) 'Clearly work value does not vary with the rise or fall in demand for particular classifications of workers; that is, it does not rise with increasing shortages when over-award payments tend to rise.'

(Transcript pp. 7267/67A)

3. Turning to another point, then there was Mr Hawke's submission that work value was meaningless unless it was related to the value of the work. The logic of this proposition reduced to its simplest terms is that a fitter producing an article worth $10.00 should be paid less than one producing an article worth $100.00, despite the fact that the former task might have called for greater skill.'

(Transcript p. 7267B)

4. 'Finally, as the Commonwealth said earlier—the Commission is faced with the challenge to bring to its award-making, principles and practices that have meaning in 1967 and that employ techniques available in 1967. It would be a sad day in the Commission's history if it succumbed to the argument that traditional practices and traditional relativities should be maintained—maintained merely because that is what people in industry—employers and unions alike—are accustomed to. If the Commission were to succumb, the new approach the Commission essayed when it ordered this inquiry would have been fruitless—indeed, the whole exercise of the past 18 months would have served little purpose.'

(Transcript p. 7267B)

Document re Union Claims

On 16 November 1967 Mr McBride tendered a document (Exhibit M63) which detailed the claims of the union. Mr Justice Gallagher had directed that the details be furnished.

The Private Employers

Mr Robinson submitted that:

1. No valid ground had been provided which would warrant a general increase.
2. The Commission may find that there are some particular classifications where the nature of the work value demands involved may warrant an upward movement in total rates.
3. The employers had repeatedly requested the unions to provide the Commission and the parties with a practical, down-to-earth claim which related to the work value demands of the classifications contained in the Metal Trades Award.
4. In the unions' exhibit tendered that morning there were six classifications where a change in the 1947 relativities was sought.

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[1] 115 C.A.R. 93 at p. 114

5. This was the area to which the unions should have directed their attention throughout the whole of the proceedings.
6. Mr Hawke had made it clear that the unions were seeking general economic increases.
7. Over-award payments merely demonstrated that there was capacity to pay what was being paid and no more.
7. Thus the increases claimed by the unions were not within the capacity of the economy.
9. 'We do not deny the existence of over-award payments, indeed we rely on the fact that over-award payments of something like the order which the unions put in evidence are being paid. We will direct the Commission's attention to the 1965 Statistician's survey which covers on a scientific basis some million employees where, in the three groups that are regarded as relevant to the metal trades, the order of over-award payment, as distinct from overtime, is approximately $6.50—I think it is, and this is for all classifications, of course.

   We do not contest that over-award payments of that magnitude found by the Statistician on a scientific basis are being paid; but what we do object to is the concession that the information put in by the unions is accurate as to any particular one establishment.'

   (Transcript pp. 7329/30)

10. A study on national accounts figures made by Mr Keating and published in the 'Economic Record' for March, 1967, at page 87, (Exhibit R.30) showed that the average earnings in the metal group of industries had not moved more slowly than in manufacturing industry generally during the period 1947-8 to 1962-3.
11. Exhibit R. 31, an extract from the 1965 survey of weekly earnings showed that award payments to the manufacturing group was $43.80 for all manufacturing groups and $43.70 for the grouping traditionally applied to the metal trades.
12. The Commission could now have no equity ground for determining that the metal trades industry had suffered *vis-à-vis* manufacturing industry generally.
13. It was conceded that the 1930 Metal Trades Award was foreshadowed by the economic depression and that in 1935 Beeby, *J.*, in granting increases to tradesmen, was inhibited by the slow recovery from the depression.
14. In the second 1937 investigation of Beeby, *J.*[1] His Honour made a definite statement that the margins were fixed with the metal trades industry in a prosperous condition.
15. It was that level of rates which had been perpetuated ever since by the 1954 two and a half times formula, by the 1959 twenty-eight per cent increase, by the 1963 ten per cent increase and by the 1966 interim margins decision.
16. The positive proposition was that the current rates were based on the metal trades industry in a prosperous condition.
17. Mr Conciliation Commissioner Galvin had, in the 1952 case, heard 117 witnesses and had carried out inspections in three states.

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(1) 38 C.A.R. 328

18. There was nothing to suggest that current metal trades rates were owed anything from history on work value grounds, or indeed that the 1952 rates were in any way incorrect either generally or in relation to particular classifications.

19. The inevitable consequences of industrial engineering developments have been a reduction in concentration, a reduction in skill, a reduction in metal effort, a reduction in responsibility, for a major part of the Metal Trades Award work force.

20. If the evidence were literally interpreted a reduction in award rates for the majority of metal trades employees would flow.

21. The limited field of work in the maintenance of complex electronic and circuitry, carried out by some electrical fitters had increased in work value demand and required additional skills.

22. This was directly related to the industrial engineering developments which had occurred.

23. Despite this concession the private employers were still opposed to the establishment of a separate classification and rate.

24. The unions had basically relied on three things: inadmissible evidence, allegation of depressed rates and economic claims.

25. The sixteen classifications belatedly introduced by the unions represented a very significant change of front.

26. If the Commission divorced the economic claims from the unions' case there would remain sixteen classifications in dispute.

27. Enough had been said about the Commonwealth's submissions to eliminate the necessity to cover the ground again.

28. 'The implacable opposition of the unions which has been a feature of their case basically is adopted by my clients and, therefore, confronts this Commission with an almost united approach on the use to be, or otherwise to be, made of the Commonwealth submissions.'

(Transcript p. 7421)

29. The Commonwealth's aim of systematisation of work value inquiry was not necessarily condemned.

30. With respect to redundant classifications the private employers had not had the time to examine in detail the classifications which had been raised by the unions.

31. This question should be left until later.

32. These proceedings were inappropriate for a discussion on the question of female rates in general or the question of equal pay for work of equal value.

33. The date of operation should be no earlier than the third week in January and there should be one operative date.

(Mr Robinson supplemented these submissions in appreciable degree.)

APPENDIX

THE INSPECTIONS AND CONSIDERATIONS FLOWING FROM THEM

1. THE CHARGE

1.1 On 8 July 1966, the then Presiding Judge (Wright *J.*), made an announcement on behalf of the Reference bench.

Part of the said announcement was:

'For the Reference bench I make the following announcements regarding the Metal Trades Award which is the only one under its consideration—

(a) It is concerned about the state of the Metal Trades Award and has reached the conclusion that it would be unwise to award any general increase until an investigation has been made on a work value basis of the relativities of the 330 classifications listed in the award and the necessity for as many as 53 separate wage rates with refinements as low as a cent per day between classifications.

(b) It has therefore decided to avail itself of the procedure available under section 34 (6) to obtain from Mr Commissioner Winter after such investigation as he considers necessary a report with respect to the following specified matters—

(1) What, if any, rearrangements or redesignations of classifications or additional classifications under Part I of the award are necessary or desirable to bring them into accord with present-day requirements;

(2) What, if any, alterations of marginal rates prescribed under Part I of the award or additional marginal rates are justified upon the grounds of work value, the economic considerations which have been presented to this bench, or for any other reason.

(c) The bench is aware that the report of Mr Commissioner Winter may take some time to formulate. It therefore indicates that if at some appropriate stage in the proceedings before him and with due regard to industrial justice and practicability Mr Commissioner Winter thinks fit to furnish an interim report pending completion of his whole investigation that would be in accordance with our intentions in seeking a report.'

(115 C.A.R. 93 at p. 102)

In consequence of and in response to this decision I have prepared this survey.

2. JOB EVALUATION OR NOT

2.1 In furnishing my general conclusions with respect to the inspections I have reviewed certain aspects of job evaluation.

2.2 I have studied several authoritative works on the subject and I have presented what I consider to be the more important and relevant extracts from them.

This digest is annexed hereto in schedule form.

2.3 Moreover, I have examined the question of job evaluation but in particular I have tested a method of job analysis and systematic recording of comparative values of job characteristics during the inspection programme.

2.4 It should first be stated that in my view a considerable amount of preparation by way of:

(a) intensive study of the subject; and
(b) selection, training and use of numbers of highly competent job examination, job analysis and job description teams;

is a necessary prerequisite even to preliminary consideration of the possible ultimate and efficient adoption of the method as an aid to determining wages and salaries on a nation wide basis.

2.5 Further, in the circumstances of the present, it is considered that a thorough understanding of the principles and mechanics of the method, wide discussion about them and acceptance of them by all parties involved are essential forerunners to their effective use in such a situation as the one now confronting the Commission.

2.6 It would appear, from the highly authoritative literature that I have read on the subject of job evaluation (see annexure), that it is only in the Netherlands that the techniques of job evaluation have been effectively applied on other than an establishment basis.

2.7 For instance, as 'Job Evaluation' published in 1960 by the International Labour Office, points out:

> 'In the Netherlands, for instance, the method is already applied over a much broader field than has so far been customary elsewhere. . . .'

Again it states—

> 'The technique of job evaluation has been applied to deal with problems of comparative equity in wage determination mainly, though not exclusively, at the level of the individual firm or plant.'

2.8 It may be seen from a study of the annexure hereto that two of the three authoritative publications which are digested therein are studded with such phrases as 'in the organisation', 'management and employees', 'in the company', 'for a company', 'to the firm', 'individual firm or plant', 'in the plant', etc.

Even the publication of the Netherlands Standards Institution largely speaks in such terms as 'the organisation', 'the management has to decide', and 'an enterprise'.

2.9 In Melbourne on 8 August 1966, Mr Woodward submitted that:

> '. . . advantage should be taken, in carrying out this exercise, of the available material and local experience on the subject of job evaluation and that you should avail yourself of the methods and techniques that have been developed in recent times in carrying out the exercise you are called upon to perform.'
>
> (transcript p. 2439)

2.10 Mr Woodward went on to say that the situation provided an excellent opportunity for the Commission 'of course with the help of the unions and of the employers and maybe with some outside or independent assistance' to show the way in this field.

2.11 In Melbourne on 14 September 1966, Mr McBride submitted:

> 'As you remember, Mr Woodward was talking about job evaluation. The unions decided that they were opposed to this approach and further decided that no useful purpose would be served by conferring with the employers and the Commonwealth Government on this subject.

Commr Winter]

After seeing the document tendered by Mr Woodward yesterday in conference it is obvious that complete co-operation between unions and employers is necessary for this approach to work. Now we say that under no circumstances will we be parties to this approach and we will not co-operate in any way.'

(transcript pp. 2452/3)

2.12 Mr Robinson submitted:

'We would like to have more time to consider the definitions which are attached to the front sheet that the Commonwealth has given, but we do give wholehearted support to what we regard as a commonsense approach that some form of consistent recording, some form of consistent notation, must be a benefit to all parties regardless of the eventual use to which it is put.'

and

'Mr Commissioner, you cannot, of course, reach a conclusion as to whether they would be useful or not until such time as implementation has been attempted. At this stage all we are saying is that any assistance to the Commission and to the parties should be tried.'

(transcript p. 2459)

2.13 I then stated:

'I have already indicated that I am not hidebound when faced with this matter. I said earlier that I would welcome any such assistance. I shall not confine my attention to any one particular form of notation or record. I would be very happy to test one against another of any type of systematic notation that the parties may suggest to me.'

(transcript p. 2459)

2.14 Mr Aird agreed that the Commonwealth's proposals formed 'at least one appropriate way of recording the results of inspections and in finality recording the relationships that should be established between one classification and another.'

(transcript p. 2462)

2.15 A little later Mr Woodward modified the earlier attitude of the Commonwealth:

'I am not discussing job evaluation. What I am talking about is simply a method of recording information. It is true that in doing this we are making use of a technique which is also used as part of the whole complex which is known as job evaluation but that is not the subject we are now discussing.

The suggestions that we are making at this stage are purely designed to facilitate the recording of information gathered during inspections.'

(transcript p. 2465)

2.16 It should be said that on this day Mr Woodward advanced a number of suggestions concerning inspections which I found quite helpful.

2.17 Although it may be seen that the Commonwealth did not finally espouse the cause of job evaluation, it did initially suggest that I should take advantage 'of the available material and local experience on the subject of job evaluation' and that I should avail myself 'of the methods and techniques that have been developed in recent times.'

2.18 In all the circumstances it seemed to me that I should at least take preliminary testings in the techniques of job evaluation or at least use a method of systematically recording information.

The method is widely used in industrially developed countries and is in successful use in certain firms operating in Australia.

2.19 The International Labour Office publication 'Job Evaluation' defines job evaluation in the following manner:

> 'Job evaluation may be defined simply as an attempt to determine and compare the demands which the normal performance of particular jobs makes on normal workers without taking account of the individual abilities or performance of the workers concerned.'

2.20 If this authoritative definition is accepted it is at once seen that the most telling word in it is the word 'demands'.

It is clear that it is not group performance of employees that is the vital, or even a minor, consideration but the 'demands' the work normally imposes upon, or requires from, those doing it.

2.21 There are of course other more complex but perhaps not so sound definitions readily available (see annexure).

2.22 The one adopted by the Netherlands, for instance, is:

> 'Job evaluation is a method which helps to establish a justified rank order of jobs as a whole, being a foundation for the setting of wages.
>
> Job evaluation, therefore, is only one of the starting points for establishing the relative differentiation of base wage rates.'

2.23 From this it is clear that the Dutch experts, while using the techniques associated with job evaluation as auxiliary devices, recognise that they help in the process of wage fixation but taken together, they constitute 'only one of the starting points'.

2.24 I have used the Job Inspection Check Lists in the form finally approved by me in relation to the inspections.

2.25 Also, to the best of my ability, I have endeavoured to bring independent judgment, unswayed by what was recorded on the check sheets, to my task of forming conclusions concerning the relative value of the work classifications.

2.26 Except in relation to the Netherlands, I have neither seen nor studied any material which suggests that even the preliminary techniques associated with job evaluation have been successfully applied to any system of wage fixation which encompasses more than one industry within the same ownership.

Most frequently by far these techniques are applied to the one enterprise.

2.27 Even in Holland it would appear that the so-called national use of even job evaluation measurement methods are most successfully applied in an area which could hardly bear comparison to the Australian experience. It should be clear that I am not thinking of geography when I use the term 'area'.

3. Recording

3.1 In the light of after-knowledge, I have formed the conclusion, after prolonged and careful trial, that the details of the check lists did not permit of a thoroughly effective, systematic and properly correlated recording of work values on a basis that would ensure their just acceptance as providing a fair and reasonable yardstick for the fixation of wage levels on a national basis.

Commr Winter]

3.2 In pointing to the reasons I think it best at this juncture to refrain from delving into tedious detail.

3.3 I believe that it will be of most and widest assistance if I invite attention, in summary form, to the particular points which have led me to the conclusion that the check lists method of recording work values in a relative sense cannot replace independent judgment in assessing relative worth considered on a national basis.

3.4 The following are the definitions which were used to make one assessment of work value in a relative pattern:

1. (a) *Basic educational requirement*

(This is concerned with the basic ability which a job requires for its performance)

Low—None needed.
Medium—Educational level of at least school leaving age.
High—Education level embracing courses, e.g. mathematics, science, enabling comprehension of technical principles and proficiency in e.g. mathematical calculations, working from drawings, etc.

1. (b) *Experience and training demand*

(This is concerned with the experience or training which a job requires for its performance)

Low—Practical demonstration and/or simple instruction: proficiency attained quickly.
Intermediate—Training (relatively short) to acquire simple manual skills.
Medium—Training (relatively short) and experience to acquire complex manual skills.
High—Extended training (normally formal) and experience to acquire complex manual skills and to understand, apply and use technical principles, drawings, mathematical calculations, etc.
Very High—Extended training (normally formal) and experience to acquire highly complex manual skills, to understand and apply advanced technical principles; and to become proficient in making advanced calculations, working from complicated drawings, etc.

1. (c) *Mental demand*

(This is concerned with the mental effort and the acuity of senses which a job requires)

Low—Limited mental effort; few demands placed on one or more of the senses.
Medium—Some degree of mental concentration; moderate demands on one or more of the senses.
High—Fairly continuous demand on mental concentration and demands on one or more of the senses.
Very High—A high degree of mental and sensory concentration.

1. (d) *Physical demand*

(This is concerned with the physical exertion inherent in a job)

Low—No more than light to moderate physical effort.
Medium—Occasional heavy or continuous moderate physical exertion.
High—Heavy continuous exertion.

1. (e) *Initiative and ingenuity*

(This is concerned with the individual judgments which a job requires)

Low—No more than occasional minor routine decisions covered by simple instructions.

Medium—Occasional independent decisions requiring initiative and judgment.

High—Independent decisions requiring initiative and judgment involving complex factors.

Very High—Regularly required to make independent decisions requiring initiative and judgment involving complex factors.

2. (f) *Responsibility for equipment and tools*

(This is concerned with the responsibility carried by a worker in a job to prevent loss of, or damage to, equipment and tools)

Low—Tools and equipment normally used not readily subject to loss or damage: no special care called for.

Medium—Continued care and attention to prevent loss of, or damage to, tools and equipment.

High—A high degree of continued care and attention to prevent damage to tools and equipment, where the consequence of failure would be serious.

2. (g) *Responsibility for material or project*

(This is concerned with the responsibility carried by a worker in a job to prevent damage, spoilage, or waste of material or product)

Low—No special care called for.

Medium—Continued care and attention to prevent damage to material or product or to ensure its effectiveness.

High—A high degree of continued care and attention to prevent damage to material or product or to ensure its effectiveness where the consequences of failure would be serious.

2. (h) *Work of others*

(This is concerned with the responsibility carried by a worker in a job to instruct or supervise assistants and to ensure that others and their work are not adversely affected)

Low—Work performed has very little or no influence on the performance of others.

Medium—Work performed influences the performance of others.

High—Work performed has a vital influence on performance of or significance (e.g. safetywise) in relation to, others.

3. *Work features*

(This is concerned with features inherent in a job, e.g. dirt, temperature, dampness, dust, noise, fumes, cramped conditions, height, etc.)

Low—Work may involve minor discomfort.

Medium—Work involves discomfort.

High—Work involves a high degree of discomfort.

3.5 As explained earlier herein I approved of the definitions.

However, in the light of the experience of the inspections, I would make radical alterations to those definitions if I were called upon to repeat the experiment.

3.6 I was tempted to make adjustments both to the definitions and to the headings of the vertical columns of the check lists during the course of the inspections but abstained for the reason that I considered that if others had gone some distance in recording work value elements on the approved check list, sudden variation could bring further complication to an already complex matter. Besides I was not quite certain.

3.7 In the light of my experience in this important national experiment I consider that any system of recording that does not permit of at least seven varied markings of each work value element in a nationwide wage or salary assessment must be too rigid and must fail to allow of accurate and sufficiently sensitive measurement.

3.8 In this very exercise it was obvious by the very nature of, for example, varying investment levels, or of various manufacturing objectives or market possibilities, that tradesmen with broadly identical basic educational requirements and similar experience and training demands were carrying out work functions that differed much too widely to permit of real segregation in three or even five compartments.

3.9 It is now clear to me that while three or five compartments would be adequate for recording work value factors in one plant where so many standards were common they are insufficiently broad in scope to allow of accurate estimation when one has the manifold metal industries in their complex Australian setting to consider.

3.10 Words in this sense do not at this stage matter very much except that I must make it clear that the type of check-points I have in mind are:

1. Low
2. Limited
3. Intermediate
4. Fair
5. Medium
6. High
7. Very High
8. Excellent.

3.11 Probably better indicators can be found, these only appear here in order that my meaning may be clear.

3.12 It is submitted that distinct improvements are possible in the Work Value Elements.

3.13 It is considered that as well as providing for 'Basic educational requirement' there should also be provision for 'Supplementary or Technical educational requirement' in the Work Value Elements.

3.14 In the check lists used in this experiment the definitions clearly suggested that the 'Basic educational requirement' was restricted to primary and high school considerations.

3.15 It was evident that technical education had to be evaluated under the 'Experience and training demand' element.

3.16 To me this involved an unnecessary congestion in and overloading of the 'Experience and training demand' element and could cause distortion.

3.17 After making ticks in the appropriate columns of the check lists, I assessed the preliminary score by adding up the points.

A simple points method was used consisting of one point for the 'Low' vertical column, two for 'Intermediate', three for 'Medium', four for 'High' and five for 'Very High'.

3.18 I deliberated for a long time before determining the proper weightings to apply to the various work value elements.

Finally I chose the following:

Element	Weighting
1 (a) Basic educational requirement	2
1 (b) Experience and training demand	5
1 (c) Mental demand	2
1 (d) Physical demand	1
1 (e) Initiative and ingenuity	3
2 (f) Responsibility for equipment and tools	2
2 (g) Responsibility for material or project	1
2 (h) Work of others	2
3 Work Features	3

3.19 I encountered the greatest difficulty in deciding whether 'mental demand' and 'physical demand' should be weighted as they finally were or whether the weightings should be reversed.

3.20 Finally. I settled upon the chosen weightings because it seemed that industrial trends pointed in such direction.

3.21 I am conscious of the fact that prospective employees tend to avoid work that calls for appreciable physical demand or imposes unsatisfactory, dreary or unhygienic conditions.

Nevertheless, I concluded that in any national assessment 'mental demand' should receive the priority.

3.22 However, when it came to a consideration of 'Work features' it occurred that this element should be weighted highly.

3.23 Here again loomed the difficulty that confronted me right through this exercise, when trying to make effective work value assessments on a national basis by inspecting plants of a widely different character providing or demanding work or other standards which varied greatly from plant to plant.

3.24 In some plants work features designed to achieve identical ends varied appreciably throughout the whole gamut of work processes, apart altogether from other features.

3.25 Nevertheless I am of the opinion that while the 'Check lists' method of job assessment did not in this experiment provide a mechanism which could be used with infallibility it did assist greatly in directing my attention to features that in all the hurly-burly of difficult, noisy and often extremely uncomfortable inspections might otherwise have been obscured.

3.26 Therefore, it should be said that whenever I was faced with indecision flowing from conflicting check lists, I relied upon judgment stemming from assessment of work seen during inspections balanced against my general knowledge of the metal industries.

3.27 It should be remembered that in my Announcement No. 2 of 8 August 1966 I said:

> 'As intimated in my earlier announcement I have acquired a certain degree of knowledge of the nature of work being carried out in the metal industries. To the extent that this is relevant I propose to draw upon this knowledge for the purposes of my investigation.'

3.28 Frequently, in certain regions of indecision the records of the check lists were of decisive assistance.

In other situations they were often confusing and negative.

4. THE PHASES OF THE INSPECTIONS

4.1 The inspections may generally be divided into four quadrants:

1. The Queensland inspections which generally provided a 'shake-down' period during which various approaches to the problems facing me and various methods of arranging and organising the inspections were canvassed.

   In this testing time I tried any proposal suggested by any party or intervener which seemed to warrant a trial.

   The Queensland inspections commenced in Brisbane on 28 September 1966 and concluded in Townsville on 1 November 1966.

   It seemed to me that the time the inspection of the plant of the English Electric Co. of Australia had been reached, a certain pattern of acceptable procedure had clearly emerged. Certain modifications occurred later but most of the initial difficulties had been by then overcome.
2. The inspections in New South Wales extending from 1 December 1966 until 5 April 1967 when I gave my decision in which I stated that from that point I would concentrate upon eleven specified classifications.[1]
3. The inspections in New South Wales and Victoria extending from 3 July 1967 until 8 August 1967.
4. The inspections in New South Wales, Victoria and Tasmania from 16 August 1967 until inspections concluded on 15 September 1967.

   During this period the inspections were carried out by all members of the full bench.

5. LIMITATION IN DEGREE

5.1 In the decision[1] to which reference has already herein been made I selected the following eleven classifications for concentrated inspection:

Number	Classification
5	Fitter
13	Machinist—1st class
14	Machinist—2nd class
15	Machinist—3rd class
20	Patternmaker
26	Toolmaker
58	Welder—special class
87	Electrical fitter and/or armature winder
268	Furnaceman—electric
283	Process worker (all divisions)
287	Storeman and/or packer

together with adult females employed in various classifications.

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[1] 118 C.A.R. 31

5.2 After the inspections had concluded the unions requested the full bench to adjourn until later, consideration of 'Storeman and/or packer'.

The private employers indicated that they were not opposed to this procedure.

The full bench granted the request, so that left ten classifications.

5.3 Although I concentrated in the period between 5 April 1967 and the date of conclusion of the inspections upon the eleven specified classifications, I did not limit my observations during inspections to these eleven classifications.

5.4 In the decision of 5 April 1967, I said:

> 'I did not at any time say that I would limit myself in observation to the classifications due on a particular day for express observation.'(1)

5.5 On several occasions prior to this I had clearly told party and intervener that I would be 'keeping my eyes open' during inspections and I would not be necessarily limiting my investigation to chosen classifications.

5.6 However, I was of the view that I should first proceed to an analysis and evaluation of the work content of employees seen in the eleven classifications considered in relation to employees in other classifications and also in the perspective of their worth to the employer.

6. The Ten Classifications

6.1 No. 5—*Fitter*

6.1.1 As Commissioner alone, or with other members of the full bench, I inspected work being carried out or received public information concerning work that had been carried out by twenty-one fitters.

6.1.2. Naturally where conflict occurred between the unions and management as to what work, other than that seen by me, had been done, I applied my own tests to the problem.

6.1.3. This procedure applied to all classifications which I specifically examined.

6.1.4. Although some ranges of fitting work were perhaps more than adequately explored I consider that some fields were not effectively examined.

This is particularly true of the wide variety of work that a fitter does at his bench.

6.1.5. It seems in this, as in other certain areas of the inspections, that fault cannot be seated anywhere at the overall inability to see a full range of duties being done.

6.1.6. To commence with in the modern Australian industry the maintenance fitter has a very wide degree of responsibility for instant attention to any fault or failure of a greatly diversified range of highly productive machines, whether in the private or the public sector of industry.

6.1.7. It is part of his function to do all that lies in his power to limit the 'down-time' of such machines arising from mechanical breakdown.

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(1) *Ibid* at p. 49

6.1.8. It is obvious that an inspection party would have a better opportunity of acquainting itself with the degree of importance of the maintenance fitter's responsibility if it could have been so fortuitously arranged that an inspection coincided with an important mechanical breakdown. Except in minor degree mechanical breakdown did not occur during inspection.

6.1.9. I am satisfied that the true versatility of the competent fitter was not revealed on inspections.

6.1.10 In this, and particularly in regard to benchwork, I constantly had to remember that the inspections were being carried out while the wheels of industry were turning.

It seemed to me that the inspections should be conducted with the least possible dislocation to industry.

6.1.11 In short, employees were encouraged to show that work which they were actually carrying out in the normal course of their ordinary day's work. For this reason in particular, I considered that certain phases of a maintenance fitter's work were not examined in appropriate detail. This restriction applied also to bench work.

6.1.12 Much was made by some employers of the fact that they had developed a system of tooling 'spares' or machine spare parts—in some cases 'spare' production lines.

6.1.13 The implication was that in such a situation the responsibility of the fitter in connection with speedy adjustment, repair or renewal considered as a machine 'down-time' limitation factor, had been lessened.

6.1.14 While these effective production—bolstering techniques undoubtedly go a long way in the direction of eliminating 'down-time', it is questionable whether they reduce the ultimate responsibility of the fitter.

6.1.15 In the first case it is essential that a 'spare' production line be ready at all times instantly to become part of the production mechanism.

Without the maintenance fitter's attention there could be no guarantee of this.

6.1.16 With regard to tooling 'spares' or machine spare parts, it is evident that the modern tendency is for them to be held in stock and readily available for quick fitting in the event of mechanical breakdown.

6.1.17 However, much depends upon the versatility, knowledge and skill of the maintenance fitter.

Within the range of his knowledge the maintenance fitter must have a clear understanding of the technical problems inherent in new machines of varying designs and purposes.

6.1.18 In particular, it is evident that within the last ten years or so, many new special purpose machines have been absorbed into the Australian productive mechanism.

6.1.19 During the inspections I observed the work of what I recorded as twenty-one fitters in as many plants or workshops. Fourteen of these were positively identified by name.

6.1.20 Of the remaining unidentified seven, several were multiple observations which, for practical purposes, were recorded singly.

Where this was done it was because it was obvious that the values of the work seen—which in some cases was limited—were approximately equal.

6.1.21 Some of the higher grades of fitting work observed were to be seen at the following plants, workshops or projects:

Standard Telephones and Cables Ltd
S. T. Leigh Co. Pty Ltd
Cadbury-Fry-Pascall
Vickers Ruwolt Pty Ltd, and
The Hydro Electric Commission of Tasmania (Cluny/Repulse)

6.1.22 Some of the lower grades of fitting work observed were to be seen at the following plants:

Wyper Bros Ltd
Ronaldson Bros and Tippett Ltd, and
W. and T. Avery (Aust.) Pty Ltd

6.1.23 It is clear that a varying diversity of skill, responsibility, exercise of initiative and judgment and work features come into play in the work of a fitter, whether it be of an installation, maintenance or production nature.

6.1.24 Certainly a proportion of most fitters' work consists of the carrying out of relatively simple tasks with hand tools.

6.1.25 However I have faced and dealt with this problem in my decisions in re Elrington Engineering Co.[1] and James Hardie and Co.[2] In those decisions I quoted the judgment of the full bench of the Commonwealth Court of Conciliation and Arbitration in the matter of an Appeal from a decision of a Board of Reference (Drake-Brockman *C.J.* and Kelly and Foster *J.J.*)[3] and, in my view, demonstrated the essential validity of that judgment in its application to similar industrial problems of today.

6.1.26 Of course, on the other hand a fitter, particularly if he is engaged on installation or maintenance must be prepared to use his trade skills: skills which must be capable of adjustment to meet any contemporaneous test, whether arising from technological change, production variation or design alteration.

6.1.27 I am of the view if I were to consider the matter by bringing the judgment of an arbitratior to weigh the matter, that I would rate the overall work value of the fitter somewhat higher than is disclosed by the check lists.

6.1.28 The weighted mean average of the twenty-one markings made was 77.

6.1.29 Of his worth to the employer I say nothing at this point as I propose to deal with this factor generally with respect to the ten classifications principally reviewed.

6.1.30 I am satisfied that the Metal Trades Award, 1952, (the award) substantially undervalues the work and worth of the fitter.

6.2. *No.* 13—*Machinist—1st class*

6.2.1 As Commissioner, or in company with other members of the full bench, I inspected work being carried out or received public information concerning work that had been carried out by twenty machinists—1st class, twelve identified by name and eight observations, single or multiple, unidentified.

Generally I considered that the work of the classification in its widest extent was not surveyed.

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(1) 115 C.A.R. 65 (2) *Ibid* p. 1023 (3) 60 C.A.R. 685

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6.2.2 Certainly some very fine examples of the craft of the machinist—1st class were seen, but the position was too greatly obscured by the tendency of some employers to up-grade their employees in a manner that interfered with objective analysis. The right of such employers to take such action is not in any way questioned.

6.2.3 Some of the best work seen was being carried out at the following plants or workshops:

Bliss Welded Products Ltd
Vickers Ruwolt Pty Ltd
Sunbeam Corporation Ltd, and
The State Electricity Commission of Victoria.

6.2.4 Some of the lower quality work done by those graded by their employers as machinists—1st class was at Borg-Warner (Aust.) Ltd and at Ronaldson Bros and Tippett Ltd.

6.2.5 In particular I saw high quality work being carried out on a valuable component at Vickers Ruwolt Ltd by a machinist—1st class.

6.2.6 It occurs, both from the degree of knowledge and understanding that I have of the metal industries as well as from the lessons of the inspections, that there should be established a new classification to be termed, if present classification nomenclature is to be retained 'machinist—special class'.

6.2.7 I am aware that there may exist current practical difficulties why this course cannot be pursued. It is a matter for fine judgment, but undoubtedly there exists a certain range of high quality work being carried out within the range of the classification 'machinist—1st class' which should be segregated in a higher grade and specified by definition.

It is pointless further to dilate upon this point at this juncture until the matter has been further considered.

6.2.8 I am satisfied that generally such factors as the greater hardness of many alloy metals now widely used in industry, the greater cutting speed of modern machine tools such as those tipped with tungsten carbide allied to the increasing demand for finer tolerances call for much greater responsibility and finer appliances of skill on the part of many, now classified as 'machinist—1st class'.

6.2.9 Moreover the value of many components now being machined and the machines used is very great.

6.2.10 As one example, during the inspection at Vickers Ruwolt Pty Ltd on the 18 August 1967, the party was informed by Mr Brown, Engineering Production Manager, that the large vertical borer, which we saw machining a part for a mine winder, would cost something like $200,000 to $250,000 to replace.

He said that the part being machined cost round about $4,000 or $5.000.

6.2.11 Most importantly he said:

> 'I would say that out of the first class machinists we have there is a very small minority that I would be happy to put on this machine'.
>
> **(transcript p. 4553)**

6.2.12 Apart altogether from those doing work which I consider merits the establishment of a higher grade for many now classified as 'machinist—1st class' I am of the view that, like the fitter, the work of the machinist—1st class is substantially under-valued by the award.

6.2.13 The weighted mean average of the twenty markings I made of machinists —1st class in the check lists was 79.

6.2.14 Again, like the fitter, the whole of my experience in the metals industries and such judgment as I have cries out against the accuracy of such marking in relative terms.

6.2.15 In short there are, in a national exercise of this character, issues so wide and deep that I question whether they can be accurately reflected in markings of this kind.

6.3 *No.* 14—*Machinist—2nd class*

6.3.1 I recorded seven inspections, of 'machinist—2nd class', two only identified and five unidentified, either single or multiple. One was a female.

6.3.2 Here again it was obvious that the practice of a number of firms of paying scant attention to the definitive requirements of the award when placing employees in positions made the task quite difficult.

Let me repeat, for the last time, that I level no criticism at these firms.

One understands that desirable labour in various categories may be difficult to procure.

6.3.3 To me the only inspection of the work of a machinist—2nd class that was in any degree worth while was that at Westinghouse Brake (A/asia) Pty Ltd.

6.3.4 Even here the proceedings were clouded by dispute as to whether certain complex work had been taken away from the operator concerned and replaced by comparatively simple work.

Moreover, the disputed work was outside of the definition of machinist—2nd class, in that drawings came into consideration.

I called for the drawings of the work upon which the machinist had been engaged (L6/93—nine drawings).

6.3.5 While there was clear evidence that drilling and machining and a degree of machine setting was carried out, it was also evident that the machinist had been working from drawings. I was, and I am, inclined to agree with the comment then made by Mr Douglas that 'there are gaps in the award'.

6.3.6 Mr Douglas suggested that the inspection might furnish an example for the desirability of providing for a further classification to cover work falling above the area of machinist—2nd class but below the area of a tradesman.

6.3.7 While a number of the current definitions seem to me to be unsatisfactory and permit of 'gaps', it seems to me that many employers when faced with a practical work difficulty, or another sort of 'gap', would meet the difficulty, not by considering the terms of a remote definition, but by the intensely practical method of finding somebody there and then to do the required job.

6.3.8 That does not absolve the Commission from the responsibility of endeavouring to close 'gaps' in the award. However, I do not think that the creation of another class of machinist, apart from perhaps machinist—special class, would assist anybody.

6.3.9 Equally clearly, if a person classified as machinist—2nd class is required to work from drawings he should for that period be paid at a higher rate than a machinist—2nd class.

6.3.10 Definitions should be overhauled most carefully, but I would be loath to tamper with any of them in an arbitrary manner without considerable discussion with the representatives of those who continuously have to consider their effects—the employers and those employed by them.

6.3.11 Therefore, although the Westinghouse Brake inspection was in some degree worthwhile, there were difficulties.

6.3.12 Generally otherwise the work seen on inspections was below the calibre I had learned to expect from machinists—2nd class and was certainly not representative.

Principally the difficulty lay in the fact that most of those seen were not by definition machinists—2nd class.

6.3.13 The weighted mean average of the seven inspections of machinist—2nd class was 46.

This marking of the check lists fairly accurately measures, relatively, the work value seen on the inspections.

However, it falls lamentably short, in my judgment of the real worth of the truly representative machinist—2nd class.

6.3.14 I consider the worth of the work to be undervalued by the award.

6.4 *No. 15—Machinist—3rd class*

6.4.1 Nine inspections were noted of machinist—3rd class, four identified and five unidentified either single or multiple.

6.4.2 The very wide scope of the award definition was not explored in the inspections and consequently not a great range of work was seen.

6.4.3 It should be stated that, upon intimation that the parties were disposed to agree to the insertion of classifications for those engaged in the wiremaking industry, I have disregarded, for the present, such influences upon the work value of machinist—3rd class.

6.4.4 The higher range of work was seen on the inspections at Cyclone K-M Products Pty Ltd at Townsville and at Granville, while the lower range was observed at Borg-Warner (Aust.) Ltd.

6.4.5 The weighted mean average of the nine inspections of machinist—3rd class was 37.

I consider that the marking of the check lists reflects with reasonable accuracy, and relatively, the work seen on the inspections.

6.4.6 However, it does not, in my view provide a dependable gauge for assessment of the wage of a machinist—3rd class considered on a national basis.

6.4.7 Some of the real difficulty lies in the width of the range of work encompassed by the definition.

6.4.8 Most of the work carried out by most machinists—3rd class requires concentration and a reasonable knowledge of the machines that they are operating and the tasks that they are called upon to perform.

There is a residue of work that is simple in the extreme.

6.4.9 However, it is not uncommon to find equally wide variation in the degrees of skill and responsibility that a tradesman brings to bear upon the range of work that he is called upon to do.

6.4.10 I consider the worth of the work to be undervalued by the award.

6.5 *No. 20—Patternmaker*

6.5.1 Three inspections were made of Patternmaker, involving four pattern-makers, all identified.

6.5.2 Although perhaps a somewhat wider range might have been shown I considered that the examples of work seen were sufficient to demonstrate the scope, skill, techniques and responsibility of the work.

6.5.3 The appreciable and varied skills of the patternmaker have, in my view, assumed greater importance in modern industry.

6.5.4. A patternmaker is required to work skilfully in wood or latterly in fibre glass, plastic, aluminium or certain other metals.

6.5.5 In this connection, during the inspection at Vickers Ruwolt Pty Ltd on the 18 August 1967 the foreman of the pattern shop expressed the view with respect to wood, fibre glass and aluminium that each of them brought their own problems and that they brought out the versatility of the patternmaker.

6.5.6 During the course of this inspection I saw, by accident, some work which exemplified in high measure some of the intricacies of the fine skills of a pattern-maker working with hand tools.

6.5.7 Some distance away from the place in the patternshop which had been one of the focal points of the inspections, I observed a young patternmaker very intent upon some work that he was doing. He was using a spokeshave.

At the appropriate stage the party moved over to this place and I questioned the man.

He was using the spokeshave to shave off to within one sixty-fourth of an inch from a wear strip.

The wear strip was curved and the curve was slanted.

It was a very delicate exhibition of craftsman's work requiring the highest degree of concentration and skill.

6.5.8 A patternmaker must understand machining practice and moulding methods and must be able to do competent mechanical and sketch drawing. Apart from moulding methods, the patternmaker must have a sound general knowledge of foundry work.

6.5.9 In working from drawings the patternmaker must be exact, but must always be clear in his mind of the ultimate use for the product formed from his pattern. Therefore he must critically analyse everything that comes before him in terms of his experience and craft skill.

6.5.10 There is no doubt in my mind that the worth of the patternmaker is greatly undervalued by the award.

6.5.11 The weighted mean average of the check lists marking was 86, somewhat lower than my judgment tells me is warranted.

6.6 *No. 26—Toolmaker*

6.6.1 The work of sixteen toolmakers was examined, fourteen identified and two unidentified, single or multiple.

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6.6.2 All the evidence of such understanding as I have as to what has been and is occurring, suggests that the value of the toolmaker to industry is greater now than it was previously, in relative terms, and the likelihood is that the future will enhance this value.

6.6.3 The imperative need for closer tolerances to sustain, in one direction, the technical trend in certainly highly profitable consumer durable goods towards the world of the miniature, and in the other direction, the requirement for the exact fitting of complicated components, sometimes of appreciable size, renders the work of the Toolmaker of increased and increasing worth.

6.6.4 Some examples of the requirement of fine accuracy were seen at the inspection at Telephone and Electrical Industries Pty Ltd at Meadowbank.

6.6.5 In one case (transcript pp. 4127-32) I observed a toolmaker making a part of a progressive blanking die fitted into a bolster.

I was informed that all parts had to be within .0001 of an inch 'so that you cannot get multiple errors over that distance'.

I saw a number of examples of fine precision toolmaking during the same inspection.

6.6.6 I considered that the inspections provided a representative survey of toolmaking.

All of the work seen was of high quality.

6.6.7 The weighted mean average of the sixteen markings of check lists was 86. Although I deal with these matters generally it is significant that while the mean average disclosed by the markings was 86, both the mode and median average returned the same figure—86.

6.6.8 In this case I am satisfied that the check lists markings approached close to reality, although, when balanced by judgment, they are somewhat too low.

6.7 *No. 58—Welder—Special class*

6.7.1 Nine inspections were made of Welder—Special class, five identified, four unidentified, either single or multiple.

6.7.2. Again some appreciable difficulty arose out of the contrast between the rigidity imposed by the terms of the definition and the essential and immediate requirements of industry.

6.7.3. The definition at present appearing in clause 29 of the award reads:

> '(22) "Welder—special class" means a tradesman using electric arc and/ir oxy-acetylene equipment and who is required to, and is competent to, apply general trade experience in welding *all* the following classes of metals:
>
> Mild steel, stainless steel, cast iron, aluminium, copper, brass, diecast metal and magnesium.'

6.7.4. While the other requirements of the definition may have been complied with, it hardly seemed that I met with one case where a welder classified as 'Welder—Special class' was required to apply general trade experience in welding all the metals specified.

6.7.4 Yet all the 'Welders—Special class' whose work I carefully examined and whom I questioned were undoubtedly *competent to* apply general trade experience *if required.*

6.7.5 Industry in its modern setting is an extremely sensitive and necessarily highly flexible force. Its prime requirement is not rigidity but the very antithesis of it.

6.7.6 Understandably it is necessary to have rigidity and precision in definitions but it is also of prime importance to ensure that a definition is a servant not a master; a pliable and useful instrument or tool, not a dead hand or meaningless joss.

6.7.7 Jolting a definition back to reality is one matter—a matter which in my view should only be undertaken after close consultation with the representatives of the employers and employees.

Applying practical commonsense to a difficult industrial situation is another.

6.7.8 Definition or no definition I was confronted with a situation in which highly competent welders had been classified by their employers as 'Welder—Special class' and were carrying out high class welding work.

6.7.9 I considered, irrespective of the definition, that the work was worthy of classification as that of 'Welder—Special Class' and I examined it on that basis.

6.7.10 The quality of work seen was of almost uniformly high standard, although that seen at the Melesco Mfg Co. Ltd, the State Electricity Commission of Victoria (Yallourn) and the Gas and Fuel Corporation was very fine.

6.7.11 It is quite obvious that there have been wide technological changes in welding in industry over the last few years.

6.7.12 Although I am aware that rivetting is still used in certain areas—for instance for certain special purposes in shipbuilding, such as for certain centre frames in lengthy oil tankers—I did not see any rivetting throughout the inspection. I may say that I kept my eyes open for it.

6.7.13 In particular, pressure welding has come into high significance.

There has been a great development in boiler construction over the past few years.

6.7.14 During the inspection at Hazelwood Power Station we were informed that the boilers, vertically installed, were 250 feet high.

The power station superintendent informed us that steam was produced in the boiler at 1500 lb per square inch and 1050 degrees fahrenheit.

6.7.15 On many of the inspections it became apparent that pressure welding had assumed the highest importance yet there has been no application to provide for it in any of the welding definitions.

In fact the only place that pressure-vessel welding appears to get an award mention is in the definition of 'Boilermaker'.

That definition, in part, reads '. . . or boilers or other vessels subject to greater pressure than the weight of their contents . . .'.

6.7.16 I am satisfied that 'Welders—Special Class' and indeed 'Welders—1st class' are required to use quite a degree of judgment in their selection of electrodes, but particularly in the allowance they must make for the forces of expansion and contraction.

No drawing can effectively and precisely cover all eventualities in this regard, no matter what allowance a draftsman or designing engineer endeavours to attain.

6.7.17 This type of situation was very well brought out by Mr Cameron, Instructor of the Boilermaking Section, during our inspection of the Hobart Technical College on 24 August 1967.

The following appears at p. 4762 of the transcript:

> 'COMMISSIONER WINTER: A drawing that relates to a welding process in a heavy steel section, would that clearly indicate to the welder the sort of tolerance he would have to expect for expansion and contraction Would he know definitely how to work or would he have to pay particular attention to that problem:
>
> MR CAMERON: There are no hard and fast rules or table you can work to that covers those problems but these causes and their effects and the prevention of them; the measures we take to prevent this is that we teach them and in so many of the cases it rests on their own judgment.'

6.7.18 I am of the view that the work of the 'Welder—Special Class' is greatly undervalued by the award.

6.7.19 It seems to me to be imperative to make urgent provision in the appropriate welding definitions for pressure welding, perhaps with various pressure ranges quoted. Further it seems necessary in the manifest interests of both sides of industry to do something about the unhelpful verbal straitjackets of 'who is required to' and 'all'.

6.7.20 The weighted mean average of the markings of the check lists of the nine inspections was 89.

In this case I am of the view that the average of the markings of the check lists accords reasonably closely with my wider judgment.

6.8 *No. 7—Furnaceman—electric*

6.8.1 Three inspections were made of 'Furnaceman—electric', two identified and one unidentified, multiple.

6.8.2 The inspections were at Thomson and Scougall Industries Ltd, St Peters, M. G. John and Hattersley Ltd, Ballarat, and at Vickers Ruwolt Pty Ltd, Richmond.

6.8.3 All of the inspections disclosed that the furnaceman—electric had an appreciable degree of responsibility that no exercise of supervision could fairly claim to take away from him.

His work is carried out in exacting conditions of close proximity to great heat and he must continuously exercise considerable care, both in attention to the furnace and to ensure freedom from accident.

6.8.4 At the Ballarat inspection I recounted how the hands of a furnaceman—electric approached within one foot of an aperture door of a furnace:

> 'I witnessed the operation of loading or charging the furnace. The furnace door, when opened by a reasonably remote control, left an aperture of approximately 1 ft square. The furnaceman—electric, who had a face shield on and was wearing asbestos gloves, emptied fine material from two cans through the furnace door. In this operation on several occasions I saw his hands come within one foot of the furnace door. At times flames came through the furnace door. Then, by means of a shovel, he loaded material of a somewhat larger size into the furnace. In this operation his hands did not come any closer than a point of about 2 feet from the furnace door.'
>
> (transcript p. 4255)

Earlier the management had informed me that at the point of charging, the furnace temperature could be 1000 degrees centigrade.

6.8.5 The inspection at Richmond showed that, in spite of close and excellent metallurgical attention to furnace practice, the furnaceman—electric still retained considerable responsibility and necessarily exercised proper and appreciable discretion, a discretion born of long experience and training.

6.8.6 There was a difficulty encountered at the St Peters inspection arising from the fact that the English of the furnacemen—electric was too poor to stand up to the needs of an inspection.

6.8.7 Consequently, the supervisor described the process from the union point of view, while I witnessed the work being carried out by the employees concerned.

6.8.8 The weighted mean average of the markings of the check lists of the three inspections was 56.

My judgment would place the figure a little higher.

6.8.9 I have no doubt that the work is undervalued and comparatively undervalued.

6.9 *No.* 87—*Electrical fitter and/or armature winder*

6.9.1 There were 29 inspections of the classification termed herein 'Electrical fitter', 24 of them being identified by name and 5 being unidentified by name, single or multiple.

6.9.2 There was a fairly wide scope of the work done by an electrical fitter covered by the inspections but I am not satisfied that sufficient was seen of the really high range of this craft work.

6.9.3 There is hardly any industrial field which is in such a state of almost convulsive change as that in which the electrical tradesman is involved.

6.9.4 In these days of deep, rapid and accelerating technological change it is almost trite to say that any person engaged in industry and facing its technical problems must keep abreast continuously of significant innovations, must stay in tune with swiftly changing trends and be alert to the possibility of deep disturbance to, or even supercession of, cherished technical principles.

6.9.5 This ferment in industry touches most of the trades moving in the metal industries field.

6.9.6 As one example, the sheet metal trades face a great expansion in the use of materials such as stainless steel and aluminium with accompanying new techniques applying to the working of these materials and new uses for them.

6.9.7 I have referred to other changing factors affecting the skills, training, experience and responsibility of certain areas of the work of a fitter, a machinist, a patternmaker, a toolmaker and a welder.

6.9.8 In my view perhaps the greatest impact of technical, or technological, change has occurred within the province of the electrical tradesman.

6.9.9 Not only has there been this technical agitation in the theories to which the electrical tradesman must respond, but there has been a considerable turmoil of change boiling up in the practical area of industry.

6.9.10 The electrical tradesman is now more widely regarded as the industrial investigator who makes the initial diagnosis in the event of sudden and unexpected fault or failure in machine or production line.

6.9.11 Of course it is still true that, if it is apparent to a machine operator that a fault is clearly occasioned by a mechanical failure, the maintenance fitter would first be called.

6.9.12 Nevertheless, in the increasing technical complexity of industry it is logical that where doubt occurs the electrical tradesman should make the first diagnosis following fault or failure.

6.9.13 It must be remembered that in recent years there has been great industrial development of hydraulic and pneumatic as well as electrical techniques.

6.9.14 To be competent an electrical maintenance tradesman must have more than a nodding acquaintance with hydraulic and pneumatic power forms and of their application to the productive mechanism of the plant.

6.9.15 There is an increasing number of special purpose machine tools finding a way in fairly wide distribution into Australian secondary industry.

6.9.16 Many of these machine tools are quite complicated in design and construction although many of them may be relatively simple in purpose.

6.9.17 All, or almost all, of them are powered in some degree by electricity.

6.9.18 While the matter of primary power installation to machines of this character may be relatively simple to an electrical tradesman, the question of knowing and being able effectively to deal with all the wiring complications past the simple point of connection of the machine tool to the factory power line, is a much more complicated matter.

6.9.19 The argument, as often advanced, that the vendor of the machine tool furnishes full technical information of all the mechanical and electrical complications likely to be encountered, together with drawings and schematic diagrams, does not impress.

6.9.20 Neither does the argument that usually the vendor supplies highly qualified technical advisers to superintend the installation of what is usually an expensive item of equipment.

6.9.21 The important fact is that after the hurly-burly of successful installation is dissipated the electrical tradesmen are usually on their own in the event of breakdown, in spite of the availability of consultation.

6.9.22 The same is true, of course, of the maintenance fitter.

6.9.23 In the extremely sensitive and highly practical world of industry, where the emphasis is clearly and understandably upon production levels and maximum profit potential, machine 'down-time' is anathema to management.

6.9.24 In this practical world the competent maintenance tradesman, electrical or mechanical, is worth a great deal to management.

6.9.25 As industry attains to higher levels of technical merit, the value of the first class electrical or mechanical 'fault finder and fixer upper' will accrue appreciably.

6.9.26 I have thought it best to develop this theme initially unaccompanied by particular references to inspections.

6.9.27 The fact is, however, that this is the reality of the situation as disclosed by the inspections.

6.9.28 Nowhere during the inspections was this more clearly pronounced than in the inspections at Borg-Warner (Aust.) Ltd.

6.9.29 An electrical fitter whose work was one subject of inspection, informed me that there were approximately two thousand machine tools in the plant, most of which had electrical and hydraulic controls. Some had pneumatic controls.

6.9.30 At an earlier inspection of this plant I asked about this and had been informed by Mr Amedee that there were about two thousand machine tools in the plant.

6.9.31 The electrical fitter (Mr J. Lennon) told me that in the event of breakdowns where the cause was not known, the electrical fitters were called first to examine matters and, if possible, to rectify the fault or to effect repairs.

6.9.32 Mr Lennon said:

> 'It is our job to get flow lines going as soon as possible, to obviate unnecessary loss of production. There is no electrical engineer on the plant, consequently we are required to do electrical design and developmental work, mainly on new machinery within the plant.'
>
> (transcript p. 4184)

6.9.33 In direct answer to me Mr Lennon said that the foreman would very rarely examine a faulty machine.

6.9.34 I put a further direct question to Mr Lennon:

> 'THE COMMISSIONER: In the event of a machine failing, would an electrician be first called to diagnose the fault?
>
> MR LENNON: If the others do not know what the fault is, they usually call us; a lot depends on the foreman of the section, as to who he calls.'
>
> (transcript p. 4185)

6.9.35 Mr Lennon's statements were not disputed by the employers' representatives during inspection.

Commr Winter]

6.9.36 Further, the following was said:

'MR KEITH (MAINTENANCE ELECTRICAL FOREMAN): It is part of an electrical tradesman's duty to make any machine safe, whether the machine is designed here or overseas.

THE COMMISSIONER: Then in your view, Mr Keith, it is part of the responsibility of the electrical tradesman to ensure that any machine that depends on electrical energy is completely safe?

MR KEITH: Yes.' (transcript p. 4186)

6.9.37 The example provided by Borg-Warner (Aust.) Ltd. was seized upon in particular because of the fact that this factory provided the most emphatic instance of highly developed machine automation production, pointedly in the realm of transfer machines.

6.9.38 Consequently the inspection was that which, beyond others, brought out so clearly the relationship of the skilled maintenance tradesman to near continuous production in a modern factory—the prototype of current and pending industrial development.

6.9.39 Some of the higher ranges of work of the electrical tradesman were seen and described at inspections at A.R.C. Engineering (Q'land) Pty Ltd, International Combustion (Aust.) Ltd, Instrumentation Ltd, Aust. Aluminium Co. Ltd, W. D. and H. O. Wills, A.E.I. Engineering Pty Ltd, Borg-Warner (Aust.) Ltd, Cadbury-Fry-Pascall, the Hydro Electric Commission of Tasmania and the State Electricity Commission of Victoria.

6.9.40 Some of the lower ranges of work were seen and described at Email Ltd.

6.9.41 At A.R.C. Engineering (Q'land) Pty Ltd for instance, the electrical tradesman whose work was inspected, Mr Dodt, had very high responsibility for installation and maintenance work.

He did a wide range of highly skilled electrical work.

6.9.42 I noticed a Crouzet Valence instrument in the electrician's workshop and asked for what it was used.

The following exchange occurred:

'MR DODT: I am doing a check of the consistency of the time period of the mechanical time against that of the electronic timers on the fabric machines.

THE COMMISSIONER: Were you asked by your supervisor to do that or did you initiate it of your own accord.

MR DODT: The works manager and myself saw this machine and we thought we would be able to incorporate it here to some satisfaction for the company, but I had decided to do this on my own as a comparison.'

(transcript p. 2531)

6.9.43 It is of interest that Mr Dodt reported directly to the Works Manager.

6.9.44 Mr Dodt had completed a two year course in electronics at a technical college.

In his work he inspected and maintained electronic gear.

6.9.45 In the Instrumentation Ltd inspection at the Lake Munmorah Power Station site, I saw and heard described the work of an electrical fitter, Mr Baird.

Mr Baird worked on the electrical installation of important, intricate and valuable control gear, measuring and indication equipment, switch gear and panelling.

6.9.46 His installation work was associated mainly with boilers and turbines.

However he had worked on the installation of an electronic LM400 digital computor, which I saw in operation.

6.9.47 In such plants as Aust. Aluminium Co. Ltd, W. D. and H. O. Wills and Cadbury-Fry-Pascall I saw first class electrical tradesmen competently handling the installation and maintenance problems of costly, complicated and sensitive factories.

6.9.48 In each of these plants the electrical tradesman was exposed continuously to great pressure and high responsibility in an endeavour to limit 'down-time' of high-speed, automatic productive machinery to the irreducible minimum.

6.9.49 In these and similar plants the maintenance mechanical fitter also would be exposed to pressures of this nature.

6.9.50 There is one feature of the electrical tradesman's work which seems to me to be frequently glossed over.

I refer to the fact that he is dealing with a power which is invisible, usually silent, powerful but always menacing.

6.9.51 If the electrical tradesman does not learn through his training and experience continuously to analyse, examine, test, and concentrate he is worthless.

6.9.52 The electrical tradesman who does not so equip himself can be responsible for sudden death and serious injury to himself and others.

6.9.53 All tradesmen working with complicated machines in modern industry have this type of responsibility to a degree, but not to the degree encountered by the electrical tradesman.

6.9.54 It may be noted that I have throughout this section of my survey generally referred to the electrical tradesman, rather than to the electrical fitter or the electrical mechanic.

6.9.55 Throughout the inspections it was evident, whatever may once have been the position, that electrical fitters and electrical mechanics are generally interchangeable.

6.9.56 It was seen that electrical fitters worked on 'live' mechanisms, while electrical mechanics did fitting work.

6.9.57 The requirement that an electrical tradesman be licensed by the appropriate local electricity authority before working on a 'live' installation seemed to be universal.

Otherwise any strict demarcation seemed to be markedly absent.

6.9.58 In all the circumstances I do not consider that there is any further need for the Commission to differentiate between electrical fitter and electrical mechanic in designation.

6.9.59 This, together with half-hearted definitions, seems to be the only present practical difference.

The wage rates are identical.

6.9.60 It occurs that it would be better if the terms electrical fitter and electrical mechanic be dropped and the term electrician substituted for the electrical tradesman.

6.9.61 After all, the current award specifies certain tradesman classifications which include the word 'electrician'.

6.9.62 The mean weighted average of the electrical fitter (or mechanic) as disclosed by the check lists was 85.

This I consider to be somewhat below the level that my independent judgment would allocate.

However, the figure is not remote from reality. Indeed the figure approximates it.

6.9.63 I consider that the current award greatly undervalues the worth of the electrical tradesman.

6.9.64 There is clear evidence and in my view, logical justification for the establishment of a classification of 'Electrician—special class'.

6.9.65 The type of work being carried out by electrical tradesmen at such places as Borg-Warner (Aust.) Ltd, A.R.C. Engineering (Q'land) Pty Ltd and in the plants of other private employers mentioned in paragraph 6.9.39 bears eloquent and convincing testimony to the need.

6.9.66 Even if this field is considered not to warrant the establishment of a special class of electrician or electrical tradesman, there is clear warrantry for the creation of a special class of electrician to cover the work of tradesmen in the electronic field.

The worth of this work has never been valued under the terms of the award.

Although the word 'electronic' appears in the current award definition of 'The radio industry' there is no doubt that the implications of the term in its current usage are vastly different from those contemplated when the definition was inserted into the award.

Although the industrial inspections—such as that A.R.C. Engineering—were quite impressive where the skill and responsibility of the electrical tradesman came into play in the world of electronics, the technical college inspections were conclusive.

There was clear indication that an increasing number of electrical apprentices were receiving advanced tuition in electronic courses just as there is obvious evidence that industry is increasingly receptive to electronic techniques.

The inspections at the technical colleges made it evident that effective electronic courses are now in being, and that it is expected that these will become wider in response to the anticipated greater demands of industry.

A study of and competence in the electronic field requires intelligence, concentration, alertness and skill.

Information gleaned during the inspections bolstered that obtained from technical colleges.

6.9.67 However, I am aware that in this practical world the impractical realities of the past sometimes place heavy burdens and fix drag-chains upon desirable objectives.

Therefore I do not at this point reach positive conclusion upon this matter of electrician—special class.

I point to the evidence of my eyes, knowledge and experience.

I emphasise the logic of and justification for the establishment of a classification termed 'Electrician—special class'.

Nevertheless, I realise so clearly the illogical distrust of change, the vested concern of entrenched employer and union interests and the ominous possibility of a chain reaction of human emotion to this and similar desirable and progressive proposals.

6.9.68 Therefore at this point of review I do no more than intimate that I would seek further opportunity to consider the question.

6.10 *No.* 283—*Process Worker*

6.10.1 As I have previously said on two occasions during this inquiry:

'There is a whole world of industry in the field of the process worker alone'.

6.10.2 In attempting in any way to review this industrial field one inevitably is beset with intense difficulties.

6.10.3 Some of these stem from the very clear fact that the work of the process worker, so far as the award is concerned, has never been examined on any comprehensive basis.

6.10.4 The classification was inserted into the award in December, 1929,[1] by Beeby *J.*

6.10.5 This judgment of His Honour in making what was to become the Metal Trades Award, 1930, was clearly accented by depression overtones.

6.10.6 The whole of the judgment, in general terms, makes that clear.

6.10.7 When the position of process worker is concerned it is obvious that Beeby *J.* was trying to do two things:

1. Introduce a classification of labour that would assist the infant Australian manufacturing industry to compete with secondary imports; and
2. cushion the effects of the 1929-1937 economic depression.

6.10.8 In the sense of the economic theories current at that time and in the context of the great pressures being exerted upon the Australian economy and in particular upon our manufacturing industry the rectitude of the judge's thinking and the contemporary propriety of his course are understood.

6.10.9 The only justification for launching into consideration of such questions at this point of my review is that I found that I could not see the matter of the appropriate wage levels for process workers in true perspective until I had considered the history of the classification.

6.10.10 When I found that the classification had never been examined comprehensively on any sort of work value basis, and when I saw the fixing of the original rate was a depression legacy, a number of things became clearer to me.

6.10.11 I have studied the various judgments and decisions made since 1930 which broadly affected the process worker.

I cannot find any indication which suggests that the margins applying to the classification were reviewed within this award on other than an economic basis (except the review of Beeby *J.* in the second 1937 exercise), or which denotes that the work done within the classification was considered, or which intimates that the classification had ever been considered to any degree except by way of extension of the use of those employed within the classification.

6.10.12 I have encountered greater difficulty in coming to a decisive consideration with respect to process worker than in any other area.

This is not because of any uncertainty as to whether an increase is warranted —it is—but because of the exceedingly wide and flexible functions carried out within the scope of the classification.

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(1) 28 C.A. R. 923 at p. 1027

6.10.13 In my view it is economically and industrially desirable that there should be a classification of this nature which permits of flexibility, particularly in the Australian industrial environment which appears, in increasing degree, to be poised between small and large batch and mass production.

6.10.14 One would expect that natural population increase plus intensive immigration programmes and improving secondary export levels will gradually tip the industrial scales towards mass production in wider fields.

6.10.15 In the province of mass production the process worker is invaluable.

It is not too much to say that in Australian secondary industry in its present state of development, it is the process worker whose labour would return by far the greatest measure of profit to the employer.

6.10.16 I have found that there is a wide distinction between various levels of process workers performing duties of varying requirements.

6.10.17 Broadly, and very broadly, I think it is possible to divide process workers into three main groups:—

1. Those who do work requiring intense concentration of mind and eye, a high order of manual and digital dexterity and mental and bodily coordination, mainly in the field of the miniature.
2. Those who do work involving assembly and processing of components or units outside of the range of the miniature, where a considerable degree of concentration and coordination is still required, but where the emphasis is not so pronounced upon the necessity for digital dexterity.
3. Those who do work involving assembly and/or processing of units requiring minor concentration, some lesser degree of coordination, but in some cases a greater physical exertion.

6.10.18 Examples of the first group were to be seen during the inspections at Standard Telephones and Cables Pty Ltd, Telephone and Electrical Industries Pty Ltd, Amalgamated Wireless (A/asia) Ltd, Radio Corporation Pty Ltd and Amalgamated Wireless Valve Co. Pty Ltd.

6.10.19 Examples of the second group were seen during the inspections at Malleys Ltd, Containers Ltd, Gadsden Hughes Ltd, Northern Manufactures Pty Ltd and Willow Ware Pty Ltd.

6.10.20 Examples of the third group were seen during the inspections at Borg-Warner (Aust) Ltd, Lawrenson Alumasc and Efco Mfg Co. Ltd.

6.10.21 The inspections undertaken in which the first group were involved (examples: paragraph 6.10.18) were of absorbing interest.

In each case components and units were being made that had no place in Australian industry of 1930 or of 1952.

The whole emphasis to me was of intense concentration, of vital and efficient manual and digital dexterity and of fine coordination.

During the Amalgamated Wireless Valve Co Pty Ltd inspection the question of concentration came into discussion on several occasions. As examples, the following comments were made:

1. 'GALLAGHER *J.*: Manual dexterity is a basic requirement?
   MR SHAW (Assistant Works Manager): Yes.
   GALLAGHER *J.*: And concentration?
   MR SHAW: Yes, that is right.'

(transcript p. 4943)

2. COMMISSIONER WINTER: The process worker, as I commence to observe her, welds a fine connector which appears to be a little more than quarter of an inch long, with an infinitesimal width, the size of which I would like to get later. She picks up a connector bar, again slightly more than a quarter of an inch long, infinitesimal in depth and fairly measurable in width.

She welds the connector bar to the valve component, takes another connector bar and welds it. With the tweezers she slightly pulls the top of the connector bar askew and delicately fits the whisker connection into the minute sockets. She carefully presses down with the tweezers at either side and takes the socket mounting, inserts one component with the right hand into the cavity and with the left hand, with the aid of the tweezers, inserts the component into the bottom cavity. She presses together delicately and then welds around the circumference between the two sockets.

In each case she operates the weld with pedals, one to bring the jaws of the welder close together and then, with a final impulse on the pedal, completes the weld.

All the time she is very closely observing with extreme concentration all she is doing, as indeed she must, because of the very minute components with which she is working.

She is carefully inspecting the work she has done. Apparently there is a requirement in the operation that the delicate whiskers and connector bars be slanted at particular angles, bent at particular points, so that a cross-weld can be effected.

The welding process is continuously interlocked with the balance of the operation.

The process worker then places a collar on top of the new valve components and then welds it on top of the damper mica.

I have tried myself to pick up the section of damper mica with the tweezers and I found it an extremely difficult operation, I do not think I would earn a bonus.

Then she picks up the 'getter' which is a circular connection with a bar connection to the valve component and the inevitable welding occurs. Then the operator again subjects the completed valve to a careful inspection.

I think it important that the precise sizes of the various minute components used in this operation should be recorded and it would be appreciated if management could supply them to the Commission.'

(transcript p. 4949)

(This work description was undertaken at the invitation of the presiding judge, Gallagher *J.*)

3. 'GALLAGHER *J.*: I notice you are looking intently at your work as you are doing it. You have to do that, do you?
MRS MILLS: Yes.'

(transcript p. 4957)

4. MR CULLEN: Do you think it requires any different degree of concentration on the various jobs in the section?
MR WALKER (Receiving Valve Foreman): Well, yes, there is a different degree of concentration required. That is fairly obvious.

(transcript p. 4957)

5. MR CULLEN: Does the extent of concentration required have any effect on the accepted output of the girls?

   MR WALKER: Are you making allowances for mental strain or nervous stress?

   MR CULLEN: What I am putting is this: if the job is more of a strain and requires more concentration is there an allowance in the rate for some reduction in output, for example?

   MR WALKER: A material handling allowance is made.'

   (transcript p. 4957A)

6. MR SHAW: I think you could say fairly safely one of the main reasons they like to keep on a job once they are trained to it is the fact that they do not have to think too much whilst on the job. It becomes virtually automatic.

   MR WALKER: Yes; they can chat to each other and it does not interfere with their output.'

   (transcript p. 4956)

7. COMMISSIONER WINTER: I think it should be recorded that for a period of one minute I have observed a lot of the process workers at the rear of where I am standing and almost without exception they appear to be concentrating and I only saw three groups of two speaking to each other. I may have missed some but I observed fairly closely.'

   (transcript p. 4958)

6.10.22 It should be stated that at the AWV inspection I separately recorded on check lists the results of the inspection of fifteen identified process workers; there was one multiple recording of two identified process workers and two multiple recordings of unindentified process workers.

6.10.23 At the first inspection at Telephone and Electrical Industries Pty Ltd I separately recorded markings of ten identified process workers.

6.10.24 At this T.E.I. inspection I observed employees classified as process workers working from drawings.

This function is not covered by the definition of process worker and clearly the work was superior to that covered by the definition.

6.10.25 Mr Wilson, employed by the company as a process worker was the delegate for the Electrical Trades Union.

While I watched an operation Mr Wilson described it:

'Transmission Transformer Department:

MR WILSON: The first operation in this section is the winding and I suggest we start with that. Here we see a transformer being wound to a drawing which the operator has in front of her. She is using an Aumann winding machine. This present operation is on a rural carrier transformer.

The operator must obtain the correct wire from the store. She sets the wire to the right tension on the back of the springs so that she can wind the transformer correctly. The tension is set by fingers and a spring gauge. If the tension is not set correctly there could be a jumping action. The operator uses her fingers on the wire to get the correct tension and if it is .006 wire she uses six fingers and if it is .003 wire she uses three fingers.

By experience the operator gets to find out on which side each lead goes. She must know the position of the flying lead cuts, and this is shown on the drawing of the transformer. The diagrams show where these leads are to go.

THE COMMISSIONER: The drawing indicates that this is transformer TS4233 and it is dated 26 November 1964.

MR MC BRIDE: What information does the operator get from the drawing?

MR WILSON: She can see the position of the lead cuts. She gets the bobbin fixed and it is my job to check the first-off to see that it is correct. There is a mark on the bobbin called an identification mark. This is also shown on the drawing, and the operator is able to feel it.

THE COMMISSIONER: She would only look at the left hand side of the drawing, I presume?

MR WILSON: Yes, but she does get the sizes and colours from the other part of the drawing.

THE COMMISSIONER: There are winding instructions and other instructions concerning the coil printed on the drawing?

MR WILSON: Yes. The operator then works out that the green lead comes out on one side, as marked on the drawing. She would start off with blue and that blue wire will come out at about the centre of the bobbin, above the identification pip.

The operator will wind 200 turns, which will be shown on the counter, and she will, at the 200 turns, tap in the green. She must tap this without breaking the wire. She must come in and out without a break. When it is finished it will be 300 turns of the same wire and there will be 200 with the blue and another 100 with the green. The operator will then wrap a complete turn of electrical tape around it, and then continue in much the same way but with different colours.

THE COMMISSIONER: I notice that the operator is using a safety razor blade, a pair of tweezers, a pair of scissors, an electric soldering iron and another tool. What is that other tool?

MR WILSON: That is an Aumann twister.' (transcript pp. 3897, 3898)

6.10.26 The diameter of the wire in use came in for some consideration:

'THE COMMISSIONER: Do you work from both sides of the diagram, in your duties?

MR WILSON: Yes. I must check that the wire is correct, and here it is .00314 in. There is a difference between the medium and fine wires and I have to check that the correct wire is used.

MR GRAHAM: On this operation Mr Wilson would work from the left hand side of the sheet, and it is clearly marked by the manufacturer.

THE COMMISSIONER: Would that be the finest dimension wire worked with at this establishment?

MR WILSON: No. The smallest dimension wire worked here would be much smaller than that.

MR GRAHAM: The smallest would be .002 in, or maybe a little smaller.' (transcript p. 3898)

6.10.27 At the Liverpool inspection of Standard Telephones and Cables Pty Ltd, I first saw the use by process workers of binocular microscopes in the industrial world of the miniature.

The work that I most closely inspected was carried out in an air conditioned laboratory type workshop, designed to eliminate dust and temperature change. In fact Mr Jones, the manufacturing supervisor, described it as a laboratory.

I was informed that this plant was mainly engaged in the manufacture of radio transmission equipment.

A range of semi-conductors was manufactured in the laboratory I inspected.

Transistors and diodes or rectifiers were manufactured on separate production lines.

6.10.28 An important comment was made at an early stage of the inspection:

> 'MR MC BRIDE: My understanding of this process is that the speed at which the job is done depends to an extent upon the manipulative and visual ability of some of the operators but I acknowledge that once the machine is in process of welding it is the machine which determines the speed of the weld.
>
> MR JONES: I would agree with this.
>
> THE COMMISSIONER: Is there anything else you wanted to add, Mr Jones?
>
> MR JONES: Not really; that is a general outline of the procedure.'
>
> (transcript p. 4162)

6.10.29 The following discussion ensued at a point of inspection of the transistor production line:

> 'THE COMMISSIONER: How does the operator determine respective features?
>
> MR JONES: She does not. The device is programmed on the adjoining digitated programmer which can be set up according to parameters required; the parameters are determined by engineering staff, not the operator.
>
> THE COMMISSIONER: Then, what does the operator do?
>
> MR JONES: She positions the slice on the automated chuck so that it will coincide with two probes that come down and have to contact the two basic elements in each transistor dice on the slide.
>
> THE COMMISSIONER: The operator examines through a binocular microscope?
>
> MR JONES: Yes the microscope can be set in various fashions for differences between operators' eyes. The operator looks to see whether inkers are depositing ink, because the criterion in this examination is for the machine itself to decide which are reject and which are acceptable. The ones it rejects automatically receive a small dot of red ink. I show the inker.
>
> THE COMMISSIONER: While looking through the microscope, the operator uses her left hand on a panel, her right hand on a switch?
>
> MR JONES: That is so; and this is to stop and start the excursion of the mechanism when it gets to the end of one laneway. With her left hand she can make it shift to the next laneway. With the buttons she can make it reverse when it gets to the end of the laneway.
>
> MR MC BRIDE: If the machine is performing this semi-automatically, why is it necessary for the operator to look to view the process?
>
> MR JONES: Once the girl initiates a cycle, the machine is then right to complete the cycle. There is sometimes danger that ink in the pots will congeal and cease inking; that is the main reason the girl looks—so that too much of the operation is not done when the ink has dried.

THE COMMISSIONER: If by this visual examination the operator did not detect a fault or a failure, would this be picked up later?

MR JONES: Yes, it would be picked up by the automatic devices at the other end of the line. But then yield would come down, because the bad ones would have gone all through the line and reduce the yield of good devices.

MR MC BRIDE: Would the bad ones be put through all following processes before the fault was detected?

MR JONES: The size of the dice on these slices is .025 by .025 and the dot which goes on there must not be bigger. If it were, it would obliterate the neighbouring ones. They are magnified fifty times; this is not critical, but happens to be so on this machine. Some dice are smaller than others, being only 10 thou. by 10 thou.; therefore the dot is smaller.

MR MC BRIDE: Are they about 1 thou. in diameter?

MR JONES: No, they are bigger than that.

THE COMMISSIONER: I examined the process through the miscroscope. I saw a pair of needle crab-like claws, and that the slide moved consecutively to new partitions. There did not seem to be any irregularity, but occasionally a drop of violet ink appeared.'

(transcript pp. 4163, 4164)

6.10.30 In answer to Mr McBride Mr Jones informed me that the smallest article so far processed had been .015 of an inch by .010 of an inch.

He answered a question of mine by saying that the current output programme achieved completely within the laboratory and an adjacent test room was 65,000 finished transistors a month.

I observed that I saw sixteen female process workers in the room. Mr Jones told me that at the present level of output this was the normal operator complement.

6.10.31 In this group of process workers (paragraph 6.10.18) qualities of patience, concentration, dexterity, or rather ambidexterity, mental and physical co-ordination and a degree of judgment and selectivity are required.

6.10.32 It should be emphasised that in this range of process worker it is almost exhaustively the female who fulfils the requirements.

It is not too much to say that because of the essential requirements of manual and digital dexterity, the male almost disqualifies himself from employment in this exacting field.

6.10.33 Details of the period of training required before competent and speedy workmanship is achieved vary.

I am satisfied, depending upon the degree of aptitude, that a period of between three and six weeks is required to condition and train the process worker to a level of speedy and efficient production in this field on one production line.

6.10.34 It should be stressed that the essential basic ingredients are aptitude and ambidexterity. Experience and training achieves the rest.

6.10.35 It was clear without noticeable exception right throughout this field of manufacture of small electrical and electronic units, that a system of bonus payments, stated to be usually about 25 per cent of wages operated.

6.10.36 With regard to the second group (examples: paragraph 6.10.19) it should be said, while the intense emphasis upon concentration required for miniature production was not present, that some fine examples of very worthwhile work were seen.

6.10.37 The inspection at Malleys Ltd showed, for instance, a wide range of responsible duties being carried out by Mrs Hardy, a process worker.

She worked variously upon the assembly of iceboxes, refrigerators, washing machines. She also carried out certain electrical tests on refrigerators. This seemed to be outside the range of work to be expected of a process worker.

She answered my question by saying that she used screw drivers, rivetting guns, spray painting guns, files, pliers and indeed most tools.

During the period in which I watched Mrs Hardy carrying out refrigerator electrical tests, I asked Mr Wulff, Works Manager, certain questions:

> 'THE COMMISSIONER: In the event of the operator certifying these tests were all right would that be accepted or would they be subject to further tests?
>
> MR WULFF: The refrigerator does go on to another test, a 20 minute test, on the panel here. There is another test which would show up anything.
>
> THE COMMISSIONER: The efficiency of an operator here would probably save you quite a lot of time?
>
> MR WULFF: That is correct.'
>
> (transcript p. 3281)

Pages 3279 to 3283 inclusive make interesting reading concerning some of Mrs Hardy's duties.

6.10.38 The inspection at the plant of Willow Ware Pty Ltd was of considerable interest.

This factory manufactured metal and plastic houseware goods.

Mr Wilson, Joint Managing Director, in outlining the processes in the metal factory said, in part:

> 'MR WILSON: To understand this process we must realise we are dealing in the main with printed sheet. In metal working sheeting is printed first, therefore, you process a printed sheet through the various assembly lines or deep drawing lines in such a way the sheet is not scratched or the print and coatings do not come off the sheet. This requires far more care than if you are processing a sheet that has no finish on top of it.
>
> We process both types of sheet. In bakeware we have a sheet which is self-finished from our supplying mills. Our process is the common process, the guillotine cuts the sheet down as being a suitable size for the processing department. We have a press room and the function after the press room is to deep draw or stamp the sheets as various finished products or components.
>
> Finished products would be bakeware. Components of finished products would be bases or cans or lids for cans. These are then assembled at the assembly department.
>
> There are different techniques of assembly. If you have a round can, oblong or irregular, they require different techniques and machinery and different skills.'
>
> (transcript p. 4440)

Mr Wilson told Gallagher, *J.*, 'that there had been great technical changes over the past twenty years which was the period of his association with the business.'

In answer to Mr Heffernan, Mr Wilson said that the firm required process workers to be flexible:

> 'It is an unusual day that is the same as the day preceding in our manufacture of metal products, therefore, process workers can not only be skilled at the one job, we require a degree of skill on many jobs from them.'
>
> (transcript p. 4442)

Mr Wilson gave his opinion as to what the company required of a process worker:

> 'When we engage labour we are looking for a person, to the best of our ability, who has a good manual dexterity.
>
> . . . . . .
>
> He must be a person who likes to produce.
>
> He must have an innate rhythm.'
>
> (transcript p. 4443)

In answer to Mr Heffernan concerning the period required to train a process worker, Mr Wilson said:

> 'I think many of the production people's opinion here would differ on this point, but I would say four years would be my opinion if a process worker were introduced and their skill developed in the normal course of events. If I were asked what would be the minimum period which we could accelerate a higher degree of skill, I think that would be one year.'
>
> (transcript pp. 4443/4)

The following was then said:

> 'COMMISSIONER WINTER: You are speaking of somebody now who would have the aptitude to which you had selected him or her?
>
> MR WILSON: That is correct.
>
> GALLAGHER *J.*: It will be four years before you would say he is completely trained, is that the position?
>
> MR WILSON: What we would call an all-rounder.'
>
> (Transcript p. 4444)

In answer to Mr Cullen, Mr Wilson agreed that the operators in the plastics products manufacturing division would be similar to those engaged in the manufacture of metal products, except that (in answer to Mr Heffernan) he said that he did not expect the operators in the metal factory to have the same degree of skill as those in the plastics factory.

6.10.39 The inspections at Contains Ltd and Gadsden-Hughes Ltd highlighted the manufacture of can containers of liquids.

At Containers Ltd Mr Heywood, the Plant Manager, explained the methods used to train process workers for the particular requirements of the Company.

The Company has a system of internal designation providing for various grades of machinists recruited from process workers.

The following exchanges occurred:

> 'MR HEFFERNAN: I would like to ask how long the programme takes from process worker to machinist and from machinist through the machine setting stages.

MR HEYWOOD: This depends a great deal on the ability of the individual. We reckon about three years from grade 3 to grade 1.

MR HEFFERNAN: How long would it take normally to train a process worker to operate the various machines?

MR HEYWOOD: A process worker being transferred from the packing station to presses to go through the operations area would take approximately two months.'

(transcript pp. 3450/1)

Can producing lines that I saw had outputs of 350, 380 and 600 per minute respectively.

One female process worker was carrying out an inspection of the interior of the cans which massed before her at the rate of 380 cans a minute.

This of course required intense concentration.

Mr Heywood commented:

'It is not possible for 100 per cent concentration at all times and therefore cans will get through, but she is expected to get all the defective cans out of the batch if possible.'

(transcript p. 3456)

There was no doubt about responsibility being required.

At another station I observed two female process workers packing cans at the rate of 350 per minute between them.

I commented:

'I notice that both females seem to be able to pick up five cans in each hand at the one time, and frequently they were doing eight at the same time.'

(transcript p. 3458)

6.10.40 In connection with the third group (examples: paragraphs 6.10.20) the emphasis upon high concentration lessened.

However, that is not to say that inattention to work was a concomitant.

It was obvious that concentration was still necessary, but the work features were not so exacting as in the first two groupings of process workers.

6.10.41 At the Borg-Warner (Aust.) plant on the inspection of 13 July 1967, I inspected the work of a number of female process workers employed in the automatic transmission machinery section.

They were at the time working on a flow line producing components termed forward sun gear.

I was informed that the female process workers operated the automatic machines and used fixed gauges on the components.

The process workers each operated several machines in the flow line.

At my request Mr Amedee, General Manager (Manufacturing), informed me that on the line being observed the process workers operated a Churchill facing and centring machine, a Sunstrand multi-tool lathe and an S pilot (Transpilote) copy lathe.

Other machine tools included a Norton grinding machine, an Avey automatic drilling machine, a Borg-Warner dunk type washing machine and a Hahn and Kolb multi-spindle automatic drilling machine.

6.10.42 At the Lawrenson Alumasc factory I inspected the work of male and female process workers which consisted principally of press trimming, drilling, tapping and manual operations such as de-burring.

The Company specialises in contract die-casting of zinc, aluminium and brass components for manufacturers of motor vehicles, household appliances and various other industrial products.

I saw process workers using:

(a) An automatic drill;
(b) a rotary burr;
(c) hand tools in deburring;
(d) a trice bath and a hammer in a de-greasing operation;
(e) a light press to process a component for a washing machine.

6.10.43 At the factory of the Efco Mfg Co. Ltd, which manufactures builders' hardware and refrigeration fittings, the Commission saw process workers working:

(a) On a latch assembly;
(b) on a schlage type lock;
(c) on a lock assembly;
(d) on a knife sharpener assembly; and
(e) on die cast door furniture assembly.

We were told by Mr Toovey, Production Manager, and Mr Thatcher, Works Manager, that the female process worker we saw working on the lock assembly turned out about 400 units a day each of which sold retail for about $1.20. Mr Toovey pointed out that pressings had first to be made and plastic parts moulded on.

Mr Thatcher informed the Commission that the female process workers working on units of die cast door furniture were producing an average between 500 and 600 sets per person per day.

6.10.44 The weighted mean average of process workers recorded on check lists was 51. This stemmed from 53 recordings, 34 being identified observations and 19 being unidentified, either single or multiple.

6.10.45 It is clear that the work of all process workers is undervalued; that in the higher echelon appreciably so.

6.10.46 It seems palpable to me that the reality is that there are at least three distinct levels of process workers, segregated generally in the manner indicated in paragraph 6.10.17 herein and illustrated by subsequent comparison.

However, I am well aware that reality and practicality do not always mesh.

There is little doubt but that there is ethically clear scope for at least one division of the present classification.

When the question of practicality comes into consideration the unfortunate fact that the real work value of process workers has never been examined in the thirty seven years of the classification's being is thrown into high relief.

A substantial and effective drag to drastic and necessary progressive action has gradually and imperceptibly developed and will take time to dissipate.

As with other classifications which I believe realistically require attention of this nature but which intention encounters practical difficulty I would wish to consider this question further.

7—THE OTHER CLASSIFICATIONS

7.1 In my decision of 5 April 1967[1], in this matter I selected eleven classifications, including 'Storeman and/or Packer' together with adult female employees whose margins were at that time prescribed in sub-clause (b) of clause 4 of the award as being those classifications upon which 'I shall concentrate from now on.'

In my announcement (No. 2) of 6 August 1966 I stated:

> 'It is clear that in order to complete its task with the minimum of delay and with the maximum of expedition it will be necessary for the Commission to limit the inspections to consideration of what may be termed pilot classifications.'

The procedure then envisaged by me has never in practice been departed from, even before the turn of events led me to take the selective action of 5 April 1967.

More than once I warned the parties that 'I was keeping my eyes open' and that I was not necessarily confining my observations during inspections to attention to the work of selected classifications.

7.2 This procedure was generally in conformity with the type of measure proposed by Mr Robinson (transcript pp. 2507/8), accepted by Mr Fowler[2], advanced by Mr McBride[3], adopted in principle by Mr Keely[4] and certainly not seriously opposed by Mr Aird[5].

7.3 Prior to my decision of 5 April 1967, which indicated future inspection concentration on certain classifications, I had inspected a number of classifications outside of the range of the chosen eleven.

Some of these other classifications had been inspected, some reasonably comprehensively.

Nevertheless, I consider that in this survey I should only deal in detail with the eleven classifications (less 'Storemen and/or packer') that I had selected.

7.4 It is clear from paragraph 7.2 hereof that all the principals at the bar table believed that it was possible ultimately to determine proper wage levels for all classifications from an examination of a few. Mr McBride, for example, considered in the first instance that this might be possible from a survey of four classifications.

Later he went further than this by declaring that it might be possible to set the wage rates of all from an initial consideration of two—the electrical fitter and the process worker.

7.5 From what has gone before in this section (7) of my review it may readily be seen that I never relinquished my intention to use pilot classifications to determine not only work characteristics and their value for these specified classifications, but to use them to make wide and related decisions.

7.6 It appeared to me that many classifications could properly have their values determined either in the wake of the pilot classifications or flowing in the current astern of substantial inspections made of other than pilot classifications.

I must of course in all things rely to some extent upon the experience I have had in this assignment in assessing the value of any classification, whether seen during the inspections or not.

7.7 The following tabulation expresses a relationship pattern which could assist in reaching a conclusion as to proper wage levels.

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(1) 118 C.A.R. 31 (2) *Ibid* at p. 37 (3) *Ibid* at p. 34 (4) *Ibid* at pp. 41 and 42 (5) *Ibid* at p. 38

7.8

Pilot classifications and others inspected			In the wake
Number	Item	Classification	Classification
		Division A—General Engineering, etc.	
1	5	Fitter	All other classifications within the Division
2	13	Machinist—1st class	
3	14	Machinist—2nd class	
4	15	Machinist—3rd class	
5	20	Patternmaker	
6	26	Toolmaker	
7	27	Turner	
		Division B—Smithing	
8	45	Smith, other	All other classifications within the Division
		Division C—Boilermaking and Steel Construction	
9	49	Boilermaker and/or structural steel tradesman	All other classifications within the Division
10	55	Marker off	
		Division D—Welding	
11	58	Welder—Special class	All other classifications within the Division
12	59	Welder—1st class	
		Division E—Foundry	
13	66	Dresser and grinder (when using portable machine)	All other classifications within the Division
14	70	Furnaceman—electric	
15	72	Jobbing moulder and/or coremaker	
		Division F—Electroplating	
		No inspections	Nil, but may be fixed on relativity basis
		Division FA—Silverplated Ware	
		No inspections	Nil, but may be fixed on relativity basis

Pilot classifications and others inspected			In the wake
Number	Item	Classification	Classification
		Division G—Electrical	
		(*a*) *General*	
16	87	Electrical fitter and/or armature winder	All other classifications within the Sub-Division
		(*b*) *Radio Section*	
		No inspections	All classifications may be determined from consideration of electrical fitter
		(*c*) *Wet Battery Manufacturing*	
		No inspections	All classifications may be determined from consideration of electrical fitter
		Division GA—Tradesman not elsewhere specified	
		No inspections	The rate can be determined from consideration of other tradesmen
		Division H—Sheet Metal	
		(*a*) *Sheet Metal Section*	
10	126	Sheet metal worker (1st class)	All other classifications within the Sub-Division
11	129	Die setter	
12	130	Die setter—press operator working from blue prints or plans	
13	139	Press operator—light	
		(*b*) *Canister Making Section*	
		No inspections	The rates can be determined from a comparison of the relationships with Sub-Division (*a*)
		(*c*) *Painting and Japanning Section*	
		No inspections	The rates can be determined from a comparison of the relationships with Sub-Division (*a*)
		Division I—Galvanising	
		Brief inspections at several points	It may be possible to determine rates on combination of inspections and a relativity basis
		Division J—Porcelain Enamelling	
14	185	Duster	Nil, but may be fixed on a relativity basis
		Division K—Stovemaking	
		No inspections	It should be possible to determine rates on a basis or relativity with rates fixed in Divisions A and O

Pilot classifications and others inspected			In the wake
Number	Item	Classification	Classification
		Division KA—Cast Iron Gas Meters and Repairers	
		No inspections	The Division should be placed in the appendix
		Division L—Steel Pipe Making	
		No inspections	Nil, but may be fixed on a relativity basis
		Division M—Plastic Moulding	
		No inspections, although I carried out thorough inspections when inserting the classifications in the award	It should be possible to determine rates on a relativity basis
		Division N—Electrical Advertising and Fluorescent Lighting	
		No inspections	Nil, but may be fixed on a relativity basis
		Division NA—Metters Ltd.	
		No inspections	The Division should be placed in the appendix
		Division NB—T. S. Malleable Pty Ltd	
		Inspection at St. Peters only but not of these classifications	The Division should be placed in the appendix
		Division NC—Bradford Kendall Ltd	
		No specific inspection of the classification, although I have had several inspections of it	The Division should be placed in the appendix
		Division O—Ironworking and General	
15	261	Dogman and/or crane chaser	All other classifications within the Division
16	262	Dresser and grinder (when using portable machine)	
17	268	Furnaceman—electric	
18	283	Process worker	
19	291	Other employees with not less than three months experience in the metal trades industry	

8—GENERAL

Revision of Check List Marking

8.1 In the first place it should be said that I was constantly revising earlier markings in the light of newly acquired information or as a result of the testing of one marking against another.

Commr Winter]

In this revision, as in the primary marking, I endeavoured to be careful to keep any influence of separate, independent judgment or assessment based on factors weighed separately, distinct from the marking procedure.

This revision was simply a process of continuous evaluation or revaluation in what I tried to maintain as true perspective as the number of inspections grew.

However, it was found that a minor number of markings were subjected to this later adjustment.

Comparison of Job Evaluation Marking with Independent Judgment

8.2 I consider it pertinent and necessary at this juncture to express a comparison of the results secured from the check lists with a judgment estimate represented in a similar arithmetical manner.

I find it not only helpful to do this, but I believe that it will make the comparison clearer to those who read this.

Naturally, both results, whether achieved by marking or arrived at by judgment are equally susceptible to my human fallibility.

In the case of the markings I was confined by definitions, by the constituents of the work value elements and by the compression into at most five and at least three comparative degrees of estimating the quality of work value elements.

In the case of the results based on judgment all the roving qualities of experience, memory, understanding and balance, for example, came into play.

Again it is necessary to remember that these qualities in varying degree, are, like the check lists marking, prone to human error.

Nevertheless, I am disposed to have greater faith in the judgment analysis, particularly when the selection and formation of the structure of the check lists were unaccompanied by wide debate and acceptance.

I have expressed the results of the check lists markings in terms of mean, mode and median average.

Thus, I think, a clearer understanding is possible. Of course it is not possible to do this when it comes to the judgment analysis. Such an attempt would involve altogether too much supposition and arbitrary guesswork.

If the judgment analysis is accepted as being a reasoned, fair and honest attempt to measure accurately many evasive factors, it may be seen that the check lists markings came through the test fairly well.

Admittedly in each case my own standards are the only weights on the scales.

I have come to the conclusion that while the check lists system of measurement is and has been of assistance in this exercise, it has not been decisive.

Whether it would be decisive in a field less widespread and complicated than that covered by the Metal Trades Award is not for me to say. It is possible.

It is however competent for me to express the opinion that such a system would be of value to trade unions and employers in the processes of attempting to reach agreement upon difficult issues within one or several closely related plants where identical or closely similar managerial procedures are observed throughout all departments or over all factories in the group.

Clearly, it would be of advantage to such experiment if only the one ownership was involved.

Finally, it is obvious that a considerable amount of prejudice—not on one side only—surrounds the question of job evaluation.

One questions whether the Australian system of compulsory industrial arbitration is presently suitable, without considerable prior study and testing, for the adoption of any of the currently accepted methods of job evaluation as decisive factors.

However it is not too much to say that it is considered that further study and experiment is justified.

Moreover it is also considered that a trial of various techniques of job evaluation in private negotiation could be richly rewarding.

8.3 *Check List Analysis*

Number	Classification	Number inspected	Total points	Mean average	Mode average	Median average
5	Fitter	21	1,617	77	83, 76 and 69 equal	76
13	Machinist—1st class	20	1,574	79	86	83
14	Machinist—2nd class	7	323	46	37	40
15	Machinist—3rd class	9	332	37	30	38
20	Patternmaker	4	342	86	86	86
26	Toolmaker	16	1,372	86	86	86
58	Welder—Special class	9	802	89	90	90
70	Furnaceman—Electric	3	168	56	..	53
87	Electrical fitter and/or armature winder	29	2,451	85	88	87
283	Process worker	53	2,726	51	52	52

8.4 *Judgment Analysis*

Number	Classification	Higher range	Medium range	Lower range
		Estimated mean average	Estimated mean average	Estimated mean average
5	Fitter	82	80	..
13	Machinist—1st class	85	80	..
14	Machinist—2nd class	70	..	..
15	Machinist—3rd class	50	..	..
20	Patternmaker	90	..	..
26	Toolmaker	90	..	..
58	Welder—Special class	85	..	..
70	Furnaceman—Electric	60	..	..
87	Electrical fitter and/or armature winder	85	80	..
283	Process worker	50	40	30

Comment on Judgment Analysis

8.5 It should be explained that whereas I consider that it was clearly established that there are in fact two distinct ranges of electrical fitters, fitters and machinists —1st class, I am of the view that toolmakers, patternmakers and welders—special class are indivisible.

Outside of the tradesmen class I believe that machinists—2nd class and 3rd class are similarly indivisible though each may move from a relatively simple job to one of greater work demand and *vice versa.*

Commr Winter]

For reasons set out earlier herein I am convinced that there are in fact three echelons of process workers.

However, in conformity with what I said earlier herein I am of the view that other and countervailing factors require mature consideration.

Classifications Inspected Other than Those Selected

8.6 Prior to my decision of 5 April 1967, wherein I intimated that from that point I would concentrate on the eleven classifications I then specified, I had made thorough inspections of a number of other classifications such as Welder—1st class, Dogman and/or crane chaser and Sheet metal worker—1st class.

Also there were several equally thorough albeit solitary inspections of some other classifications such as Die setter press operator (blue prints etc.), Die setter and Duster.

While, in view of my deliberate selection of certain specific classifications, it seems that in this survey I should limit detailed consideration to those specific classifications, it also occurs that it is desirable that my views concerning these supplementary classifications, the work of which I inspected on one or more occasions, should be available.

Exempting the storeman and/or packer the following expresses the result of my check lists marking made on inspections of these supplementary classifications as well as my separate judgment analysis.

Number	Classification	Number inspected	Total points (weighted)	Mean average	Mode average	Median average	Judgment analysis
139	Press operator (light) ..	1	42	42	42	42	50
261	Dogman and/or crane chaser	4	239	60	..	..	60
59	Welder—1st class ..	8	636	80	86	82	82
66	Dresser and/or grinder (portable machine) ..	4	174	44	41	43	50
27	Turner	1	79	79	79	79	82
49	Boilermaker and/or structural steel tradesman ..	6	477	80	..	84	82
45	Smith—other	3	225	75	75	75	82
55	Marker off	2	174	87	..	..	85
130	Die setter press operator (blue prints etc.) ..	1	74	74	74	74	78
72	Jobbing moulder and/or coremaker	3	234	78	76	..	82
129	Die setter	1	67	67	67	67	70
291	Other employees (after 3 months)	1	43	43	43	43	40
126	Sheet metal worker—1st class	3	230	77	..	73	82
185	Duster	1	65	65	65	65	70

Definitions and Inspections

8.7 Originally I debated with myself as to whether I should insist, during inspections, upon confining my attention to the work of those, who in their qualifications or in the nature of the work being done, conformed to the requirements of the definitions.

Of the ten classifications effectively selected, nine are covered by definition.

Only the furnaceman—electric escaped definition.

However the so-called definition of patternmaker is not in fact a definition at all, while I have earlier herein dealt with the deficiencies of the definition applying to welder-special class.

Upon reflection, I decided that if I insisted on running the gauge of strict definition over all whom I was called upon to inspect, I would waste considerable time.

Moreover, and much more importantly, I would lose a bright opportunity to discover the realities of the strict application or otherwise of the fixed gauge of a definition within the metal industries.

As pointed out earlier herein the reality is that a hard pressed supervisor does not look around for a definition; he gets a man to do a job, whether the industrial officer likes it or not.

Consequently, I took things as I found them and measured them in that fashion.

That is, if a man described as a machinist—1st class was palpably doing the work of a machinist—2nd class I marked the check lists according to the standard of the work being done and formed my independent judgment making due allowance for the circumstances.

The functions, operations and performances of industry must necessarily be sensitive to all kinds of incessant change and consequently must be highly flexible and effectively resilient.

Such factors as primary shortage of labour and secondary shortage of labour, stemming from turnover, illness, long service or annual leave, industrial or other accident, and absenteeism all tend to put managements', and often unions', concern with definitions either into the discard or at the back of the top shelf.

Often, a definition only becomes important when an industrial dispute blazes.

8.8 *Technological Advancement*

8.8.1 The fact of technological advancement was disclosed more by secondary evidence accumulated during inspections by consideration of changed and changing work processes than by direct primary indication.

8.8.2 Certainly I was frequently informed during inspections, in answer to questions from me or others, of the fact that this or that type of machine tool, or product, or equipment, or instrument, or materials, or mechanism, or process, or technique had been introduced or been used or produced in a particular plant later than, say, 1952; or that this or that kind, or degree or type of requirement or demand had come into being in recent years.

8.8.3 As examples of new types of machines may be cited the pantagraph and optical grinder (Sunbeam Corporation Ltd), the multi-head profile cutter (various plants and workshops), transfer machines and flow-line machine arrangement, hydroptic jig borer (Borg-Warner) Aust Ltd, hobbing machines (various plants and technical colleges), tape programmed machines (W. D. and H. O. Wills—S. T. Leigh Co. Pty Ltd) and Schulyer press (Amalgamated Wireless (A/sia) Ltd).

8.8.4 Among new types of equipment, instruments or mechanisms may be instanced a whole exciting range such as mammoth high-pressure boilers (installed and being installed at Lake Munmorah Power Station and Hazelwood Power

Station), computers (Lake Munmorah Power Station, Standard Telephones and Cables (Liverpool), cathode ray oscilloscopes (various plants and technical colleges), and various electronic devices such as semi conductors, diodes, thyratrons, electrical-eye beams, better electric switch gear and equipment.

8.8.5 Examples of new processes, techniques, or requirements that have entered industry are automatic production lines (Containers Ltd and Gadsden-Hughes Ltd); automatic flow lines (Borg-Warner (Aust) Ltd); those associated with miniaturisation in the electronic field—binocular microscopes, air conditioned workshop—laboratories, working with wire of infinitely narrow diameter, miniature welding equipment—(one or other or all seen at various plants such as Standard Telephones and Cables, Amalgamated Wireless, Amalgamated Wireless Valve Co., Radio Corporation and Telephone and Electric Industries Ltd); better welding techniques to cope with high-pressure vessels and to meet other demands of modern industry (Hazelwood Power Station, Gas and Fuel Corporation, Melesco Ltd, Steelweld Ltd), the demand for finer engineering tolerances (toolmaking at Telephone and Electrical Industries Ltd, and at Sunbeam Corporation Ltd; machining at Vickers Ruwolt Pty Ltd; fitting at W. D. and H. O. Wills (Aust) Ltd and Cadbury-Fry-Pascall (Aust) Ltd), and for much closer electrical clearances (electrical fittings at the University of Townsville, W. D. and H. O. Wills, S. T. Leigh, Cadbury-Fry-Pascall, Lake Munmorah Power Station and Hazelwood Power Station); New processes and techniques to fashion and form stainless steel and aluminium in sheet metal operations and an automatic plating plant (Joseph Lucas Ltd).

8.8.6 A wide range of new materials, or new uses for them, have come into industry over the past few years, as, for example, plastics (Monsanto Ltd, Willow Ware Pty Ltd, Sunbeam Corporation Ltd, Telephone and Electrical Industries Ltd etc.), aluminium and stainless steel and various new and harder metal alloys (engineering generally), harder engineering cutting tools (tungsten carbide, generally) giving higher cutting speeds.

8.8.7 Although few computers were seen during the inspections there was a degree of evidence of the industrial effect of computers lurking in the background.

This was evident during inspections at Lake Munmorah Power Station, Standard Telephone and Cables Ltd, W. D. and H. O. Wills (Aust) Ltd—S. T. Leigh Co. Pty Ltd, to name several.

8.8.8. Direct inspection and consideration of the work of an appreciable proportion of fitters, machinists 1st class, electrical fitters, welders—special class, toolmakers and process workers provided all the emphasis necessary to convince that deep and effective technological change has affected Australian secondary industry, at least in the metal industries.

8.8.9 Undeniably, some work processes have been rendered simpler by technical innovation, but it would appear that there are greater demands upon the skill, experience, responsibility training and aptitude of the tradesman because of change.

However, the story does not end there, even with respect to the simpler work processes.

8.9 *Management and Supervisory Evolution*

8.9.1 It is evident that managerial planning in recent years has caused appreciable change in certain aspects of industrial control.

8.9.2 Undoubtedly in the region of supervision there is a strong tendency, in the larger factories, to extend supervisory control by means of better trained, more efficient, and a higher ratio of, supervisors.

8.9.3 Also, again in the larger and more efficient factories, industrial draftsmen or design engineers come more closely into direct contact with tradesmen than they used to do.

Whereas the tradesman was once given one complicated drawing, the aim now is to provide him with a large number of sectionalised drawings showing in larger and greater detail the components of the unit to be made, machined or otherwise formed.

8.9.4 I am far from convinced, so far as the tradesman is concerned, that these two techniques detract in any way from his responsibility or curtail the exercise of his trade skills.

8.9.5 So far as more intimate supervision is concerned, it cannot and does not operate to the point where it in any discernable way interferes with the actual carrying out of the work.

The supervisor may advise and point the way but he does not do the work.

8.9.6. In any case I observed that there is a strong, and readily understandable, tendency among tradesmen of the one craft to discuss their technical problems with each other.

On several occasions, in the byways of the inspections, I saw this age-old practice being observed.

8.9.7 With respect to the effect of the draughtsman and the breakdown of a drawing it became very obvious that this is a two way traffic.

Certainly the tradesman is given, as he should be given, the best tools—and in this sense I regard a drawing as a tool—to enable him to do his work to the best of his ability.

However, the inspections made it evident that mistakes, in design or dimension, communicated to the tradesman by way of drawing were frequently detected by tradesmen.

On a number of occasions during the inspections it was made quite clear that this 'two-way traffic' operated or had ample opportunity to operate.

8.9.8 It may be sufficient if I point to the examples provided by the inspections at McColl Electric Works Pty Ltd and at Standard Waygood Ltd.

8.9.9 At the McColl plant, Mr Kemp, Managing Director, was showing the inspecting party through the engineering section.

He explained that in the section there were five or six professional engineers who worked with a number of draughtsmen.

It was the responsibility of the engineers to work out a design to meet particular requirements and pass the design to the draughtsmen to get a lay-out and working drawings.

Mr Kemp then said:

> 'They have to convey the engineer's design into drawings. You can get pretty complicated circuits and these have to be worked out. When the drawings are completed, they are the documents that go to the tradesmen who have to have the necessary technical knowledge to carry out the work, to put the job in commission.'
>
> (transcript p. 4416)

Mr Fitzpatrick, electrical fitter, explained how he worked in conjunction with a professional engineer on a particular project:

> 'One of the engineers here, Mr Brian Girling, and I are working on a prototype diesel control wind generator set for a micro-wave radio link between Western Australia and Adelaide. It has to be tested and proved and accepted before it can go into full production.'
>
> (transcript p. 4417)

In answer to Mr Justice Gallagher Mr Fitzpatrick said that:

1. The engineer lays out what is required in the cubicle and 'leaves it to me to set it up';
2. The engineer does not tell him how to do the job.

The following exchange then occurred:

> 'COMMISSIONER WINTER: In the course of that type of development (prototype) trial and error, would it occur that the electrical fitter would, after testing whether or not this or that proposition worked, go back and advise the engineer?
>
> MR KEMP: The engineer in general will be wanting to know certain results and he would expect the fitter to come to him and tell him. It is the engineer's responsibility then to take some other step if necessary.
>
> COMMISSIONER WINTER: He would make some modifications to (on) the response he would receive from the electrical fitter, is that correct?
>
> MR KEMP: That is true.
>
> MR MCBRIDE: Mr Fitzpatrick will be showing how he has recommended changes on the job.
>
> MR KEMP: We do encourage all our people to make suggestions to improve production, output, quality and performance.'
>
> (transcript p. 4417)

8.9.10 At the Standard Waygood plant Mr Stairmand, Chief Engineer in charge of the drawing office, in taking the party through the engineering section explained that in the section was prepared all the necessary information to allow the drawing office personnel to complete the necessary drawings and material lists. Also the section arranged for the preparation of descriptions for the purchase of any special items required for the manufacture of the product.

Mr Stairmand selected at random a drawing for a transformer tank.

The drawing was identified by him as 7B 1268-002, and was for 42 components. He said that it was for a current job.

Mr Hing, Manufacturing Manager, then escorted the party through the production control section where, he said, information was received from the design office in the form of material lists and drawings.

Comprehensive material schedules were then prepared.

In answer to my question as to whether any errors were detected in the material lists, Mr Hing replied that he could not recall any such occasions, but added that any errors stemmed from the draftsmen.

The transcript then records:

> 'MR CULLEN: Do the errors that come up arise before the job is done or after it is done, or at what stage?

MR HING: Invariably if there is an error it will be found when we are putting the thing together; we realise that it will not work or fit.

THE COMMISSIONER: The practical test is the ultimate and the most necessary one.

MR HING: That is right.'

(transcript p. 4878)

A little later, in answer to Mr Cullen, Mr Hing stated that an error on the part of a draftsman had been detected within the past few days. A transformer being put into its tank fouled the side of the tank. It would not fit.

8.9.11 I have no doubt, in spite of the most efficient managerial attempts to establish supervisory controls and rationalised work processes designed to eliminate error, stimulate production and reduce fault, failure and machine downtime to the irreducible, that employees, particularly in the tradesman field still bear an appreciable measure of responsibility for accurate work, concentrated effort and intelligent application.

8.9.12 Although I say 'particularly in the tradesman field' I do not want it to be thought that I believe the measure of care, skill, concentration and responsibility exercised by non-tradesmen to be necessarily tenuous and unimportant.

In the case of process workers, for example, the inspections at Standard Telephones and Cables Ltd, Containers Ltd, Gadsden-Hughes Ltd, Amalgamated Wireless Valve Co. Pty Ltd, Telephone and Electrical Industries Pty Ltd, Radio Corporation Pty Ltd and Willow Ware Pty Ltd, conclusively proved the contrary.

8.10 *Number of Classifications and Number of Wage Rates*

8.10.1 In my Announcement No. 1 (18 July 1966) I drew attention to my view that it was illogical that there should now be prescribed within the award more than 300 classifications and more than fifty different wage rates, some of minor and paltry variation.

On several occasions throughout the progress of the exercise I requested the parties to consider these matters and in particular to furnish me with information concerning redundant, obsolete or superfluous classifications.

The parties, particularly the private employers, were in a much better position than the Commission to ascertain the facts in this connection.

To the date of the conclusion of inspections this information had not been supplied, and I am therefore unable to comment further upon this aspect.

8.10.2 Insofar as the number of wage rates are concerned, I consider that it should be possible to reduce them to the level of twenty-five or thirty rates.

When one sees that presently some wage rates vary by as little as 5 cents per week, or 1 cent per day, the whole position is seen as ludicrous.

8.10.3 Unless this fanciful situation is corrected at this point with the high authority of a full bench of the Commission behind such action, correction may never occur. It may indeed be now or never.

It is my view that the circumstances of the moment lend themselves admirably to the adoption of a more orderly, more symmetrical and more rational classification structure.

A reduction in the number of wage rates could over time encourage a reduction in the number of classifications.

8.11 *The Work of Females*

8.11.1 During the inspections I saw work being carried out by females employed in various classifications.

Predominantly this occurred in the classification of process worker, although females were observed working in other classifications such as machinist—2nd and 3rd class, welder—2nd and 3rd class and coremaker.

Moreover, quite a number of females were seen to be employed in work that was not appropriately covered by any existing classification.

8.11.2 Firstly, in the field of the process worker, much of the work being done making electrical or electronic components in the miniature range—transistors, for example—was of such a nature that most males could not be expected to be able to do the work efficiently.

8.11.3 This was because of the widespread capacity of females to use fingers that are very nimble and deft, hands that are dextrous and minds that may permit of continued concentration during repetitive though exacting work processes.

8.11.4 In this domain it is not too much to say that the reality is that the female process worker usually warrants a higher wage than her male counterpart. She certainly should not, as a result of these proceedings, receive any increase lower than that awarded to the male. She is worth more to the employer.

The inspections at Telephone and Electrical Industries Pty Ltd, Standard Telephones and Cables Ltd, Amalgamated Wireless (A/sia) Ltd, Radio Corporation Pty Ltd and Amalgamated Wireless Valve Co. amply confirmed this.

8.11.5 There were other inspections which showed the female process worker doing work on a basis that demanded complete manipulative, motile and mental equality with the male process worker.

8.11.6 Examples of this work equality were seen during the inspections at Willow Ware Pty Ltd, Northern Manufactures Pty Ltd and Gadsden-Hughes Ltd.

8.11.7 The transcript of the inspections at Northern Manufactures Pty Ltd reveals the following:

> '1. MR GILMOUR (representing the company): This is curling the top of the can so that there won't be any danger of people cutting their hands when they take the top off the ice-cream can.
>
> THE COMMISSIONER: Is there any reason why you have a male operator here?
>
> MR GILMOUR: No. We would use a girl on this if necessary but normally we do have a man on this operation.'
>
> (transcript p. 2714)
>
> '2. THE COMMISSIONER: This is automatic spot welding?
>
> MR GILMOUR: No, a hand operated spot welder.
>
> THE COMMISSIONER: Two process workers?
>
> MR GILMOUR: A girl there and a process worker there. That man is actually classified as a process worker. He is seam welding.'
>
> (transcript p. 2716)

'3. THE COMMISSIONER: What about process workers or third class machinists?

MR GILMOUR: We classify anyone working on the machines as a process worker.'

(transcript p. 2713)

8.11.8 The following was recorded during the inspection at Gadsden-Hughes: Ltd:

'1. THE COMMISSIONER: I notice that there are 125 adult females employed. I should imagine they would all be employed generally in the process worker range?

MR SMITH (WORKS MANAGER): That is correct. There are about four clerks, but the majority of them are female process workers.'

(transcript p. 3463)

2. Hand Pressing area:

'THE COMMISSIONER: In this area I observed a male and female process worker within a few feet of each other identically operating an identical machine, a John Heine 203A press.'

(transcript p. 3467)

8.11.9 The following appears in the transcript of the inspections of Willow Ware Pty Ltd:

'MOORE J.: Are the males and females interchangeable?

MR WILSON (JOINT MANAGING DIRECTOR): On some jobs, but not all. The presses lend themselves to a lot of female work. In the assembly department it is usually male work. The men would be able to interchange with the girls but the girls would not be able to interchange with the men. The heavier jobs require the men, requires a man's endurance.

There would be a fair amount of changeability between the females and the males.

GALLAGHER J.: The limitation arises, really, from the heaviness of the work compared to other work?

MR WILSON: I would think so and it also arises here because the man is usually more permanent. If a man becomes married it is usual for him to come back and he will develop a speciality on certain machines because he is usually here longer.'

(transcript p. 4450)

8.11.10 As indicated these were examples. Much careful, visual examination revealed that except where the nimbleness and dexterity in particular of the female was almost essential for productive process worker employment, a large degree of interchange between female and male process workers occurred.

8.11.11 On the hand made lap and lock line at Gadsden-Hughes Pty Ltd, for instance, fourteen process workers, male and female, were working side by side without visible division of skill, responsibility or other recognisable work feature.

8.11.12 In the inspection at Joseph Lucas Pty Ltd a female was seen machining a steel cup on a Capstan lathe.

We were informed that she was employed as a machinist—2nd class.

8.11.13 At Thomson and Scougall Industries Ltd, the following was recorded:

> 'THE COMMISSIONER: In this foundry does the female coremaker carry out any function that is not performed by the male coremaker?
>
> MR GODDEN (WORKS MANAGER): Normally all the core blowing is done by women; occasionally the procedure varies and we have a male coremaker on the benches. As a normal principle, they do not interchange.'
>
> (transcript p. 3369)

8.11.14 In the welding field many female process workers were observed carrying out welding operations, almost always automatic.

However, during the inspection at Malleys Ltd, I came upon an instance of a female being employed as a welder—2nd class:

> 'THE COMMISSIONER: I notice a female brazing there.
>
> MR WULFF (WORKS MANAGER): She is a second class welder.'
>
> (transcript p. 3277)

8.11.15 In short, the whole testimony of the inspections convinced that any increase awarded to males should apply uniformly to females.

8.12 *Delays to the Inspection Programme*

8.12.1 The decision of the full bench by which I was commissioned to investigate certain matters with respect to the award, was given on 8 July 1966.

8.12.2 My first announcement concerning the manner of conducting the resultant inquiry was made on 18 July 1966.

8.12.3 On that day I intimated that the matter would not be called on again before 8 August 1966. This was done in order to give the parties and the statutory intervenor time and opportunity to study the terms of my announcement and to prepare for what lay ahead.

8.12.4 My second announcement was made on 8 August 1966. In that announcement I gave an indication in general terms of the programme for industrial inspections and dealt with certain related matters. A hearing ensued.

8.12.5 On that day I stated that I would set down 13 September 1966 for the next hearing of the matter.

I also said:

> 'May I also say that I am seized with the overwhelming desirability, even necessity, for getting down to field work in this matter and I would only envisage with distaste the possibility of long drawn out preliminary proceedings either in Court or in conference which might prevent the Commission from getting down to the reality of this matter.
>
> . . . Given goodwill and energy on all sides, I think we should be able to commence inspections during September.'
>
> (transcript p. 2442)

8.12.6 On 14 September 1966, Mr McBride announced the classifications and firms that the unions desired to have inspected in Queensland.

8.12.7 On that day Mr Robinson reminded me that on 8 August he had indicated that the first step in any investigation should be a thorough-going review of the work performed by the various classifications in the award.

Much work in that regard had been done by his clients, but time had not permitted its completion.

Mr Robinson then intimated that it would be preferable not to commence inspections until preparation of lists, duties and details of the work done by the classifications to be inspected in particular had been finalised.

8.12.8 I had earlier stated that inspections were to commence in Brisbane during the week commencing 26 September 1966.

8.12.9 Apart altogether from the necessity to give all concerned proper opportunity and reasonable time to allow them to prepare for an exercise of the importance and magnitude of the inspections and accompanying features of the investigation, I was constantly engaged in the period between 8 July 1966, when I was commissioned to the investigation and 27 September 1966 when proceedings commenced in Brisbane, in dealing with disputes and other matters within my assignment. Then I was a member of the full bench which was occupied with the extremely important General Motors Holden's Case.

8.12.10 In my announcement of 7 March 1967 (No. 5) I found it necessary to refer to certain matters. I said, *inter alia:*

> 'Since the date of commencement of the investigation, there has been a total of 169 metal trades notifications pursuant to section 28 of the Act, including applications for variation of the award.
>
> . . . I have found it necessary to deal with 43 of these . . .'.

8.12.11 From then until the time when the Honourable the President relieved me from other requirements of my assignment I was forced from time to time for various reasons to concentrate upon other matters.

8.12.12 Some other important matters requiring my attention were:

1. Latrobe Valley contractors to the State Electricity Commission of Victoria.
2. New South Wales State Dockyard.
3. Electricity Trust of South Australia and Hydro-Electric Commission of Tasmania.
4. National Wage Cases of 1967 (full bench).
5. Interim Margins Case 1966 (full bench).

8.12.13 During a period and in an area of intense industrial disputation every endeavour has been made to concentrate upon this matter.

The only departures have occurred either when industrial matters of transcendental national importance were superimposed upon it, or when, during the period before I was released from other matters, disputes which I considered warranted priority of attention occurred.

8.12.14 Since the date upon which I was commissioned to carry out the investigation, there have been many working days during which it has been impossible or impracticable to work on the investigation.

Of this total a considerable number of working days were devoted to dealing with other essential matters lodged with the Commission; some days were lost at the request of one party or another.

Commr Winter]

8.12.15 If comparison is made with other work value inquiries of a similar nature it may be seen that this investigation into matters affected by an involved, widespread and highly important award has been carried out with reasonable celerity.

The Full Bench on Inspections

8.13 I was delighted when their Honours, Mr Justice Gallagher and Mr Justice Moore were able to join me on inspections.

This fact was of great importance.

Moreover, the welcome entry of other members of the full bench into the field of investigation effectively dispensed with the necessity for me to furnish a report to my colleagues.

However, having considered the position it seemed that I had a responsibility to all interested to issue this survey which attempts to review the whole of the inspections in a constant perspective.

The survey is an integral part of my decision and only that.

Co-operation

8.14 It should be stated that I have received the co-operation of all concerned in the investigation.

At times certain difficulties presented themselves, particularly to the unions and the private employers. These problems arose largely from the very complexity and magnitude of the task confronting all.

I desire to express my great appreciation of the manner all concerned have borne and conducted themselves in, in a task imposing great strain and concern. At times tempers were frayed but never lost. The good humour and common sense of all played a significant part in bringing the ship home to port.

I believe that one of the important by-products of the exercise has been that all concerned have not only come to know each other immeasurably better, but to understand each others problems to a much closer degree.

Appendages

8.15 Annexed hereto may be found:

1. Job Evaluation Digest.
2. Analysis of Summary of Weighted Check Lists.
3. Index of Inspections.
4. Number of employees covered by the Metal Trades Award employed at establishments inspected.
5. Announcements.

Check Lists

8.16 I have retained the job check lists and they will be filed in the Commission's records.

ANNEXURE I

JOB EVALUATION DIGEST

In conjunction with my experiment of the 'Job Inspection Check Sheets' I studied the writings of several widely accepted authorities on the subject of job evaluation.

Among them were:

(a) 'The Standardised Method of describing and grading activities for Job Evaluation and other Purposes' by the Committee of Experts for Job Evaluation of the Netherlands Standards Institution, published in 1960.

(b) 'Job Evaluation' (Second Edition) by Otis and Leukart, 1954.

(c) 'Job Evaluation' by the International Labour Office, 1960.

(d) 'Laboratory and Technical Wage Rate Survey—1965, Greater Melbourne Area' by the Business Advisory Centre Pty Ltd.

The publication of the Netherlands Standards Institution is of special interest.

The 'Committee of Experts for Job Evaluation' consisted of representatives of the government, employers, trade unions and of various agencies.

The purpose of the committee was said to be 'to find and establish a generally useable and available method of Job Description and Evaluation as an expedient for the fixing of wages and probably for other purposes'.

Although one must always be careful in using a word that has been translated to accept that the text may suffer in the translation, the use of the word 'expedient' is unfortunate.

It is certainly used in the sense of the noun 'contrivance' or 'device', but one cannot forget that the adjective can mean 'politic rather than just'.

Some of the statements in the book that I found interesting were:

1. 'The extension of the table of Dexterity meets the demand to do full justice in grading to the functions of manual labourers which, considered from this point of view, should be highly qualified.' (p. 9)
2. 'As there are many possibilities of applying a job evaluation method, it is necessary to state clearly what possibility will be chosen before a method of describing and grading is to be applied.' (p. 14)
3. '*Only a relative evaluation: a rank-order.*

   By means of a job evaluation method a justified rank-order with relation to the remuneration can be found.

   So also in this respect a job evaluation method is only one of the starting points to determine the differentiation between the wage rates. In fact it does not supply data concerning the desirable level of the remuneration for the job, i.e. neither concerning the absolute level or the wages, nor concerning the amount expressing the difference in remuneration for jobs on different levels.

   These are matters of wage policy.

   The division of the function into groups, the actual classification does not follow direct from the results of the application of a job evaluation method, because it is not only the rank-order of the functions but also the limits of the group which have to be fixed for this purpose.' (p. 15)

4. 'It may be said that during the many years of teamwork required to design the method, there was a constant evolution of ideas, and that the method is the result of fruitful brainwork and useful experience gained beforehand.' (p. 16)

5. 'If we wish to fix the permanent place of a function in a remuneration system, and the actual activity does not fully correspond with what may be considered to be the normal content of the function, we are as a rule not satisfied with the description and grading of the actual function, but (besides) we can grade the function such as it should be to fit logically in the given design of the organisation.' (pp. 19/20)

6. *'The conditions under which the job is performed'.*

   It is not possible to contribute to a correct relative appraisal of activities unless we take into account to a certain degree and always in the same manner the conditions under which the activities are (will be) performed. If e.g. two functionaries will have to attain the same result, but if one of them works under more favourable conditions than the other—e.g. better equipment and better supply of materials—then the highness of the demands made on them in the functions is also different. These differences in the highness of the demands imply differences in the functions, respectively in the tasks.

   'In this connection the activities, when they are described and graded should be considered in the framework within which they are performed.' (p. 20)

7. 'The question of the length of the period to be taken into account for the determination of the activities actually performed does not bear on the correct application of the method. In this matter it is the management which has to decide, such in consultation with representatives of the employees, if required.

   In such a case the wage policy in the relevant business may also be of influence.' (pp. 21/22)

8. 'If all functions in an enterprise have been evaluated, it does by no means imply that the rank-order of the functions is permanently fixed.

   This would only be the case if the content of the functions would never change.

   However, in every enterprise there are continuously technical and structural changes necessitating a revision of the functions from time to time.

   Furthermore new functions involve supplementary evaluation.' (p. 27)

9. 'So ability, in contradistinction to knowledge, does not come under the viewpoint Knowledge. Ability—which may also be indicated by the word professional skill—is in fact a resultant from many factors which are mainly evaluated under the viewpoints: Self-reliance, Contacts, Power of expression, and Dexterity.' (p. 36)

10. 'Self-reliance is determined by the degree of freedom in considering and thinking with regard to existing or new situations and particularly by the necessity of having to choose from several solutions.

    The following qualifications required for the performance of the job particularly find expression in the description through application of the

said viewpoint, *viz:* understanding, insight, imagination, power of combination, ingenuity, feeling, flair, resoluteness, the ability to organise one's own work and the work of others.' (p. 39)

11. *'Dexterity.*

Dexterity is determined by the skill, required for the job, in controlling one's movements.

The data to be collected concern:

1. the extent to which the movements have to be accurate;
2. the extent to which the movements are complex;
3. the required quickness of movement or reaction;
4. the required exertion of force.' (p. 57)

12. *'Arduousness of the work.*

By means of this viewpoint is evaluated: the degree to which physical exertion of force is felt as an inconvenience.

Standards to be used for the purpose could be: the extra amount of calories used, or the daily average of the number of kilogrammetres per second. For the time being, however, it will not be possible to use these standards in practice.

The data to be collected concern:

1. the weight, respectively the force to be exerted (if possible expressed in kilograms);
2. the frequency and the duration of this exertion of force.' (p. 61)

13. 'In principle the description may not contain formulations which in fact already contain an evaluation.

Consequently the use of grading terms such as "moderate", "remarkable", "difficult", "complicated", etc., should preferably be avoided.' (p. 87)

14. 'Recommendations for the Descriptions of Group Functions.

1. *Introduction*

'In many working communities of today it is inevitable that departments, shifts or working groups are charged with a group task, which has been designated as clearly as possible, but which does not consist of clear-cut individual tasks. In those cases in which the contents of the individual function are not almost exclusively technical and will regularly be changed because of human factors and a number of other causes (e.g. mutual adaptation, alternation of work, replacement) the management needs a certain freedom of action with respect to the distribution of the group task over the individual members of the staff. In this connection it should be taken into account that the individual contents of the functions are subject to modification, so that the period of time during which the individual job description remains valid, can be, considered to be restricted.' (p. 90)

15. 'The complicated structure of many—especially big—working communities makes it ever more difficult for the management, the executive functionaries and outsiders that are confronted with the relevant activities, not to lose the required insight into the nature and interrelation of the functions.

Especially in these cases a well planned description of a group function can be an efficient means to get a clear idea of the meaning and interrelation of the individual functions in the whole complex.

So a good description of a group function—in particular with regard to the last-mentioned category—must give an answer to questions concerning the *nature, meaning* and interrelation of the activities.

In this connection the word 'group' should not in the first place be regarded as an organisational unit but as a group of activities directed to the realisation of one objective or of one complex of objectives.'

(p. 91)

16. 'Therefore the primary question should not be: What should be the object of the group? but: What do the activities observed appear to aim at?

If necessary the answer to the latter question should be compared with the original objective and planning, for which purpose a possible expedient may be found in the original instruction (rules and regulations, statutes, acts, etc.) which caused the group to be established. When such a comparison is made, the "why" of the possible change of course should be duly stressed as this can contribute to a clear formulation of the objective. It is self-evident that this formulation should be entirely in conformity with the insight of top management into the whole.' (p. 94)

'Job Evaluation' by Otis and Leukart is a United States contribution to the study of the subject.

Professor Otis is Professor of Psychology and Director of the Psychological Research Services at the Western Reserve University while Mr Leukart is Assistant Secretary of the National Screw and Manufacturing Company.

In their preface to the second edition the authors say *inter alia:*

'The technique of job evaluation is now widely accepted as sound and effective business procedure. The administration of the pay systems thus established is a recognised function in a large segment of modern industrial management.'

(p. V)

In the preface to the first edition, which is incorporated in the second edition the following appears:

'Some companies analyse and describe jobs before establishing pay rates and incentive payment plans; others have arbitrary, symmetrical pay structures, and still others have elaborate wage control systems without a standard pay structure.'

(p. VII)

Some of the many statements which I found of interest are:

1. 'Job analysts, industrial engineers, and industrial psychologists have attempted to reduce to some sort of order the chaos which has existed in the field of job classification. To date, no system of classification has been constructed that has universal application.

It is questionable whether the field of occupations will ever be classified as satisfactorily as the physical and biological sciences. Some form or method of classification will probably rise above others as being most desirable, but at the present time no single system can claim this honour.'

(p. 6)

2. 'Many wage structures are based upon tradition and have never been formalised. Whether or not any specific wage is fair is difficult to determine because there is usually no accepted, clear-cut wage structure available for comparison. It is difficult to guard against an inequity in a situation like this, because when a wage is adjusted it is usually done on an individual job basis without regard to other jobs. Until such time as a formal wage structure is created, inequities will arise to cause trouble and internal dissension.'

(pp. 6/7)

3. 'A majority of the companies in the United States have no definite programme for administering the wages and salaries paid to their workers. It is surprising to find that a nation that has installed production systems, inspection systems, and work simplification procedures which have enabled it to outproduce almost the entire world has done little to bring the same thorough research to wage and salary administration.

In organisations that pride themselves on precision workmanship, one often finds that workers performing the same tasks are paid at widely differing wage rates, and that there are no logical reasons for the existing relationships among the rates for different occupations.'

(p. 7)

4. 'The technique of job evaluation has been defined by Gray as follows:

"Job Evaluation: The complete operation of determining the value of an individual job in relation to the other jobs in the organisation. It begins with job analysis to obtain job descriptions and job specifications and includes the process of relating the descriptions by some system designed to determine the relative value of the jobs or groups of jobs."*

(* Robert D. Gray, 'Systematic Wage Administration in the Southern California Aircraft Industry', Industrial Relations Counsellors, Inc., New York, 1943, p. 89.)

5. 'Job analysis and job evaluation do not replace judgment in the administration of a pay structure. They merely provide facts—insofar as facts can be obtained through observation—on which management and employees may base their decisions. Decisions thus made should be far sounder than those based upon general impressions.'

(p. 9)

6. 'In order to carry out successfully the evaluation of jobs in a company, thorough preparation for all steps is absolutely essential from the very beginning. From the original discussions of the objectives, advantages, and need for systematic evaluation of the jobs in the company, to the final steps that put the established system into effect, a clear understanding of the objective and of the orderly sequence of steps necssary to reach that objective must be retained by the person in control of the work.'

(p. 19)

7. 'When descriptions and definitions have been established for job titles, the titles themselves lose significance except as convenient "handles" in referring to jobs. In other words, when job content is described, it is then neither necessary nor advisable to depend on the title to carry all the meaning of the job.'

(p. 22)

8. 'After all plans for the job evaluation have been laid, the first step in actually going to work is the collection of factual information at the source—the jobs in the company.'

(p. 211)

9. 'In the final analysis, the application of any job-rating scale to any job is not a *measurement* in the usual sense of the word, but is the best judgment that can be arrived at under the circumstances.'

(p. 213)

10. 'Since job evaluation is one of the important applications or uses of job analysis from the point of view of the worker, the term *job analysis* as used in this discussion is defined as follows:

> "The process of determining, by observation and study, and reporting pertinent information relating to the nature of a specific job. It is the determination of the tasks which comprise the job and of the skills, knowledges, abilities, and responsibilities required of the worker for successful performance." '*
>
> (* 'Training and Reference Manual for Job Analysis.' War Manpower Commission, Division of Occupational Analysis (Washington: United States Govt. Printing Office, 1944.))

(pp. 215/216)

11. 'Job analysis and job evaluation are not synonymous.'

(p. 216)

12. 'Finally, the job description and job specification, which are the end products of job analysis in job evaluation, determine the kinds of information that must be obtained in job-analysis for the purpose of job evaluation.'

(p. 216)

13. 'In establishing standard titles for a company in conection with the definition and description of these titles, there are a number of principles which have been found to be helpful. A few of these are as follows:

    1. The standard title should be similar or identical to one of the titles which has been applied to the job in the past, so that it will not be necessary for workers and supervisors to learn an entirely new vocabulary.
    2. Titles should be set up in a natural form rather than in an inverted form; for example, Assembler—Bench is not nearly as good as Bench Assembler.
    3. They should be as brief as possible while conforming to the other characteristics listed.
    4. Within the limits of brevity, they should be as descriptive of all phases of the job as possible.
    5. If they are brief, descriptive, and in natural form, they will tend to be conversational, so that it will be easy to use the job title in referring to the job; this is particularly important if workers and supervisors are expected to use these titles rather than abbreviations or nicknames of the titles.
    6. The title should indicate wherever possible the skill level and the supervisory level of the job.
    7. Standard terms indicating skill level, supervisory level, content, or other common characteristics of jobs must be used consistently in assigning titles.'

(pp. 259/260)

14. 'Collective bargaining deals with the absolute value of jobs, and both the company and the union should use some method of job evaluation to determine the relative value of jobs.'

(p. 383)

15. 'The growth of large unions and the development of industry-wide collective bargaining has made it essential to study wage rates for entire industries. In those industries where industry-wide bargaining is the method for setting "minimum wage rates", wage reporting has attained a fairly high degree of accuracy. In some industries the member companies are preparing for the day when industry-wide collective bargaining will be the rule, by collecting wage data for key jobs.'

(p. 384)

16. 'The procedure of establishing job evaluation has as its objective the installation of a sound wage and salary administration programme in the company.'

(p. 475)

'Job Evaluation' published by the International Labour Office in 1960 deals with the subject in a highly analytical and quite objective manner.

I found the following extracts of interest:

1. 'The technique of job evaluation has been applied to deal with problems of comparative equity in wage determination mainly, though not exclusively, at the level of the individual firm or plant.'

(Introduction p. 1)

2. 'Job evaluation may be defined simply as an attempt to determine and compare the demands which the normal performance of particular jobs makes on normal workers without taking account of the individual abilities or performance of the workers concerned.'

(p. 8)

3. 'As will be seen from the description of various systems of job evaluation given in Chapter II, the real object of investigation and comparison is the content of the job, and not the rather imprecise notion of its "value" to the firm. It should also be borne in mind that, although job evaluation will normally be used as an aid in the fixing of relative wages, its results are no more than one factor determining the wage structure, and the actual fixing of wages, through collective bargaining or in other ways, is, in the view of many authors, entirely beyond the realm of job evaluation. It may also be noted that the Dutch term for job evaluation (werk-classificatie) and the most frequently used French expression (qualification du travail) do not involve any notion of evaluation.'

(p. 9)

4. '. . . under the post-war system of wage control in the Netherlands, job evaluation was accepted and encouraged by the authorities as a means of making appropriate wage adjustments for particular jobs or industries without upsetting the general objective of maintaining substantial stability in the national wage level as a whole.'

(p. 10)

5. 'Where management has taken the initiative in introducing job evaluation, the technique has naturally become a matter of great interest to the trade unions. In some cases the latter have been highly distrustful for a variety

of reasons that will be considered later. Many employers are, however, also sceptical or critical of job evalution, sometimes because they prefer to set wages by simple rule-of-thumb methods or because they find job evaluation too costly and time-consuming and believe that it does not result in a wage structure differing substantially from one that could be obtained through less sophisticated methods. The fact that both employers and trade union leaders are divided among themselves as to the value of the method makes the subject of job evaluation one of considerable topical interest.'

(p. 11)

6. 'In this study the term "wage structure" is used primarily to refer to rates of remuneration for various jobs, primarily within an individual firm or plant, in relation to each other and to rates paid for certain jobs in other firms.'

(p. 11)

7. 'Finally, it should be recalled that job evaluation is concerned with problems of relative remuneration only. It has nothing to do with the fixing of absolute wage levels or, for that matter, absolute wage differentials between evaluated jobs: even if both parties have agreed to apply job evaluation and to use its results as a basis for wage determination, wage levels and the absolute amount of wage differentials remain to be negotiated.'

(p. 19)

8. 'The purpose of a job description is to provide information about the actual content of a job.

Usually, job descriptions include indications of the purposes of the various tasks involved, the frequency with which these tasks have to be performed, the environment and conditions in which the work is done, the tools and equipment used, the nature and degree of supervision received or given, the degree of skill, knowledge, accuracy, judgment and attention required, and the responsibilities involved.

Such information is useful for many purposes other than job evaluation, such as the selection and recruitment of personnel, training, transfers and promotions, and the establishment of safety programmes.

In particular, it has often been found to reveal numerous possibilities of improving the organisation and methods of work in the plant, thus raising productivity and reducing costs.'

(pp. 39/41)

9. 'It should, however, be emphasised that job evaluation as an aid in the fixing of relative wages is not intended to do away with the normal practice of periodical review of a wage structure.'

(p. 49)

10. 'As an aid in the establishment of suitable wage differences, job evaluation is concerned with jobs for which questions of comparison arise.'

(p. 56)

11. 'In the Netherlands, for instance, the method is already applied over a much broader field than has so far been customary elsewhere, and suggestions have even been made for further extension of the scheme.

In that country, wages are controlled by the Government which has to decide on claims for wage adjustments. An important principle of the

system has been that inequalities in pay for equal work in different industries constitute grounds for wage increases. This had led to the use of job evaluation in dealing with claims submitted on these grounds and in comparing, for example, jobs and wages in agriculture with those in manufacturing.

Whatever reservations may be made concerning the validity of such comparisons, they at least have the merit of providing a systematic basis for dealing with wage claims.'

(p. 57)

12. 'It would appear from various comments and experiences noted in earlier parts of this study that at the present stage, although job evaluation has in many cases been applied with satisfactory results, the method is not yet universally regarded as a useful aid in designing national wage structures.'

(p. 102)

13. 'From a technical point of view, job evaluation constitutes a device for the settlement of certain more or less troublesome questions of wage adjustment. This is the angle from which the subject has been primarily examined in this study. To the extent that the method is useful for such purposes, however, this is largely because it attempts to base wage differentials on considerations that are not purely technical, but that have, in some degree at least, an ethical basis.'

(p. 112)

14. 'The present study is not intended as a plea for job evaluation.

Indeed many readers may not feel satisfied by the arguments and experiences cited that the method can really honour its promise of providing a tool for the establishment of an equitable and workable structure of wages and salaries.'

(p. 113)

15. 'The Workers' members indicated that they had discussed the report submitted by the Office and, in the light of the contents of this report as well as their own experience, had come to the conclusion that it would be difficult to formulate a uniform concept of job evaluation methods in the metal trades. The situation differed in the various countries. The Workers' members also considered that there was no similarity of views between the statements of the Employers' and Workers' members. The matter was not fit for discussion at the international level and the workers also had serious doubts whether it was fit for discussion at the national level. Further, it was controversial as shown by the exchange of views which had already taken place in the sub-committee. The Workers' members considered that job evaluation tended to limit collective bargaining and to freeze the wage structure. It was insufficiently adaptable to a dynamic economy. Before reaching any conclusions, discussions should continue, within each country, in respect of pasic problems of job evaluation. . . .

(p. 119)

16. 'ADVANTAGES

(1) Job evaluation is a logical and, to some extent, objective method of ranking jobs relatively to each other. It may thus help in removing **inequities in existing wage structures and in maintaining sound and**

consistent wage differences in a plant or industry. It may also result in a simpler wage structure than the existing one, more easily understood and accepted by the workers.

(2) In the case of new jobs, the method often facilitates fitting them into the existing wage structure.

(3) The method helps in removing grievances over relative wages and thus may improve labour-management relations and workers' morale, in addition to reducing the time that management and trade union officers have to devote to such grievances, enabling them to deal with other important matters. In providing a yardstick by which workers' complaints or claims can be judged, the method simplifies discussion of wage demands and enables differences in wages to be explained and justified.

(4) The method replaces the many accidental factors occurring in less systematic procedures of wage bargaining by more impersonal and objective standards, thus establishing a clearer basis for negotiation; this too may help in improving labour-management relations.

(5) The method may lead to greater uniformity in wage rates, thus simplifying wage administration. If widely applied in an industry, it also tends to facilitate wage comparisons between geographically separated markets, which again may be helpful for certain bargaining purposes.

(6) The information collected in the processes of job description and analysis may also be used for the improvement of selection, training, transfer and promotion procedures on the basis of comparative job requirements.

(7) Such information also often reveals that workers are engaged on jobs requiring less skill and other qualities than they possess, thereby pointing to the possibility of making more efficient use of the plant's labour force. More generally, inefficiencies in the organisation and methods of work and possibilities of improving working conditions and reducing job hazards may be discovered.

LIMITATIONS

When judging the advantages listed above it should, however, be borne in mind that job evaluation is not a panacea. The scope of its useful application may be limited by a smaller or larger number of factors of which the following seem to be the most important.

(1) Although there are many ways of applying job evaluation in a flexible manner, rapid changes in technology and in the supply of and demand for particular skills raise problems of adjustment that may need further study. Perhaps difficulties of this nature are more serious with point rating systems than, for example, with certain versions of the factor comparison method which do not involve predetermined degrees of the various factors.

(2) However logical and consistent a system may be, account has to be taken of various limits to the possibility of changing apparently illogical elements in an existing wage structure. Certain external rates may have to be paid for 'hiring jobs' whether they are

compatible with the job evaluation system or not; traditional wage relationships, however inconsistent they may be, cannot always be altered. It has been pointed out that—

. . . the fundamental purpose of job evaluation is to establish a mutually acceptable criterion of equity. If both worker and supervisor agree that, for example, the cementers are the aristocrats of the raincoat industry, what useful purpose is served by upsetting this scale of values in favour of some mechanistic criterion of equity? These traditions are every bit as important as job content.

(3) When job evaluation results in substantial changes in the existing wage structure, the possibility of implementing these changes in a relatively short period may be restricted by the financial limits within which the firm has to operate.

(4) When there is a large proportion of incentive workers, and especially when incentives have to be changed frequently, it may be very difficult to maintain a reasonable and acceptable structure of relative earnings.

(5) In any case, job evaluation does not provide a complete answer to the wage problem. It has nothing to say about the absolute wage level and little about the absolute size of the wage differentials appropriate to the evaluated job structure. It is not concerned with questions of rewarding loyalty, seniority or merit, and its consistent application may be very difficult in cases where payment by results is applied.

(6) In particular, the process of job rating is to some extent arbitrary because few of the factors and degrees can be measured with great accuracy. This process can certainly not be regarded as 'scientific' and it can be considered 'objective' at best in the sense that, under ideal conditions, it is free from deliberate bias. All that can be expected to emerge from the process is a well-considered and honest, but basically subjective, evaluation of jobs.

(7) Job evaluation takes a long time to install, requires specialised technical personnel and may be quite costly. One Canadian estimate put the cost of installing a scheme at $45 per job evaluated and maintenance charges at about 25 cents per employee per month.

(8) The drawing up of job descriptions tends to formalise job contents, which may lead to abuses by workers who acquire a vested interest in maintaining the requirements for certain jobs. According to one writer there are 'classic examples of this in railroading (in the United States) where featherbedding is entrenched behind job definitions that were made to fit conditions of 50 years ago'. Very precise and detailed job descriptions may also make it impossible to assign occasional jobs not explicitly provided for in the descriptions.

(9) Trade unions often regard the method with suspicion and in some cases with hostility. In such cases, job evaluation may still be useful in helping management to clarify its own ideas as to what is to be regarded as a suitable wage structure, but the possibilities of using the results of the method in actual wage negotiations and in the settlement of grievances will be limited.'

ANNEXURE 2

Plant or workshop		Arc Eng.	Appleton	Steelweld				Bradford Kendall				Rheem	
Employee		Dodt	Pachenko	Bernadin	Norris	Carson	Bolton	Kurth	Lee	Fraser	Schultz	Falcon-Green	Horvath
Number		1	2	3	4	5	6	7	8	9	10	11	12
87	Electrical fitter (or 90. Mechanic)	88									86		
139	Press operator (light)		42										
261	Dogman and/or crane chaser			54		72	81			62			
59	Welder—1st class				70								
66	Dresser and/or grinder (portable machine)							41	41			85	
13	Machinist—1st class												42
283	Process worker												
26	Toolmaker												
5	Fitter												
27	Turner												
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		Rheem		English Electric						Clyde Engineering	
Employee		Spence	Ross	Delauney	Van Diest	Baumanis	Warren	Green	Vickery	Baldwin	Russell
Number		13	14	15	16	17	18	19	20	21	22
87	Electrical fitter (or 90. Mechanic)										80
139	Press operator (light)										
261	Dogman and/or crane chaser								64		
59	Welder—1st class				82						
66	Dresser and/or grinder (portable machine)										
13	Machinist—1st class			78						72	
283	Process worker										
26	Toolmaker	80					78				
5	Fitter		72								
27	Turner							88			
49	Boilermaker and/or structural steel tradesman										
15	Machinist—3rd class										
45	Smith—Other										
58	Welder—Special class										
55	Marker off										
130	Die setter press operator (blue prints, etc.)										
72	Jobbing moulder and/or coremaker										
70	Furnaceman—Electric										
129	Die setter										
291	Other employees (after 3) months										
14	Machinist—2nd class										
20	Patternmaker										
287	Storeman and/or packer										
126	Sheet metal worker—1st class					85					

Plant or workshop		Toowoomba Foundry		Napier Bros.	Wyper Bros.		S. Williams			Cyclone		Allens Industries	
Employee		Harth	Adams	Hails	James	Fidd	Phillips	Franklin	Williamson	Fitz-simmon	Brennan	Hyde	Moore
Number		23	24	25	26	27	28	29	30	31	32	33	34
87	Electrical fitter (or 90. Mechanic)			84									88
139	Press operator (light)												
261	Dogman and/or crane chaser							69					
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)		44										
13	Machinist—1st class									44			
283	Process worker												
26	Toolmaker												
5	Fitter	76				69	79						
27	Turner												
49	Boilermaker and/or structural steel tradesman				65				71		44		
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class											72	

Plant or workshop		Northern Mfrs.	Allens Industries	Stewarts and Lloyds	Dumbrells		Instrument.	Inter. Combust.		Alcan	Cockatoo Docks		
Employee		Szandron	White	Williamson	Riggesford	Buttons	Baird	Holroyd	Potter	Gadsby	McJanett	Gurnett	Frazer
Number		35	36	37	38	39	40	41	42	43	44	45	46
87	Electrical fitter (or 90. Mechanic)		82				88		87	88			
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class												
283	Process worker												
26	Toolmaker												
5	Fitter	83											
27	Turner												
49	Boilermaker and/or structural steel tradesman			82								86	
15	Machinist—3rd class												
45	Smith—Other				75	75					75		
58	Welder—Special class							89					
55	Marker off												90
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Commr Winter]

Plant or workshop		Dickson and Johnson		Bliss	Sovereign	A.W.A.	Malleys		Babcock and Wilcox			S.T.C.	Tullochs
Employee		Malzard	Newland	Woods	Berry	Poppie	Mrs Hardy	Atton	Williams	Rodger	Ryan Cosgrove	Griffiths	Gunn
Number		47	48	49	50	51	52	53	54	55	56	57	58
87	Electrical fitter (or 90. Mechanic)												
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class	90	86								59		
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class			86									
283	Process worker						52	54					
26	Toolmaker				86							85	
5	Fitter												
27	Turner												
49	Boilermaker and/or structural steel tradesman									85			
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class								84				
55	Marker off												
130	Die setter press operator (blue prints, etc.)					74							
72	Jobbing moulder and/or coremaker												82
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		T.S. Malleable	Pettiford			C'wealth Steel	Goninan	McIlwraith Indust.	Containers Ltd	Gadsden Hughes	Cyclone		
Employee		Stead	Cormack	Barsbey	Nugent	Kibble	Goverd	Campbell	Various employees	Parkes	Turo-cinskis	Vella	Gerova-silis
Number		59	60	61	62	63	64	65	66	67	68	69	70
87	Electrical fitter (or 90. Mechanic)	..	..	..	..	..	..	..	..	..	..	..	..
139	Press operator (light)	..	..	..	..	..	..	..	..	..	..	..	..
261	Dogman and/or crane chaser	..	..	..	..	..	..	..	..	..	..	..	..
59	Welder—1st class	..	..	..	..	..	..	..	..	..	..	..	..
66	Dresser and/or grinder (portable machine)	..	..	..	..	..	..	48	..	..	..	..	..
13	Machinist—1st class	..	(Wire)	..	(Wire)	..	..	..	..	..	..	..	..
283	Process worker	..	62	55	61	..	..	..	56	..	..	..	..
26	Toolmaker	..	..	..	..	..	..	..	..	..	..	..	..
5	Fitter	..	..	..	..	..	..	..	..	..	..	..	..
27	Turner	..	..	..	..	..	..	..	..	..	..	..	..
49	Boilermaker and/or structural steel tradesman	..	..	..	..	..	..	..	..	..	..	..	..
15	Machinist—3rd class	..	..	..	..	..	..	..	..	..	..	43	49
45	Smith—Other	..	..	..	..	..	..	..	..	..	..	..	..
58	Welder—Special class	..	..	..	..	..	..	..	..	..	..	..	..
55	Marker off	..	..	..	..	..	..	..	..	..	..	..	..
130	Die setter press operator (blue prints, etc.)	..	..	..	..	..	..	..	..	..	..	..	..
72	Jobbing moulder and/or coremaker	..	..	..	..	76	76	..	..	..	..	..	..
70	Furnaceman—Electric	..	..	..	..	..	..	..	..	..	..	..	..
129	Die setter	53	..	..	..	..	..	..	..	67	..	..	..
291	Other employees (after 3 months)	..	..	..	..	..	..	..	..	..	43	..	..
14	Machinist—2nd class	..	..	..	..	..	..	..	..	..	..	..	..
20	Patternmaker	..	..	..	..	..	..	..	..	..	..	..	..
287	Storeman and/or packer	..	..	..	..	..	..	..	..	..	..	..	..
126	Sheet metal worker—1st class	..	..	..	..	..	..	..	..	..	..	..	..

Plant or workshop		Westinghouse	W.D. and H.O. Wills		S.T. Leigh	Muller	Bernard Smith	Pioneer Industries	North Sydney Tech. College	T.E.I.	
Employe		McCall	Nash	Scott	Everett	Page	Carlaw	Riddington		Wilson	Miss Kent
Number		71	72	73	74	75	76	77	78	79	80
87	Electrical fitter (or 90. Mechanic)		90	90							
139	Press operator (light)										
261	Dogman and/or crane chaser										
59	Welder—1st class										
66	Dresser and/or grinder (portable machine)										
13	Machinist—1st class					55				60	59
283	Process worker										
26	Toolmaker				83			70			
5	Fitter										
27	Turner										
49	Boilermaker and/or structural steel tradesman										
15	Machinist—3rd class										
45	Smith—Other						87				
58	Welder—Special class										
55	Marker off										
130	Die setter press operator (blue prints, etc.)										
72	Jobbing moulder and/or coremaker										
70	Furnaceman—Electric										
129	Other employees (after 3 months)										
14	Machinist—2nd class	59									
20	Patternmaker										
287	Storeman and/or packer										
126	Sheet metal worker—1st class										

Plant or workshop		T.E.I.								Borg Warner				
Employee		Mrs E. Kerr	Sutherland	Murto	Mrs Kane	Mrs Fletcher	Mrs Koeck	Tan	Mrs Vericy	Various				
Number		81	82	83	84	85	86	87	88	89	90	91	92	
87	Electrical fitter (or 90. Mechanic)													
139	Press operator (light)													
261	Dogman and/or crane chaser													
59	Welder—1st class													
66	Dresser and/or grinder (portable machine)													
13	Machinist—1st class													
283	Process worker	59	56	50	50	50	44	62	50					44
26	Toolmaker													
5	Fitter													
27	Turner													
49	Boilermaker and/or structural steel tradesman													
15	Machinist—3rd class											30		
45	Smith—Other										30			
58	Welder—Special class													
55	Marker off													
130	Die setter press operator (blue prints, etc.)													
72	Jobbing moulder and/or coremaker													
70	Furnaceman—Electric													
129	Die setter													
291	Other employees (after 3 months)									37				
14	Machinist—2nd class													
20	Patternmaker													
287	Storeman and/or packer													
126	Sheet metal worker—1st class													

Plant or workshop		Borg Warner				A.W.A.						Nuttall	
Employee		Various	Various	Nothing to record	Various	Various	Various	Various	Various	Various	Various	Various	Various
Number		93	94	95	96	97	98	99	100	101	102	103	104
87	Electrical fitter (or 90. Mechanic)												
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class				49			79		47		81	
283	Process worker					47	40		41		44		
26	Toolmaker												
5	Fitter												75
27	Turner												
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class	32	26										
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		Nuttall	A.E.I.		Lawrenson Alumasc	S.T.C.	Email		Delairco	T.E.I.			
Employee		Drayton	Payne	Miss Sheehan	Various	Various	Micallef	Mrs Rogers Miss Madigan	Mitchell	Baker	Schmarr	Samootin	Holt
Number		105	106	107	108	109	110	111	112	113	114	115	116
87	Electrical fitter (or 90, Mechanic)		88				65		84				
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class												
283	Process worker			52	44	46		43		88	88	88	88
26	Toolmaker												
5	Fitter												
27	Turner									88	88	88	
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer	88											
126	Sheet metal worker—1st class												

Plant or workshop		Melesco	S.T.C.	Borg Warner			Goetz			Johns and Hattersley		Ronaldson Bros. and Tippett	
Employee		Saywell	Various	Lennon	Gomola	Grimaldi	Kilroy	Various (M. & F.)	Unnamed	Various	Bowden	Bown	Mitchell
Number		117	118	119	120	121	122	123	124	125	126	127	128
87	Electrical fitter (or 90. Mechanic)			88									
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class						86						68
283	Process worker		50					50					
26	Toolmaker				86	86						69	
5	Fitter												
27	Turner												
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class	90											
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker									52			
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)								53		82		
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		Monsanto	McPhersons	Vickers Ruwolt	Collingwood tech. school	McColl Electric	Willow Ware	Gordon Bros.				Horsecroft	
Employee		Gingell	Anastasiadis	Kalnins		Fitzpatrick	Various	Various	Georgakopoulos	Various		Various	
Number		129	130	131	132	133	134	135	136	137	138	139	140
87	Electrical fitter (or 90, Mechanic)					86							
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class							86					62
283	Process worker		59 (no present classification)				51						
26	Toolmaker									80			
5	Fitter	76										73	
27	Turner												
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off										90		
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class								50				
20	Patternmaker												
287	Storeman and/or packer			55									
126	Sheet metal worker—1st class												

Plant or workshop		Horsecroft		Vickers Ruwolt				Radio Corp.	H.E.C.			
Employee		Various	Unnamed	Palmer Harris	Turnbull	Macdonald	Hanson	Various Unnamed	Various			
Number		141	142	143	144	145	146	147	148	149	150	151
87	Electrical fitter (or 90, mechanic)								84			
139	Press operator (light)											
261	Dogman and/or crane chaser											
29	Welder—1st class											
66	Dresser and/or grinder (portable machine)											
13	Machinist—1st class					88					83	
283	Process worker							58 or 64				
26	Toolmaker											
5	Fitter									76		
27	Turner				83							
49	Boilermaker and/or structural steel tradesman											
15	Machinist—3rd class											
45	Smith—other											90
58	Welder—special class											
55	Marker off											
130	Die setter press operator (blue prints, etc.)											
72	Jobbing moulder and/or coremaker						63					
70	Furnaceman—Electric											
129	Die setter											
291	Other employees (after 3 months)											
14	Machinist—2nd class	37										
20	Patternmaker			86 and 86								
287	Storeman and/or packer		45									
126	Sheetmetal worker—1st class											

Plant or workshop	H.E.C.				Cadburys		Hobart Technical College	Johns and Waygood	Sunbeam			
Employee	Unnamed			Ruppert and unnamed	Banks	Eaton		Panzenbock	Longfield	Gould	Horley	Butt
Number	152	153	154	155	156	157	158	159	160	161	162	163
87 Electrical fitter (or 90. Mechanic)			86		88							
139 Press operator (light)												
261 Dogman and/or crane chaser												
59 Welder—1st class												
66 Dresser and/or grinder (portable machine)												
13 Machinist—1st class												
283 Process worker												
26 Toolmaker	84								86	86	86	86
5 Fitter				75 or 89		85						
27 Turner												
49 Boilermaker and/or structural steel trademan												
15 Machinist—3rd class												
45 Smith—Other												
58 Welder—Special class								87				
55 Marker off												
130 Die setter press operator (blue prints, etc.)												
72 Jobbing moulder and/or coremaker												
70 Furnaceman—Electric												
129 Die setter												
291 Other employees (after 3 months)												
14 Machinist—2nd class												
20 Patternmaker												
287 Storeman and/or packer												
126 Sheetmetal worker—1st class		73										

Plant or workshop		Sunbeam		Efco	Standard Waygood					Avery			
Employee		Marich	Krynda	Various	Various		Various (M & F)	McNiece	Farrell	Various			Page
Number		164	165	166	167	168	169	170	171	172	173	174	175
87	Electrical fitter (or 90, Mechanic)							86	86				
139	Press operator (light)												
261	Dogman and/or crane chaser					86							
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)									71			
13	Machinist—1st class	86	86										
283	Process worker			46			55						
26	Toolmaker												
5	Fitter												69
27	Turner												
49	Boilermaker and/or structural steel trademan												
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)										51		
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer				47						45		
126	Sheet metal worker—1st class												

Plant or workshop		AWV												
Employee		Mrs Milne Mrs Sharkey	Newton	Mrs Clout	Miss Dixon	Mrs Mills	Mrs Husling	Mrs Collins	Mrs Bischoff	Mrs Treemayne	Mrs Kelly	Miss Out	Miss Lee
Number		176	177	178	179	180	181	182	183	184	185	186	187
87	Electrical fitter (or 90. Mechanic)		83										
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class												
283	Process worker	54		53	52	52	52	52	52	52	52	54	52
26	Toolmaker												
5	Fitter												
27	Turner												
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		AWV							M and M.T.B.				
Employee		Miss Matthews	Various	Miss Mehmet	Mrs Yea	Mrs Sonter	Various	Mrs Crews	McGuigan	Unnamed			Taylor
Number		188	189	190	191	192	193	194	195	196	197	198	199
87	Electrical fitter (or 90. Mechanic)								76	82	77		
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)											83	
13	Machinist—1st class												
283	Process worker	52	54	52	52	52	60	62					
26	Toolmaker												
5	Fitter												
27	Turner												
49	Boilermaker and/or structural steel tradesman												40
15	Machinist—3rd class												
45	Smith—Other												
58	Welder—Special class												
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		S.E.C.										Gas and Fuel Corporation	
Employee		Nicholson	Sulzer	Unnamed	Glawitsch	Various	Various	Lambert	Worfe	Grixti Whittle	Marlin and unnamed	Various	
Number		200	201	202	203	204	205	206	207	208	209	210	211
87	Electrical fitter (or 90. Mechanic)	86								86	86		
139	Press operator (light)												
261	Dogman and/or crane chaser												
59	Welder—1st class												
66	Dresser and/or grinder (portable machine)												
13	Machinist—1st class		77						86				
283	Process worker												
26	Toolmaker				86								
5	Fitter						79						78
27	Turner												
49	Boilermaker and/or structural steel tradesman												
15	Machinist—3rd class			38									
45	Smith—Other												
58	Welder—Special class					89		90				90	
55	Marker off												
130	Die setter press operator (blue prints, etc.)												
72	Jobbing moulder and/or coremaker												
70	Furnaceman—Electric												
129	Die setter												
291	Other employees (after 3 months)												
14	Machinist—2nd class												
20	Patternmaker												
287	Storeman and/or packer												
126	Sheet metal worker—1st class												

Plant or workshop		Gas and Fuel Corporation	C.R.B.			Lucas			McIlwraith Industries	Radio Corporation
Employee		Various	Various	Miller and unnamed	Various	Various	Unnamed (female)	Perris Tomlinson	Shorrock	Unnamed
Number		212	213	214	215	216	217	218	219	220
87	Electrical fitter (or 90, Mechanic)	81								
139	Press operator (light)									
261	Dogman and/or crane chaser									
29	Welder—1st class									
66	Dresser and/or grinder (portable machine)									
13	Machinist—1st class			82						
283	Process worker					45		86		
26	Toolmaker									
5	Fitter				74					
27	Turner									
49	Boilermaker and/or structural steel T'man									
15	Machinist—3rd class									
45	Smith—other									
58	Welder—special class									
55	Marker off									
130	Die setter press operator (blue prints, etc.)									
72	Jobbing moulder and/or coremaker									
70	Furnaceman—Electric									
129	Die setter									
291	Other employees (after 3 months)						36			
14	Machinist—2nd class									
20	Patternmaker									
287	Storeman and/or packer		49						65	
126	Sheet metal worker—1st class									58
185	Duster									
108	Radio tester									

ANNEXURE 3

INSPECTIONS TRANSCRIPT INDEX

Number of inspection	Plant or establishment	Date	Transcript page reference
1	A.R.C. Engineering (Queensland) Pty Ltd	28.9.1966	2522–2535
2	N. V. Appleton Pty Ltd	28.9.1966	2536–2540
3	Steelweld Fabrications	29.9.1966	2541–2548
4	Bradford Kendall Ltd	29.9.1966	2549–2555
5	Rheem (Australia) Pty Ltd	4.10.1966	2559–2567
6	English Electric Co. of Aust. Pty Ltd	5.10.1966	2568–2591
		6.10.1966	2592–2599
7	Clyde Engineering (Queensland) Pty Ltd	6.10.1966	2600–2610
8	Toowoomba Foundry Pty Ltd	24.10.1966	2615–2629
9	Napier Bros Ltd	25.10.1966	2630–2644
10	Wyper Bros Ltd	26.10.1966	2645–2658
11	Sidney Williams and Co. Pty Ltd	27.10.1966	2663–2680
12	Cyclone K-M Products Pty Ltd	28.10.1966	2683–2693
13	Allens Industries (N.Q.) Pty Ltd	1.11.1966	2694–2710
			2729–2738
14	Northern Manufactures Pty Ltd	1.11.1966	2711–2729
15	Stewarts and Lloyds (Australia) Pty Ltd	1.12.1966	2801–2822
16	A. Dumbrell Pty Ltd	1.12.1966	2823–2834
17	Dumbrell Forging Co. Pty Ltd	1.12.1966	2835–2841
18	Munmorah Power Station	2.12.1966	2842–2875
19	Alcan (Aust. Aluminium Co. Ltd)	31.1.1967	3120–3145
20	Cockatoo Docks and Engineering Co. Pty Ltd	1.2.1967	3146–3187
21	Dickson and Johnson	2.2.1967	3188–3215
22	Bliss Welded Products Ltd	3.2.1967	3216–3227
23	Sovereign Appliances Pty Ltd	3.2.1967	3228–3238
24	Amalgamated Wireless (A/asia) Ltd	13.2.1967	3249–3259
25	Malleys Limited	14.2.1967	3260–3285
26	Babcock and Wilcox of Aust. Pty Ltd	15.2.1967	3286–3319
27	Standard Telephones and Cables Pty Ltd	16.2.1967	3320–3342
28	Tulloch Limited	16.2.1967	3343–3363
29	Thomson and Scougall Industries Ltd	17.2.1967	3364–3374
30	Pettiford Industries	17.2.1967	3374–3393
31	Commonwealth Steel Co. Limited	24.2.1967	3394–3409
32	A. Goninan and Co. Limited	24.2.1967	3410–3423
33	McIlwraith Industries Pty Ltd	7.3.1967	3434–3444
34	Containers Limited	8.3.1967	3447–3460
35	Gadsden Hughes Ltd	8.3.1967	3461–3468
36	Cyclone K-M Products Pty Ltd	3.7.1967	3724–3744
37	Westinghouse Brake (A/asia) Pty Ltd	3.7.1967	3745–3758
38	W. D. and H. O. Wills (Aust.) Ltd and S. T. Leigh Co. Pty Ltd	4.7.1967	3759–3800
39	F. Muller Pty Ltd	5.7.1967	3801–3818
40	Bernard Smith Co.	5.7.1967	3819–3833
41	Pioneer Industries Limited and Excelsior Spring Co.	6.7.1967	3834–3852
42	North Sydney Technical College	10.7.1967	3853–3892
43	Telephone and Electrical Industries Pty Ltd	11.7.1967	3893–3935A
44	Borg Warner (Aust.) Limited	13.7.1967	3936–3974
45	Amalgamated Wireless (A/asia) Limited	17.7.1967	3975–4014
46	Nuttall Engineering Pty Ltd	18.7.1967	4015–4038A
47	A.E.I. Engineering Pty Ltd	18.7.1967	4039–4058
48	Lawrenson Alumasc	18.7.1967	4059–4065
49	Standard Telephones and Cables Ltd	19.7.1967	4066–4093
50	Email Limited	19.7.1967	4093–4106
51	Delairco Pty Ltd	20.7.1967	4107–4124
52	Telephone and Electrical Industries Pty Ltd	20.7.1967	4125–4141
53	Melesco Mfg Co. Pty Ltd	20.7.1967	4142–4158

Number of inspection	Plant or establishment	Date	Transcript page reference
54	Standard Telephones and Cables Pty Ltd	24.7.1967	4159–4183
55	Borg-Warner (Aust.) Ltd	24.7.1967	4184–4205
56	W. G. Goetz and Sons Pty Ltd and W. G. Goetz Mfg Pty Ltd	31.7.1967	4225–4244
57	M. G. John and Hattersley Ltd	1.8.1967	4252–4261
58	Ronaldson Bros and Tippett Ltd	1.8.1967	4262–4270
59	Monsanto Chemicals (Aust.) Ltd	2.8.1967	4271–4302
60	McPhersons Ltd	3.8.1967	4303–4321
61	Vickers Ruwolt Pty Ltd	7.8.1967	4322–4341
62	Collingwood Technical School	8.8.1967	4342–4386
63	McColl Electric Works Pty Ltd	16.8.1967	4400–4437
64	Willow Ware Pty Ltd	16.8.1967	4438–4460
65	Gordon Bros	17.8.1967	4461–4494
66	L. Horsecroft Pty Ltd	17.8.1967	4495–4521
67	Vickers Ruwolt Pty Ltd	18.8.1967	4522–4573
68	Radio Corporation Pty Ltd	22.8.1967	4574–4609
69	Hydro-electric Commission Tasmania	23.8.1967	4610–4691
70	Cadbury-Fry-Pascall (Aust.) Ltd	24.8.1967	4692–4724C
71	Hobart Technical College	24.8.1967	4725–4769
72	Johns and Waygood Ltd	25.8.1967	4770–4801
73	Sunbeam Corporation Ltd	6.9.1967	4802–4852
74	Efco. Mfg Co. Ltd	6.9.1967	4853–4861
75	Standard Waygood Ltd	7.9.1967	4862–4908A
76	W. and T. Avery (Aust.) Pty Ltd	7.9.1967	4909–4931
77	Amalgamated Wireless Valve Co. Pty Ltd	8.9.1967	4932–5009
78	Melbourne and Metropolitan Tramways Board ..	12.9.1967	5010–5061
79	State Electricity Commission, Yarraville	12.9.1967	5062–5094
80	State Electricity Commission, Yallourn	13.9.1967	5095–5167
81	State Electricity Commission, Hazelwood	14.9.1967	5168–5211
82	Gas and Fuel Corporation	14.9.1967	5212–5248
83	Country Roads Board	15.9.1967	5248A–5288
84	Joseph Lucas (Aust.) Pty Ltd	15.9.1967	5289–5327

ANNEXURE 4

NUMBER OF EMPLOYEES EMPLOYED UNDER PART I OF METAL TRADES AWARD AT PLANTS OR PROJECTS INSPECTED

Number of inspection	Plant or establishment	Number of employees
1	A. R. C. Engineering (Queensland) Pty Ltd	84
2	N. V. Appleton Pty Ltd	400
3	Steelweld Fabrications	36
4	Bradford Kendall Ltd	199
5	Rheem (Australia) Pty Ltd	248
6	English Electric Co. of Aust. Pty Ltd	829
7	Clyde Engineering (Queensland) Pty Ltd	53
8	Toowoomba Foundry Pty Ltd	678
9	Napier Bros Ltd	162
10	Wyper Bros Ltd	50
11	Sidney Williams and Co. Pty Ltd	27
12	Cyclone K-M Products Pty Ltd	18
13	Allens Industries (N.Q.) Pty Ltd	43
14	Northern Manufactures Pty Ltd	32
15	Stewarts and Lloyds (Australia) Pty Ltd	381
16	A. Dumbrell Pty Ltd	5
17	Dumbrell Forging Co. Pty Ltd	7
18	Munmorah Power Station—	
	Instrumentations Ltd	35
	International Combustion	264
19	Alcan (Aust. Aluminium Co. Ltd)	145
20	Cockatoo Docks and Engineering Co. Pty Ltd	1,049
21	Dickson and Johnson	83
22	Bliss Welded Products Ltd	147
23	Sovereign Appliances Pty Ltd	532
24	Amalgamated Wireless (A/asia) Ltd, North Ryde	1,932*1
25	Malleys Ltd	523
26	Babcock and Wilcox of Aust. Pty Ltd	492
27	Standard Telephones and Cables Pty Ltd	*2
28	Tulloch Ltd	619
29	Thomson and Scougall Industries Ltd	181
30	Pettiford Industries	89
31	Commonwealth Steel Co. Ltd	261
32	A. Goninan and Co. Limited	417
33	McIlwrath Industries Pty Ltd	160
34	Containers Limited	130
35	Gadsden Hughes Ltd	456
36	Cyclone K-M Products Pty Ltd	72
37	Westinghouse Brake (A/asia) Pty Ltd	247
38	W. D. and H. O. Wills (Aust.) Ltd *and* S. T. Leigh Co. Pty Ltd	168 122
39	F. Muller Pty Ltd	120
40	Bernard Smith Co.	121
41	Pioneer Industries Ltd *and* Excelsior Spring Co.	156
42	North Sydney Technical College	Nil
43	Telephone and Electrical Industries Pty Ltd	1,196
44	Borg Warner (Aust.) Ltd	1,140
45	Amalgamated Wireless (A/asia) Ltd, Ashfield	*3
46	Nuttall Engineering Pty Ltd	92
47	A. E. I. Engineering Pty Ltd	528
48	Lawrenson Alumasc	119
49	Standard Telephones and Cables Ltd	1,659
50	Email Limited	464
51	Delairco Pty Ltd	54
52	Telephone and Electrical Industries Pty Ltd	*4
53	Melesco Manufacturing Co. Pty Ltd	183

Number of inspection	Plant or establishment	Number of employees
54	Standard Telephones and Cables Pty Ltd	566
55	Borg Warner (Aust.) Ltd	*5
56	W. G. Goetz and Sons Pty Ltd *and* W. G. Goetz Manufacturing Pty Ltd	222
57	M. B. John and Hattersley Ltd	600
58	Ronaldson Bros and Tippett Ltd	59
59	Monsanto Chemicals (Aust.) Ltd	68
60	McPhersons Ltd	305
61	Vickers Ruwolt Pty Ltd	711
62	Collingwood Technical School	Nil
63	McColl Electric Works Pty Ltd	231
64	Willow Ware Pty Ltd	127
65	Gordon Bros	182
66	L. Horsecroft Pty Ltd	92
67	Vickers Ruwolt Pty Ltd	*6
68	Radio Corporation Pty Ltd	374
69	Hydro-Electric Commission of Tasmania—	
	Moonah Workshops	192
	Cluny, Repulse	101
70	Cadbury-Fry-Pascall (Aust.) Ltd	137
71	Hobart Technical College	Nil
72	Johns & Waygood Ltd	66
73	Sunbeam Corporation Ltd, Hurstville	22
73	Sunbeam Corporation Ltd, Penshurst	18
74	Efco. Manufacturing Co. Ltd	253
75	Standard Waygood Ltd	222
76	W. and T. Avery (Aust.) Pty Ltd	77
77	Amalgamated Wireless Valve Co. Pty Ltd	563
78	Melbourne and Metropolitan Tramways Board—	
	Preston	198
	East Coburg	32
79	State Electricity Commission, Yarraville	126
80	State Electricity Commission—	
	Yallourn	510
	Central Workshops, Yallourn	611
81	State Electricity Commission, Hazelwood	202
82	Gas and Fuel Corporation, Morwell	67
83	Country Roads Board	173
84	Joseph Lucas (Aust.) Pty Ltd	999
	TOTAL NUMBER OF EMPLOYEES UNDER PART I OF METAL TRADES AWARD	25,314

*1. Includes Metal Trades employees employed at: North Ryde, Ashfield and Silverwater plants. Silverwater plant not inspected.

*2. Included in . . . . . 49.

*3. Already included in 24.

*4. Already included in 43.

*5. Already included in 44.

*6. Already included in 61.

ANNEXURE 5

ANNOUNCEMENT No 1—18 JULY 1966

A Full Bench of this Commission, of which Full Bench I am a member, has decided to avail itself of the procedure available under section 34 (6) of the Act to obtain from me after such investigation as I consider necessary a report with respect to the following specified matters relative to the Metal Trades Award, 1952 (the award):

(1) What, if any, rearrangements or re-designations of classifications or additional classifications under Part I of the award are necessary or desirable to bring them into accord with present-day requirements;

(2) What, if any, alterations of marginal rates prescribed under Part I of the award or additional marginal rates are justified upon the grounds of work value, the economic considerations which have been presented to the bench, or for any other reason.

The said Full Bench has:

(i) intimated that it is aware that the said report may take some time to formulate

(ii) indicated that if at some appropriate stage in the proceedings before me with due regard to industrial justice and practicability I think fit to furnish an interim report pending completion of my whole investigation that would be in accordance with its intentions in seeking a report.

In approaching consideration of the task allotted it occurs that if I can suggest to the parties hereto ways and means by which some of the difficulties inevitably inherent in and attendant upon such investigation as devolves upon me as a required duty with respect to the award may be overcome, and if some or all of my proposals receive the support of some or all of the parties, not only will my task be thereby lightened, but the difficulties foreshadowed by others may be surmounted.

In so far as an investigation upon the grounds of work value is concerned, some of the principal difficulties likely to be encountered appear to lie in the facts that:

(a) subject to the exceptions and exemptions prescribed by the award the industries and callings covered by it are the engineering, metal working and fabricating industries in all their branches, and all industries allied thereto and include expressly the following 63 industries:

1. Mechanical and electrical engineering.
2. Shipbuilding and repairing.
3. Smithing.
4. Boilermaking and erection and repairing.
5. Bridge and girder construction and erection, and repairing.
6. Steel fabrication, construction and erection, and repairing.
7. Welding.
8. Tool, die, gauge and mould making.
9. Sheet metal working.
10. Metal moulding.
11. Diecasting.
12. Stovemaking and repairing.

13. Agricultural implement making and repairing.
14. Metal pressing and stamping.
15. Porcelain enamelling.
16. Manufacture of porcelain enamels, oxides, glazes and similar materials.
17. Metal machining.
18. Ironworking.
19. Iron and steel pipe making and fabrication.
20. Window frame making and repairing.
21. Safe and strong-room making and repairing.
22. The manufacture, erection and installation, maintenance and repair of all forms of electrical machinery, apparatus and appliances, including valve and globe manufacturing.
23. Radio, telephone and X-ray manufacturing, maintaining and repairing.
24. Manufacture of insulation materials and articles.
25. Wet and dry battery manufacturing and repairing.
26. Manufacture, erection, installation, maintenance and repair of electrical advertising equipment, including neon signs.
27. Manufacture, erection, installation, maintenance and repair of fluorescent lighting.
28. The drawing and insulation of wire for the conducting of electricity.
29. The manufacture and repair of recording, measuring and controlling devices for electricity, fluids, gases, heat, temperature, pressure, time, etc.
30. The production by mechanical means of industrial gases (other than coal gas).
31. The making of canisters, drums and other metallic containers.
32. Galvanising, tinning and pickling.
33. Electroplateware manufacturing.
34. Electroplating of all types.
35. Processing of metals such as sherardizing and bonderizing.
36. Lift and elevator making, repairing and maintenance.
37. Plastic moulding, casting or fabricating in synthetic resins, or similar materials and including the production of synthetic resins, powders, tablets, etc., as used in such processes.
38. Melting and smelting of metals.
39. Refrigerator manufacturing, maintaining and repairing.
40. Perambulator manufacturing and repairing.
41. Making, manufacture, installation, maintenance and repair of ventilating and air-conditioning plant and equipment.
42. Metal furniture manufacturing and repairing.
43. Kitchenware manufacturing.
44. Metallic toy and sporting goods manufacturing.
45. The making, assembling, repairing and maintenance of vehicles (except where such work is at present covered by another Federal award).
46. The manufacture of bolts, nuts, screws, rivets, washers and similar articles.
47. The manufacture of bright steel bars, rods, shafting, etc.

48. Making, manufacture, installation, maintenance and repair of scales and weighing machines and equipment.
49. Making, manufacture, installation, maintenance and repair of watches and clocks, including cases.
50. Making, repairing, reconditioning and maintenance of motor engines, and/or parts thereof, and of the mechanical and electrical parts including the transmission and chassis of motor cars, motor cycles and other motor driven vehicles.
51. The making of metal motor-body parts.
52. Japanning, enamelling, painting, etc., of metallic articles.
53. Hand and machine engraving.
54. Badge and name-plate manufacturing, including chemical engraving.
55. Manufacture, testing and repair of water fittings.
56. Manufacture of any article or articles from metal wire.
57. Installation of all classes and types of electrical wiring equipment and plant, and the repair and maintenance thereof.
58. Generation and distribution of electric energy.
59. Manufacture of ceramic articles for use in the metal trades industries.
60. Making, manufacture, treatment, installation, maintenance, repair and reconditioning of any article part or component, whether of metal and/or other material, in any of the foregoing industries.
61. Sorting, packing, despatching, distribution and transport in connection with any of the foregoing.
62. Making, manufacture, installation, construction, maintenance, repair and reconditioning of plant, equipment, buildings and services (including power supply) in establishments connected with the industries and callings described herein and maintenance work generally.
63. Every operation process, duty and function carried on or performed in or in connection with or incidental to any of the foregoing industries.

It is further provided that:

All descriptions of industry or callings set out in this clause wherever expressed may be read either alternatively or collectively in any combination whatsoever.

(b) excluding for the moment consideration of the Appendix to Part I, Females, junior females, unapprenticed male juniors and apprentices, there are prescribed rates for 295 classifications (some of these having sub-classifications) extending over the following 24 Divisions (some of which have sub-divisions):

Division A—General Engineering (including Windowframe and Agricultural Implement Making)
Division B—Smithing
Division C—Boilermaking and Steel Construction
Division D—Welding
Division E—Foundry
Division F—Electroplating
Division FA—Silverplated Ware (New South Wales and South Australia only)

Division G—Electrical
Division GA—Tradesmen not elsewhere specified
Division H—Sheet Metal
Division I—Galvanising
Division J—Porcelain Enamelling
Division K—Stovemaking (New South Wales and Queensland only)
Division KA—Cast Iron Gas Meter Makers and Repairers (Hibberd Meters Pty Ltd, Alexandria, N.S.W., and Parkinson and Cowan (A/sia) Pty Ltd, Redfern, N.S.W., only)
Division L—Steel Pipe Making (other than Drawn Pipes)
Division M—Plastic Moulding
Division N—Electrical Advertising and Fluorescent Lighting
Division NA—Metters Ltd—N.S.W.—Bath Plant
Division NB—T-S Malleable Pty Ltd, St Peters, New South Wales —Hallsworth Plant
Division NC—Bradford, Kendall Limited, Queensland
Division O—Ironworking and General
Division P—Leading Hands
Division Q—Tradesmen in Large Power Houses
Division R—Ship Repairing.

(c) some decades have elapsed since a general work-value examination was undertaken with respect to the work covered by the award.

(d) since the last general work-value examination was undertaken, the organisation and the technology of metal trades industries have altered appreciably.

(e) as pointed out by the Full Bench in this matter, there are '330 classifications listed in the award' with 'as many as 53 separate wage rates with refinements as low as a cent a day between classifications.'

It is manifest that, in relation to these difficulties, the principal obstacle to surmounting them readily is the amount of time likely to be required of anyone and everyone engaged in the undertaking.

Therefore, I have looked at some of the problems of this challenge.

It would appear, having regard for all the complexity of the structure and background of the award as well as the tempo of change of one kind and another in the fields covered by it, that in order to have any reasonable prospect of completing a task of the nature assigned to me with even a semblance of celerity, it is necessary to endeavour to proceed broadly in the following manner, that is by now:

1. intimating that in my view as it seems at the present time—

   (a) it is ludicrous that there should be prescribed within the award 'separate wage rates with refinements as low as a cent a day between classifications';

   (b) it is illogical that there should now be prescribed within the award some 330 classifications and some 53 separate wage rates;

   (c) the award structure permits classification to jostle classification in disorderly and irrational array;

   (d) every advantage should be taken of the possibilities conferred by the introduction of decimal currency; both from the point of view of management as to timekeeping and wage calculation

simplification, and from the point of view of the trade unions and those employed in industry as to ease in checking as to whether correct wage rates have been paid;

(e) it should be possible to prescribe separate wage rates in minimum graduation variation of 50 cents or, in certain cases, at least 25 cents a week;

(f) in a 50 cent or 25 cent wage step-ladder type of reorganisation of the wage structure, certain clusters of classifications may be expected to gain or lose minor marginal relativity, but this likely eventuality may flow without dislocation because of other aspects of wage adjustment possibly arising from later decisions of the Full Bench; and

(g) it should be possible to prescribe a greatly diminished number of classifications (if it is desired to retain present designations for easy or convenient management or trade union identification this could readily be done by grouping a number of designated occupations within the one classification range, but isolating them from the clause specifying classifications and giving them title and classification identification either in a schedule or a separate clause providing for designation identification);

2. indicating that as I now see it—

(a) the experience I have had in the metal trades industries within the last few years as Commissioner has in part equipped me to formulate certain ideas concerning comparable work-values;

(b) I should be expected to possess sufficient knowledge of work-values with respect to certain classifications of work as to be able to express such value in current monetary equivalents without further inspection (for instance, it would be both unrealistic and an outrageous waste of everybody's time for me to carry out further inspections concerning the work of what is now known as a 'rigger and/or splicer', either for the purpose of informing myself of what the 'rigger and/or splicer' does while at work, or of estimating the worth of such work in order to express its monetary value in relation to that of other occupations);

(c) there are a number of classifications of work concerning which it would be necessary for me to undertake inspections, particularly in order to enable me to make recommendations concerning proper relativities;

(d) it is highly important for me to endeavour to understand the impact and the effect of the impact of technological change upon work-values, especially such change as may have been expected to have developed over the last decade;

(e) it is of consequence that the parties advise me as to the areas of metal trades industries into which technological change may have penetrated during the last fourteen years, that is since the last award was made (it might rationally be expected, from their reasonably intimate knowledge of the inspections undertaken by me during the three years that I have been a member of the Commission, that the principal parties would be aware of what has been placed before me in this regard);

(f) it is expected that, within the next few weeks, the principal parties will confer, at first separately and later collectively, so that when next invited to appear before the Commission as at present constituted in this matter, they would be prepared to make either several or joint submissions as to what inspections should be undertaken for the purpose of enabling me best to inform my mind upon work-value considerations;

(g) it should be emphasised that inspections of the metal trades industries must necessarily be in sample form;

(h) it is hoped that sample selection may be a matter of agreement between the parties, otherwise I must decide upon both the samples and the programme;

(i) in the event that in any metal trades industry the choice of sample is left to me, I would in most cases use random sampling selection but where necessary or desirable I would employ representative sampling selection; and

(j) it occurs that it is desirable to take inspections in each State of the Commonwealth wherein the award operates and in such States to inspect certain large scale industries, those of intermediate size and those of small scale dimension; further, such inspections should, where considered necessary, embrace capital and provincial cities as well as small towns.

There are certain other general matters that should be touched upon at this juncture. These are:

1. It must be appreciated that until I present a report or reports to the Full Bench of which I am a member, I will not be ruling upon any matters submitted to me except upon questions of procedure, and then only upon such procedures as are requisite to such investigation as may be deemed necessary to enable me to furnish a report in accordance with the provisions of section 34 (6) of the Act.
2. Apart from matters specifically mentioned in the unanimous views expressed by the Full Bench in the Announcements read by the Presiding Judge, the Honourable Mr Justice Wright, on the eighth instant, the proposals set out herein are those for which I must accept sole responsibility.
3. This prefatory statement is necessary to enable me better and with greater celerity to furnish a report to the Full Bench upon the specified matters directed to my attention.
4. It is not considered necessary, for the purposes of reporting upon the specified matters directed to me, for the parties to make submissions concerning any wage rate currently appearing in any award other than the Metal Trades Award, nor would such submissions either interest or influence me.
5. I am not dogmatic nor doctrinaire at this point of time concerning any of the proposals now outlined.
6. I have enunciated these proposals for the purpose of assisting the parties in a difficult, complicated task; in turn I am hopeful of receiving constructive criticism and helpful advice from the parties.
7. Where necessary in the course of the investigation the Commission will have particular regard to its powers under sections 40 and 41 of the Act.

Finally, and far from least importantly, bearing in mind the emphasis placed upon conciliation by the Act in its chief objects and elsewhere, I would welcome any situation in which the parties may be able greatly to assist by reaching amicable agreement in certain areas of dispute. The Commission as presently constituted will do all that lies within its power to assist in such achievement.

It would, however, be a pity to lose this golden opportunity to establish topical work-values in the Metal Trades Award. I deem it of paramount concern to have regard to the explicit nature of the assignment given me. The clear intention of the Full Bench must not be stultified.

ANNOUNCEMENT No 2—8 AUGUST 1966

1. As soon as is possible after the conclusion of what is known as the *General Motors Holden's case*, which is currently being heard by a full bench of which I am a member, it is proposed to commence inspecttions in the metal industries.

The initial inspections will be made in the State of Queensland. It is likely that subsequent inspections generally will be made in the following order, although the Commission cannot bind itself to adhere strictly to this programme:

New South Wales
Victoria
South Australia
Tasmania

It may be necessary, in considering a particular industry, and in having regard to other requirements of my assignment as a Commissioner, to cut across this programme. This necessity will be limited to that which is unavoidable. The Commission will endeavour to inform all parties and interveners of the projected plan of procedure within a State with respect to inspections at least one week before commencement of such inspections.

2. On 5 March 1963 during the progress of a hearing by a full bench of the Commission in the matter of applications to vary the Graphic Arts Award (C Nos 251, 314, 316, 352, 369 and 384 of 1962) the Honourable Mr Justice Wright made some highly pertinent observations concerning the proper conduct of industrial inspections.

In view of the extensive nature of the task confronting the Commission in this matter, and in consideration and appreciation of the desirability of conserving the time of and limiting the expense for all concerned, it is thought that it may be helpful if His Honour's observations were reproduced herein:

> 'I propose to arrange for a court reporter to attend the inspections; his notes will be made available to the parties as portion of the transcript.
>
> Second: the purpose of inspections is not to receive or collect evidence. They are undertaken as an aid to an understanding of evidence presented to the Commission through witnesses or documents.
>
> Third: persons giving descriptions on inspections are expected to be completely objective and not to indulge in advocacy.
>
> Fourth: the inspections must not be made the occasion for cross-examination or addresses.
>
> Fifth: questions by parties should be asked sparingly and subject to the permission of the Commission.

Sixth: any person undertaking explanations at inspections must be prepared to give oral evidence subsequently at the request of any party or the Commission itself.

Lastly: subsequent references to the official notes will be allowed only as reminders of things observed upon inspection and not as evidence in themselves.

The Commission in this matter proposes in general to adhere to these requirements. One or more of them may be relaxed only in cases where it is thought that such relaxation will be obviously and genuinely helpful.

3. The Commission has prepared a dissection in tabulated form of the classifications of male adult employees now appearing in clause 4 of the Metal Trades Award 1952 (the award). Copies are now available for the parties and interveners.

It is hoped that the dissection of the award will be of some assistance to all concerned.

4. It is clear that in order to complete its tasks with the minimum of delay and with the maximum of expedition it will be necessary for the Commission to limit the inspections to consideration of what may be termed pilot classifications.

In this connection the word 'pilot' is used in its sense of being a guide through a difficult course of affairs.

It is trusted that the dissection to which reference has been made may furnish assistance in pilot classification selection.

Manifestly it will be necessary to undertake inspections calculated to inform the Commission as to certain work characteristics and patterns with respect to most of the recognised classifications of tradesmen in regard to their varying degrees of skill and responsibility and other relevant factors.

It may become of particular importance to establish whether a designation, now applied generally to a particular category of tradesmen, conceals the fact that there exists within the classification wide and varying degrees of skill and other factors relevant to logical wage assessment.

It will also be necessary, of course, to make enveloping inspections of work done by those other than tradesmen.

As intimated in my earlier announcement I have acquired a certain degree of knowledge of the nature of work being carried out in the metal industries. To the extent that this is relevant I propose to draw upon this knowledge for the purposes of my investigation.

5. The Commission would welcome the presentation by the parties to the Commission of statements of duties or proposed definitions.

This invitation is issued not as a requirement but as a suggested procedure that might assist in expediting my investigation.

6. At a time deemed appropriate it may be that the Commission will invite technical experts to assist it in its investigation. In the meantime the Commission would welcome consideration of this possibility by the parties and interveners.

If the parties or interveners desire to present views upon the subject by means either of oral or written submissions, such procedure would be acceptable

to the Commission. It is, however, suggested that if it be contemplated that a particular person, or persons, be considered in such connection, the reference should be in writing to the Commission.

In the event of such a course being considered desirable, the matter will be discussed informally with the parties and any intervener directly affected prior to a decision being made.

7. It had been my intention to launch the statement which follows during today's proceedings. However, during a hearing of 1 August 1966 in the matter of Cockatoo Docks and Engineering Company Pty Ltd and The Boilermakers' and Blacksmiths' Society of Australia and The Federated Ironworkers' Association of Australia (C No 1406 of 1966) I was confronted with a situation which made it necessary that some statement be issued at that point.

The said statement, as reported at page 9 of the transcript record of proceedings, was made in the following terms:

> 'As is well known to the parties, as soon as the *General Motors Holden's case* is finished, I shall be commencing a review of margins in the metal trades industries. The review will consist of an assessment of what should be currently the correct marginal rates in the Award.
>
> The manner of assessment will primarily be on the basis of work value, but clearly, there may be economic overtones. It would be manifestly unfair to many if, before the said review is completed, I yielded to pressures imposed by any party and made a decision which favoured the few and forgot the many. If I were so disposed to yield to such pressures, I would be allowing a situation to develop which would be one tantamount to industrial anarchy.
>
> Therefore, I wish to make it perfectly clear that, apart from consideration of cases wherein the existence of special circumstances may seem to require it, or wherein the contending parties come to agreement, I will not be granting any increases with respect to any marginal matter that newly comes to my notice, on and from today, until I have completed my report to the full bench, of which I am a member.
>
> It should be stated further that it must be made clear that any day spent in dealing with a dispute which has as its basis a claim for extra over-award payments can only delay by so long the presentation of my report to the Full Bench. Therefore, if the parties desire a reasonably expeditious conclusion to my difficult and complicated task, with respect to a comprehensive marginal review of the Metal Trades Award, they will best assist to bring it about by limiting the disputes by refraining from unnecessary industrial action.
>
> It is primarily up to the common sense of the parties whether the preparation of my report takes months or years'.

It is suggested to the parties and interveners that there is little need to qualify that statement in any way in order to emphasise its implications.

ANNOUNCEMENT No 3—27 SEPTEMBER 1966

May I make it clear at the outset of this morning's proceedings as to the manner in which I envisage inspections shall proceed and the course I consider this case should take.

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

Commr Winter]

1. The unions have announced that they desire inspections to be carried out at the premises of the following firms in the Brisbane Metropolitan area:

English Electric Co. of Australia Pty Limited.
Rheem Australia Pty Limited.
Clyde Engineering (Q'land) Pty Limited.
Naco Trading Pty Limited.
Bradford Kendall Limited.
A.R.C. Engineering Pty Limited.
Steelweld (Q'land) Pty Limited.

2. The unions have intimated that they require inspections to take place with respect to work being done by employees of the said firms, who are employed in the following classifications: (The number preceding each classification refers to the classification item number in the Metal Trades Award)

5 Fitter
13 Machinist first class
49 Boilermaker and/or structural steel tradesman
59 Welder first class
66 Dresser and/or grinder
87 Electrical fitter
90 Electrical mechanic
126 Sheetmetal worker first class
261 Dogman and/or crane-chaser
283 Process worker

3. I have stated that I do not necessarily commit myself to the adoption of any one form of measuring or estimating the work value inherent in any job, whether it be that of a tradesman or a non-tradesman.

4. I have indicated that I will examine, test and, for the time being, use any form of measuring or estimating such work value that is either suggested to me or suggests itself to me.

5. It has to be made quite clear that I have no intention of permitting those representing parties or interveners to examine or have access to my markings or any conclusion I derive from them in any form of work value assessment, at least until after I have presented my report to the full bench in these matters.

6. If the parties desire to compare experiences from time to time it occurs that such a practice would be of mutual assistance. However, I will not seek to enforce such a practice.

7. At an appropriate stage, either upon request by any party or at my own instance, it is proposed to take submissions, evidence and material upon any aspect of my investigation deemed to require such action.

8. It should be made clear that all transcript notes of inspections and proceedings will be made available progressively to all members of the full bench in these matters.

9. I have not yet been made aware as to whether the parties intend to seek inspections in the State of Queensland outside the Brisbane metropolitan area. For

my part I should indicate that as soon as conveniently possible after the conclusion of the Brisbane inspection I would wish to carry out inspections at the following plants and in the following order:

(a) Napier Bros, Dalby.
(b) Toowoomba Foundry Pty Ltd, Toowoomba.
(c) Wyper Bros, Bundaberg.
(d) Sidney Williams and Co., Pty Ltd, Rockhampton.
(e) Cyclone Co. of Aust. Ltd, Townsville.
(f) Northern Manufacturing Co. Pty Ltd, Townsville.
(g) Samuel Allen and Sons, Townsville.

ANNOUNCEMENT No 4—7 NOVEMBER 1966

I make this announcement in respect of the Unions' notice that they would, on the first practicable day, apply for the hearing of an Application for an interim increase in marginal rates.

Immediately upon my return from the north I took the opportunity of listing the matter before me in Melbourne on Monday, 14th inst. This was the earliest date which, according to all indications at that time, would have afforded me the opportunity of conferring with my colleagues of the full bench which has the final responsibility in this matter and announcing, on their behalf and mine, the future course of proceedings.

It seemed to me inevitable that in one form or another and through one course or another the question of an interim increase in margins would ultimately lodge with the full bench of which I am a member.

In consideration of the circumstances of that near certainty it occurred that I would do best if I paid heed to the old saying of the Greeks 'Take time by the forelock—for she is bald behind.'

I then conferred with my three colleagues and they at once agreed with my suggestion that it would be preferable for the full bench to deal with this matter *ab initio* rather than later.

We were also all in immediate agreement that the full bench should make itself available to deal with the Unions' application and to hear the other parties and interveners in relation thereto at the earliest practicable time.

The President of the Commission was approached and he has approved of the release from other cases already set down for other members of the bench for Tuesday, the 15th inst. and for the rest of that week and for the following week.

The parties are therefore informed that those two weeks will be available for the hearing should the course of proceedings require this.

In view of this early availability of all four members of the bench, and in deference to the necessity for advising all parties and interveners as soon as possible of the likely course of the matter, I make this announcement now instead of waiting until next Monday, the 14th inst.

I shall still sit on that day for the purpose of dealing with questions which might be properly and appropriately dealt with then in order to endeavour to save the time of the full bench on the following day.

By acting in the manner indicated it should be obvious that I am concerned to conserve not only my own time but that of all others involved.

DECISION—METAL TRADES AWARD (*re* WORK VALUE INQUIRY)

Commr Winter]

ANNOUNCEMENT No 5—7 MARCH 1967

1. DELAY AND ITS CAUSES

During the hearing in Brisbane last week of an application by the Metal Trades Employers' Association to vary the Federal Metal Trades Award 1952 with respect to its operation in the State of Queensland (C No. 103 of 1967) the metal trades unions applied to have the hearing of the matter adjourned. Among the reasons advanced was the following:

> 'We say that delays in the work value examinations are the cause of grave and, in our submissions, justified industrial discontent.'

This reason was not that which caused me to adjourn the hearing. On 1 March 1967 in my decision to adjourn the hearing I said:

> 'I am not in any way deluded by representations that may be made concerning the time factor. There have been far more days lost in the metal trades work value investigation because of irresponsible bans, limitations or restrictions by members of trade unions than would be likely to occur through a hearing of the real issues of this case, provided the parties and I were mutually conscious of the latent possibilities of use of powers inherent in section 40 of the Act. In spite of this I am seized with the need to give emphasis in priority to the work value matter.
>
> In connection with that exercise it may perhaps be said that it is of little use for the parties or groups of people to be peevish about delays in that matter where their own intolerances, policies and practices are the direct causes of such delays.'
>
> (Page 12, duplicated copy of decision)

In elaboration of this statement I present with close but approximate accuracy the number of matters coming to the Commission and falling within my metal trades assignment—and I stress 'metal trades assignment', not other areas of my assignment—since the work value investigation commenced. Since the date of commencement of the investigation, *viz.* 19 September 1966, there has been a total of 169 metal trades notifications pursuant to section 28 of the Act, including applications for variation of the award. That approximate figure was compiled up to the end of last week.

I have found it necessary to deal with 43 of those, of which 16 have been applications to vary the award, three apprenticeship applications and 24 notifications pursuant to section 28 of the Act.

It is almost unnecessary to state that many days have been spent on these matters.

So much for statistics of such matters. They will be kept up to date.

Let us now consider what time is likely to be lost to the work value investigation case because of certain topical matters.

Yesterday was lost because of a needless and irrational strike extending over the past few days, which halted construction at the Lake Munmorah power station. It is possible that at least one or two days will be lost during next week in further consideration of issues arising in that matter. Effective use by the unions of the provisions of section 28 of the Act would have rendered other and abortive action completely unnecessary. Yesterday, in commenting on such action, I said:

> 'There seems to be a peculiar belief that reliance on a naked exhibition of brute force will force somebody to do something.'

On the contrary, if such people lived in reality and understood the Australian character, they would know that such an exhibition only hardens resistance and brings a determination that such measures shall not succeed.

On Thursday of this week another day is lost to the work value investigation because of understandable union desires that I hear an application concerning construction workers for certain contractors working for the State Electricity Authority of Victoria in the Latrobe Valley project. On the following day there are several other matters requiring my attention that have required my attention for some little time.

Soon I must devote a day to giving further attention to a demarcation dispute at the State Dockyard, Newcastle. A union application has just been made concerning shift work allowances with respect to the State Dockyard at Newcastle. This matter requires prompt attention. At present I am not in a position to say how much time will have to be devoted to this question.

Shortly I must conclude a hearing in a matter properly initiated by the unions and affecting the Electricity Trust of South Australia and the Hydro-Electric Commission of Tasmania. Probably two days will be required to complete that hearing.

A very important conference must take place shortly in which The Boilermakers' and Blacksmiths' Society of Australia and The Federated Shipwrights and Ship Constructors Association are locked in a serious demarcation dispute. Clearly, some time will have to be spent on that nationally important issue.

These are only some of the major matters that require my attention. There are others, and if I may rely on the past as being an indicator of the future, there are prospects.

It should be evident that I have referred only to the time likely to be devoted to hearings.

Wednesday of next week is set aside for a private conference between the employers and the unions.

I am appreciative of the fact that the unions, in the light of my 'Cockatoo Docks statement' (*vide* Announcement No. 2), in the words of Mr McBride at Brisbane last week, 'have accepted that request and have refrained from bringing numerous matters before you in the light of that request'. Nevertheless, a considerable number of such matters do have to come before me in spite of the earnest endeavours of trade union officials.

It is appreciated that genuine applications concerning important matters require prompt attention, but in the light of the large number of irresponsible, unnecessary and easily preventible bans, limitations and restrictions upon the performance of work that have occurred, there is totally unnecessary disruption of the work value investigation.

Where a matter of deep principle is involved I can at least understand such action. Where such actions are the by-products of campaigns designed to hinder the Commission in its work value investigation, I find them either bewildering or grotesque.

In the light of the 169 disputes and applications since the work value investigation commenced, I find trade union complaints of delay quite ludicrous. For some unionists—and from this, of course, I omit the responsible trade union

officials and many responsible unionists—it is a case of 'We will prevent you working, and then we will complain that you are not working'. When cheap propaganda rests on such insecure and deceptive bases, it becomes, perhaps, more laughable than nauseating.

Finally, as I said at the conclusion of my 'Cockatoo Docks statement', it is primarily up to the common sense of the parties whether the presentation of my report takes months or years.

2. The Present Stage

On 15 February, upon Mr McBride informing me that it was desired that a conference replace a planned formal hearing to enable the union and the employers to consider certain matters, I stated:

> 'Of course, any agreement reached between the parties must be subject to the fact that the Commission considers that classifications settled upon and agreed upon by the parties are sufficiently representative to allow the Commission to be assured that a work value examination of the type desired is possible under the terms of the agreement. Subject to that reservation, the approach indicated by the parties is to be welcomed. It may be said, perhaps with advantage at this stage, that this was the type of approach that I had intended to recommend to the parties in the statement I proposed to make on Monday last. It seemed to me that about this stage of the inspections, there should be some attempt by the parties to reach a point of agreement wherein certain representative classifications could be deemed to be those which would provide a sufficiently wide examination.
>
> At this stage the parties and the Commission have had the advantage of thorough inspections in Queensland and quite a number of thorough inspections in New South Wales. Of course, we have not nearly completed the programme originally proposed, but by now it should be clear to everyone that it is possible that we have gained sufficient information to enable an approach of the type now suggested.'
>
> (Transcript page 3294)

At this juncture it is perhaps necessary to remind you that the following had previously been put to you:

1. It is ludicrous that there should be prescribed within the award separate wage rates with refinements as low as a cent a day between classifications.
2. It is illogical that there should now be prescribed within the award some 330 classifications and some 53 separate wage rates.
3. The award structure permits classification to jostle classification in disorderly and irrational array.
4. It should be possible to prescribe separate wage rates in minimum relation variation of 50 cents or, in certain cases, at least 25 cents a week.
5. It should be emphasised that inspections of the metal trades industries must necessarily be in sample form. (This was from my Announcement No. 1 presented on 18 July 1966.)

6. It is clear that in order to complete its task with a minimum of delay and with a maximum of expedition it will be necessary for the Commission to limit the inspections to consideration of what may be termed pilot classifications (Announcement No 2, 8 August 1966).

I would commend to those who will take part in the private conference due to be held on Wednesday, 15 March 1967, that they be good enough to give earnest consideration to these six points. If they can give positive and practical assistance in such matters, it would be welcomed.

I do not wish to comment upon the classifications reported to be chosen by the unions as pilot classifications until I have been addressed upon the subject following the projected conference, other than to draw the attention of those concerned to the fact that applications concerning storemen and packers had been lodged prior to the commencement of the work value investigations. I announced that this matter would be incorporated as part of the work value review. May I say that at present I am more interested in work qualities than fixed classifications, although I realise that existing classifications provide a ready 'shorthand' type of identification.

When I say work quality, I am thinking for instance of such factors as skill, qualifications, aptitude, experience, nature of the work and conditions in which or under which the work is carried out. Such factors may or may not be accurately expressed or estimated in the current classifications and margins.

I can state positively that the time has come when I may say that I am of the view that it should be possible greatly to reduce the planned number of inspections, if it was intended to carry out investigations in other states of the same magnitude and of the same tempo as those carried out in Queensland and, to date, in New South Wales.

After those taking part in next week's conference have advised me as to their measure of agreement I may be in a position to be more precise. However, it should be pointed out that there are still some areas of skill and lesser skilled work which I have yet to see. If concentration be directed to these, I do not think a great deal more time need be spent on repetitive inspections, although I deem it necessary to see work in each of the other three states affected.

I remind the principal spokesmen for those interests taking part in these proceedings to be prepared at the first formal opportunity afforded them following the conference projected for 14th instant to be in a position to inform me, in approximate terms, of the time likely to be required by them in which to present submissions, evidence and material following the inspections which have so far been made.

EXTRACTS FROM TRANSCRIPT OF 8.3.67—

STATEMENT MADE AT CONTAINERS LTD., CABARITA—

SUPPLEMENTARY TO ANNOUNCEMENT No 5.

'After having read the terms of my announcement (No 5) it occurs that insufficient distinction was drawn therein between responsible trade union officers and members and irresponsible trade union members.

It should be emphasised that much work has been done by those with a sense of responsibility, and with an understanding of the importance of the metal trades work value investigation, to prevent strikes during the period of the investigation.

To my certain knowledge, some widespread strikes of planned 24 hours duration have been averted because of the efforts of the big majority of trade union officials who want to see the early termination of the investigation.

In my announcement insufficient emphasis was placed on these aspects.

Nevertheless, it remains undeniably true that in wide areas irresponsible groups of trade unionists have done much through the imposition of bans, limitations and restrictions to cause a slowing down of the tempo of the investigation.

With respect to disputes it should be made clear, as it was made clear by me last week in Brisbane, that I have never entertained the view that, simply because a strike has occurred, employees are necessarily in the wrong and employers are obviously in the right.

It is vital to examine the causes of the dispute rather than merely to consider the effects.

However, the real point is that this Commission should have an opportunity to diagnose the causes of an impending dispute before the dispute becomes a strike reality.

If that were done all would benefit.'

ANNOUNCEMENT No 6—15 JUNE 1967

1. In my view it will be possible to complete inspections within a period considerably less than that contemplated by the unions for the exercise.

2. In the initial stages of the inspections I intimated that I would not, at that point, be selective or dogmatic, but would inspect that which one party or another considered should be seen by me.

3. Later I emphasised that the exercise would have to be carried out by means of a pilot classification inspection technique.

4. It was stated that if the parties could not agree on such pilot classifications I would make the selection.

5. After being given full opportunity and specific invitation the parties failed to come to terms with such a proposition. Therefore I was forced to select the relevant classifications myself.

6. I selected eleven specified classifications plus the classifications for females. These in my view will afford a reasonably comprehensive picture of essential metal trades work.

7. I have twice unavailingly requested (*see* Announcement No 5 of 7 March 1967 and my decision of 5 April 1967) the parties to furnish me with lists of classifications which are obsolete, redundant or unnecessary.

I now intimate that unless I receive such information by 15 July 1967 I propose to move to make such recommendation in my report as seems to me to be appropriate.

8. Circumstances have made it necessary for me to refer to certain specific matters in the last six paragraphs. I do so in no querulous manner but simply because it is necessary in order that important questions may be seen in orderly perspective.

Indeed, I am satisfied that the co-operation I expect from all concerned will play a significant part in bringing about the result to which I refer at the end of this statement.

9. At this point it should be said that I am of the view that at the conclusion of inspections the matter should be referred back to the full bench.

10. It occurs that if I sitting singly took evidence and came to a recommendatory decision concerning its value, dispute as to my estimate of such value could mean a dual presentation of such evidence, with much consequential waste of time.

11. Having regard to—

(a) the width of inspections already undertaken;

(b) the intensive few years that I have spent as Commissioner assigned to the metal trades industries;

(c) the expressed desire of the unions and employers for an early termination of the matter;

I see no sound reason, so far as I am concerned, why the main inspections, apart from inspections in the electricity supply industry, cannot be completed within the next ten weeks; that is to say, by the end of August.

12. I use the words 'main inspections' because I am mindful of submissions made by Mr McBride during the 'appendix' case before the full bench wherein he pointed to the desire of and the responsibility upon the unions to ensure that all work refinements of selected classifications were seen during my inspections.

13. However, having regard to the importance attached by the parties to expedition, I propose, in accordance with the powers conferred on me by the said full bench to furnish a report as soon as is possible consistent with proper examination of the work involved.

14. Now that I have been released from other commitments and provided I am given full co-operation by the parties and am not diverted by extraneous disputation, the matter should be in the hands of the full bench, for its final determination, reasonably soon after the completion of my inspections.

ANNOUNCEMENT No 7—3 AUGUST 1967

I am now at a point where, stemming in part from my decisions, firstly, to concentrate upon eleven selected classifications and, secondly, to curtail and limit the period of time yet required to complete the inspections, it is expected that the programme will be completed within a reasonably brief period.

It occurs that it may now be decidedly helpful if the other members of the reference bench could accompany me in the final stages of the inspections.

The clear advantages lying in such a prospect should be apparent to all.

Commr Winter]

If my colleagues are afforded an opportunity to participate in the inspections a number of factors, which I think it unnecessary to mention, will, in my view, greatly facilitate the further hearing of the matter following the conclusion of the current inspection programme.

In particular these factors would accelerate appreciably the tempo of that hearing.

I am pleased to be able to announce that my colleagues are now in a position where they are able to assist in the manner indicated. They will, within a short time, join the inspection party.

I warmly welcome their participation and assistance.