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MANUFACTURING INDUSTRIES
1947-48

NO. 7. INDUSTRIAL METALS - FERROUS

PART II. PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES)

Prepared Under Instructions from
THE RIGHT HONORABLE THE TREASURER

by

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PREFACE

1. GENERAL: The industries included in this series for 1947-48 are listed on the back of the cover. They include those listed in the same series for 1946-47 with the addition of No. 39. Wire and Wire Working (including Nails). In addition, Industry Summaries Nos. 7. Engineering, and 8. Extracting and Refining of Non-Ferrous Metals; Alloys, have been expanded to give a more detailed analysis of the statistics of these and other industries associated with the metal trade. The parts included in this extension are listed on the back of the cover. The 1947-48 Summaries published to date are indicated at the top of page 2.
2. CLASSIFICATION OF FACTORIES: For purposes of industry classification, a factory in Australia is classified according to the nature of the product. Where two or more distinct types of industrial activity are carried on in one establishment, factory proprietors are requested to furnish separate returns for each activity in order to allow classification on this basis. In some instances, however, this is not practicable, and in such cases there is no alternative but to classify the factory according to its predominant activity. This difficulty is most acute in the Metal Trades industries, (e.g. Engineering firms also producing Agricultural Implements, Stoves and Ovens, and/or Brass and Copper products), but it is also to be found in factories concerned with the treatment or manufacture of Skins, Leather, Clothing, Wood products and some other articles.

Each of the Summaries in the series "Manufacturing Industries", relates to the operations of factories classified to the selected industry or industries specified. However, owing to the diverse nature of the activities carried on in some industrial establishments, the figures may include the subsidiary but extraneous activities of those establishments included in the industry, while they will exclude relevant activities which are subsidiary to the predominant activity of establishments classified to some other industry. The extent to which this qualification is important in the case of each Summary is indicated in the table(s) relating to the output of the individual products of the industry or industries involved.
3. BASIS OF THE STATISTICS: The scope of the factory statistics is fully explained in Part I of the annual Production Bulletin.

Briefly, a "factory" is taken to be an industrial establishment in which four or more hands are employed or in which power other than hand is used.

All persons employed in the manufacturing activities of the factory are counted as factory employees. The figures relating to employment, therefore, exclude all those engaged in selling and distribution, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods, and retailing storemen. The figures do include, however, proprietors who work in their own factories as well as "out-workers".

The value of output is the wholesale selling value at the factory of goods made or processed during the year, including by-products. In addition it includes the value of other work done, such as repair work, assembling and making-up for customers.

The value of production is the value of output minus the cost of raw materials, containers, power, fuel, light, lubricants, water, tools replaced, and repairs to plant, and represents the value added in the process of manufacture within the factories. As full details of the cost of production are not collected, the amount of profit resulting from operations cannot be ascertained. The value of production, therefore, is the source from which such items as wages, interest, depreciation, profits, taxation, insurance, advertising and other sundry charges are met.

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MANUFACTURING INDUSTRIES 1947-48

(Note: Summaries already published in this Series are: - Nos. 1. Cement and Cement Goods; 2. Bricks, Pottery and Earthenware; 3. Chemicals, Drugs and Medicines; 4. White Lead, Paints and Varnish; 5. Chemical Fertilizers; 6. Soap and Candles; 7. Industrial Metals - Ferrous - Part I, Smelting, Converting, Refining and Rolling of Iron and Steel; 14. Woollen Mills; 15. Hosiery and Other Knitted Goods; 27. Tobacco, Cigars and Cigarettes; 34. Cotton Mills)

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES)

1. GENERAL: In 1945-46 and 1946-47, Manufacturing Industry Summary No. 7 was issued under the general heading of "Engineering", and included details of four industries, viz., Smelting, Converting, Refining and Rolling of Iron and Steel; Foundries (Ferrous); Plant, Equipment and Machinery; and Other Engineering.

In 1947-48, the Summary has been expanded to embrace details of three additional industries, viz., Iron and Steel Sheets; Sheet Metal Working, Pressing and Stamping; and Pipes, Tubes and Fittings. In addition the Summary has been retitled "Industrial Metals - Ferrous", and for clarity in presentation, has been issued in four separate parts as shown on the back of the cover. This Summary (No. 7 - Part II) is entitled "Plant, Equipment and Machinery (including Foundries)", and embraces three separate industries, viz., Foundries (Ferrous); Plant, Equipment and Machinery (including Machine Tools); and Other Engineering. As a result of changes in classification, comparable details for these industries are not available prior to 1945-46 and consequently data included in comparative tables (except Tables V and XV) are confined to the three years 1945-46 to 1947-48.

2. SUMMARY OF STATISTICS: The following table gives a summary of the principal statistics for each industry separately and the three combined for the years 1945-46 to 1947-48. Details on a comparable basis are not available for earlier years.

TABLE I : PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) :AUSTRALIA

Year	Number of Factories	Persons Employed (a)	Salaries and Wages Paid (b)	Power Fuel, and Light, &c. Used	Value of Other Materials &c., Used (c)	Value of Production	Value of Output
	No.	No.	£'000	£'000	£'000	£'000	£'000

FOUNDRIES (FERROUS)

1945-46	312	5,344	1,612	161	1,210	2,341	3,712
1946-47	330	4,813	1,558	158	1,181	2,264	3,603
1947-48	349	6,597	2,597	247	1,764	3,666	5,677

PLANT, EQUIPMENT AND MACHINERY, INCLUDING MACHINE TOOLS

1945-46	1,038	46,123	14,259	605	16,454	21,044	38,103
1946-47	1,198	47,812	15,496	615	19,133	22,545	42,293
1947-48	1,286	50,909	19,315	730	25,417	28,780	54,927

OTHER ENGINEERING

1945-46	963	13,112	3,634	162	3,599	5,432	9,193
1946-47	1,148	12,623	3,613	134	3,814	5,538	9,486
1947-48	1,267	14,232	4,808	171	4,567	7,425	12,163

TOTAL PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES)

1945-46	2,313	64,579	19,505	928	21,263	28,817	51,008
1946-47	2,676	65,248	20,667	907	24,128	30,347	55,382
1947-48	2,902	71,738	26,716	1,148	31,748	39,871	72,767

(a) Includes Working Proprietors. (b) Excludes amounts drawn by Working Proprietors. (c) Includes also value of containers, packing, etc., replacements of tools and repairs to plant.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

3.

In the following table, particulars for each of the industries are given separately, by States, for the year 1947-48.

TABLE II : PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) :
STATES, 1947-48.

Particulars	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Aust.
<u>FOUNDRIES (PERTHUS)</u>							
No. of Factories	76	224	16	18	15	-	349
No. Employed (a)							
Males	2,428	2,536	411	499	460	-	6,334
Females	140	81	11	13	18	-	263
Total	2,568	2,617	422	512	478	-	6,597
Value of -	£.	£.	£.	£.	£.	£.	£.
Salaries & Wages							
Paid (b)	1,083,259	1,003,973	151,584	195,572	162,969	-	2,597,357
Power, Fuel, Light, etc. used	87,830	96,841	11,159	19,640	28,995	-	246,465
Materials, etc. used	584,464	858,425	99,786	115,181	105,882	-	1,763,798
Production	1,516,471	1,451,012	226,055	258,568	220,291	-	3,666,397
Output	2,182,765	2,468,338	337,000	393,389	355,168	-	5,676,660
Land & Buildings	436,948	552,715	57,333	49,118	67,137	-	1,163,251
Plant & Machinery	262,572	384,128	63,064	73,776	73,748	-	857,288
H.P. of Engines	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ordinarily in use	5,806	6,616	1,616	1,906	2,041	-	17,985

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS)

No. of Factories	703	362	76	84	61	-	1,286
No. Employed (a)							
Males	24,174	13,130	3,374	4,617	1,681	-	46,976
Females	2,037	1,082	161	581	72	-	3,933
Total	26,211	14,212	3,535	5,198	1,753	-	50,909
Value of -	£.	£.	£.	£.	£.	£.	£.
Salaries & Wages							
Paid (b)	10,000,092	5,588,965	1,180,338	1,966,831	580,415	-	19,315,641
Power, Fuel, Light, etc. used	354,463	218,709	49,915	79,964	26,957	-	730,008
Materials, etc. used	13,496,147	7,399,315	1,384,301	2,540,387	597,235	-	25,417,385
Production	14,928,542	8,475,126	1,785,316	2,795,359	835,061	-	28,779,404
Output	28,779,152	16,039,150	3,219,532	5,375,710	1,459,253	-	54,926,797
Land & Buildings	4,878,587	2,795,748	480,998	663,689	287,315	-	9,106,337
Plant & Machinery	4,287,317	2,843,682	485,287	724,755	321,441	-	8,662,482
H.P. of Engines	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ordinarily in use	58,912	27,022	9,280	11,649	6,072	-	112,935

OTHER ENGINEERING

No. of Factories	528	401	66	118	97	57	1,267
No. Employed (a)							
Males	3,616	5,640	744	2,146	493	715	13,354
Females	301	383	30	111	22	31	878
Total	3,917	6,023	774	2,257	515	746	14,232
Value of -	£.	£.	£.	£.	£.	£.	£.
Salaries & Wages							
Paid (b)	1,177,757	2,250,544	246,226	734,702	132,159	261,354	4,802,542
Power, Fuel, Light, etc. used	45,915	71,145	9,747	27,189	8,003	9,722	171,721
Materials, etc. used	1,195,598	2,072,488	308,476	633,195	148,960	208,130	4,566,847
Production	2,014,300	3,415,287	357,837	1,038,906	227,848	380,726	7,424,904
Output	3,255,813	5,558,920	676,060	1,684,290	384,811	598,578	12,163,472
Land & Buildings	1,561,888	1,343,663	148,031	314,149	115,153	169,745	3,652,629
Plant & Machinery	1,162,192	1,072,961	92,295	325,340	78,802	167,837	2,899,427
H.P. of Engines	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ordinarily in use	7,388	15,122	1,507	4,831	1,218	1,738	31,804

(a) Includes Working Proprietors. (b) Excludes amounts drawn by Working Proprietors.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

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3. AVERAGE SALARIES, OUTPUT AND PRODUCTION: Particulars of the average salary and wage paid, together with the average values of output and production per person engaged and the ratio of salaries and wages to the value of production are shown in the following table for the three industries combined for the years 1945-46 to 1947-48.

TABLE III : AVERAGE SALARIES AND WAGES PAID, OUTPUT, ETC.
PER EMPLOYEE : AUSTRALIA

Year	Salaries and Wages per Employee (a)	Value of Output per Person Engaged (b)	Value of Production per Person Engaged (b)	Ratio per cent. of Salaries and Wages to Value of Production
	£.	£.	£.	%
1945-46	311	790	446	67.69
1946-47	329	849	465	68.10
1947-48	386	1,014	556	67.01

(a) Excludes Working Proprietors and amounts drawn by them. (b) Includes Working Proprietors.

4. ARTICLES PRODUCED: The table following shows particulars of the quantity and value of the principal articles produced in the three industries, Ferrous Foundries, Plant Equipment and Machinery, and Other Engineering during the year 1947-48. A number of the articles produced in these establishments are, however, also produced in other works, and the table has accordingly been extended to show separate particulars of these articles produced in (i) the combined industrial group - Foundries (Ferrous); Plant, Equipment and Machinery; and Other Engineering, and (ii) all Australian factories. For simplification of the table, it has been divided into two parts; Part I showing those articles for which details of quantity and value are available, and Part II those articles for which value only is available.

TABLE IV : PRINCIPAL ARTICLES PRODUCED IN (1) PLANT, EQUIPMENT AND
MACHINERY WORKS (INCL. FOUNDRIES) AND (2) ALL AUSTRALIAN
FACTORIES : 1947-48

PART I

Particulars	Plant, Equipment and Machinery Works (incl. Foundries)		All Australian Factories	
	Quantity	Value (£)	Quantity	Value (£)
<u>Engines -</u>	No.		No.	
Steam, With Boilers - Water Tube	(a) 88	(a) 35,263	88	35,263
Other	96	26,009	96	26,009
Without Boilers	-	-	-	-
Steam Boilers - Water Tube	(a) 81	(a) 46,428	81	46,428
Other	245	54,091	245	54,091
Internal Combustion (excl. Car and Cycle Engines) -				
Diesel - Marine - 2 H.P. & under 6 H.P.	(b)	(b)	(b)	(b)
Other H.P.	(b)	(b)	(b)	(b)
Other - 2 H.P. & under 6 H.P.	(a) 1,751	(a) 176,304	1,751	176,304
Other H.P.	(a) 2,368	(a) 305,789	2,368	305,789
Petrol - Marine - 2 H.P. & under 6 H.P.	(a) 2,959	(a) 149,755	2,959	149,755
Other H.P.	(a) 399	(a) 125,757	399	125,757
Other - 2 H.P. & under 6 H.P.	(a) 7,800	(a) 325,626	7,800	325,626
Other H.P.	(a) 7,071	(a) 290,120	7,071	290,120
<u>Machinery -</u>				
Household - Washing	(a) 2,085	(a) 25,088	2,085	25,088
Refrigerators - Household -				
Electric-Absorption	(a) 16,527	(a) 710,681	16,527	710,681
Compression (Sealed Unit)	(a) 25,834	(a) 2,013,311	25,834	2,013,311
(Unsealed Unit)	1,877	140,800	10,971	840,480
Gas	(a) 30,322	(a) 1,288,289	30,322	1,288,289
Kerosene and Oil	(a) 28,482	(a) 1,389,689	28,482	1,389,689

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

TABLE IV : PRINCIPAL ARTICLES PRODUCED IN (I) PLANT, EQUIPMENT AND
MACHINERY WORKS (INCL. FOUNDRIES) AND (II) ALL AUSTRALIAN

FACTORIES : 1947-48

PART I (Continued)

Particulars	Plant, Equipment and Machinery Works (incl. Foundries)		All Australian Factories	
	Quantity	Value (£)	Quantity	Value (£)
<u>Machinery - (Continued)</u>				
Refrigerators-Household -				
Commercial -				
Electric	1,962	302,122	5,223	823,295
Lawnmowers - all kinds	34,850	202,274	99,368	448,512
<u>Agriculture Implements and Machines -</u>				
Tillage - Ploughs (all types)	(a) 10,299	(a) 120,308	10,299	120,308
Windmills, complete (incl. heads)	(a) 7,505	(a) 107,210	7,505	107,210
Wool Presses	(a) 1,076	(a) 21,103	1,076	21,103
Saw Benches - Stationary	433	8,727	1,897	31,231
Portable	32	1,574	472	38,724
Earth Scoops	559	55,679	1,363	76,162
Stoves - Primus Type	(a) 26,752	(a) 31,627	26,752	31,627
<u>Miscellaneous -</u>	ton	ton.		
Fabricated Structural Steel	8,691	4,027,575	83,943	4,136,285
Fencing Wire Woven	(a) 3,803	(a) 202,574	3,803	202,574
Railway and Deck Spikes	(a) 964	(a) 24,649	964	24,649
Caravans	(a) 454	(a) 165,421	454	165,421

(a) Includes production in other works, details of which are not available for separate publication. (b) No available for publication.

PART II
(c)

Particulars	Plant, Equipment & Machinery Works (incl. Foundries)		All Australian Factories	
	Quantity	Value (£)	Quantity	Value (£)
<u>Machinery -</u>				
Household - Other than Washing and Ironing	(a) 155,735	115,475		
Industrial - Air Conditioning	623,766	609,597		
Bakery	225,933	375,432		
Boot & Shoe	(a) 120,595	128,595		
Brick and Pottery	(a) 81,765	81,765		
Butchery	(a) 70,078	70,078		
Confectionery	56,657	56,657		
Conveyors and Appliances	135,475	194,505		
Dairy and Butter-making	252,623	436,264		
Flour Milling	104,757	104,757		
Food Processing and Canning	692,543	879,208		
Hoists, Cranes, Lifting	468,184	565,175		
Laundry (not household)	(a) 651,700	651,700		
Mechanical Stokers	25,729	25,729		
Metal-working	761,683	1,101,208		
Mining and Excavating	1,237,334	1,258,434		
Printing	(a) 190,107	190,107		
Pumping	1,275,332	1,490,835		
Refrigerating (not household)	1,137,973	1,197,377		
Road Making	(a) 725,859	725,859		
Sugar	(a) 251,195	251,195		
Textile	467,323	478,085		
Weighing and Appliances, n.o.i.	(a) 203,920	203,920		
Woodworking and Sawmilling	500,344	591,162		
Machine Tools - Lathes	533,376	531,756		
Other	832,332	880,909		
Engineers' Small Tools - All Types	835,355	1,197,403		
Tools, Garden, Farm and Field (all kinds)	(a) 164,507	164,507		
Tools, Hand, Tradesmen's - Spanners & Wrenches	113,116	148,837		
Vices	(a) 110,283	110,283		

TABLE IV : PRINCIPAL ARTICLES PRODUCED IN (1) PLANT, EQUIPMENT AND MACHINERY WORKS (INCL. FOUNDRIES) AND (11) ALL AUSTRALIAN FACTORIES : 1947-48

PART II (Continued)
(2)

Particulars	Plant, Equipment & Machinery Works (incl. Foundries)	All Australian Factories
Cutlery, Saws, etc. -		
Knives - Guillotine and Woodworking	33,197	124,180
Saws - All kinds	40,411	218,382
Agricultural Implements and Machines -		
Tillage Parts	28,866	398,726
Milking Machine Parts	91,806	192,270
Windmill Parts (other than Towers & Engines)	10,011	128,224
Miscellaneous -		
Furniture of Iron and Steel	1,055,301	1,226,515
Metal Window Frames	674,220	747,216
Bolts and Nuts	1,097,933	1,146,461
Rivets	(a) 136,417	136,417
Washers	132,677	154,761
Screws	(a) 336,031	336,031
Springs - Auto, incl. leaves	40,796	332,943
Wire-Fencing - barbed	(a) 260,926	260,926
-Iron and Steel - other	(a) 1,504,423	1,504,423
Pipes and Pipe Fittings	360,422	6,257,805
Stoves and Ovens - Cooking	95,525	2,522,833
Heating	22,545	242,232
Unspecified	76,500	76,500
Steam, Gas, Water Fittings, Non-Ferrous (incl. valves and parts)	129,502	1,893,981
Window and Door Fittings, Non-Ferrous	97,400	167,636
Castings - Iron	728,023	728,023

(a) Includes production in other works, details of which are not available for separate publication. (b) Not available for publication.

Particulars of total Australian output of marine engines (petrol and light oils) and other internal combustion engines (excluding engines for motor-cars, motor-cycles, tractors and aeroplanes) are shown in part (i) of the following table for each of the years 1938-39 and 1944-45 to 1947-48. Part (ii) of the table shows the output of refrigerators for the same years, and also gives preliminary figures for the output of domestic refrigerators for the year 1948-49.

TABLE V (i) : OUTPUT OF INTERNAL COMBUSTION ENGINES : AUSTRALIA (a)

Year	Marine Engines (Petrol and Light Oils)		Other Internal Combustion Engines (b)			
			Crude Oil		Petrol	
	No.	Value (£)	No.	Value (£)	No.	Value (£)
1938-39	2,957	81,039	1,003	66,493	1,886	75,934
1944-45	1,636	74,686	3,447	404,409	11,630	464,525
1945-46	1,054	47,357	4,216	419,933	11,372	456,527
1946-47	3,230	157,776	4,105	439,695	14,223	520,250
1947-48	3,358	275,512	4,119	482,093	14,871	615,746

(a) Total production in all factories. (b) Excludes engines for motor cars, motor cycles, tractors and aeroplanes.

TABLE V (ii) : OUTPUT OF REFRIGERATORS : AUSTRALIA (a)

Year	Refrigerators							
	Household						Commercial -	
	Electric		Gas		Kerosene		Electric	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1938-39	(b) 29,499	(b) 1,085,633	(c)	(c)	(c)	(c)	(d)	(d)
1944-45	(b) 20,899	(b) 988,248	(c)	(c)	(c)	(c)	(d)	(d)
1945-46	14,325	712,453	13,006	508,099	13,280	651,977	3,967	469,609
1946-47	32,502	1,766,866	15,585	656,048	20,448	1,006,484	5,523	761,653
1947-48	53,332	3,564,472	30,322	1,288,289	28,482	1,389,689	5,223	823,295
1948-49	85,380		26,297	(f)	33,746		(f)	(f)

(a) Total production in all factories. (b) Includes Gas and Kerosene. (c) Not available separately. Included under Electric. (d) Details not available. (e) Subject to revision. (f) Not yet available.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

5. **EMPLOYMENT:** The number of persons employed shown in Tables I, II, VIII and IX has been adjusted to represent the average employment over the whole year in those cases where short time was worked. In the following table, the factories in the industrial group - Plant, Equipment and Machinery (including Foundries) - have been classified according to the average number employed during the actual period worked during the years 1945-46 to 1947-48.

TABLE VI : FACTORIES CLASSIFIED ACCORDING TO HANDS EMPLOYED : AUSTRALIA

Number of Persons Employed in each Factory	1945-46		1946-47		1947-48	
	No. of Factories	No. Employed	No. of Factories	No. Employed	No. of Factories	No. Employed
Under 4	600	1,237	756	1,577	868	1,823
4	161	644	191	764	207	828
5 to 10	572	4,081	663	4,683	716	4,983
11 to 20	360	5,180	429	6,218	438	6,343
21 to 50	334	10,676	357	11,077	371	11,732
51 to 100	146	10,569	143	9,916	160	11,413
101 to 200	80	11,321	83	11,496	106	17,565
201 to 300	30	7,335	21	5,219		
301 to 400	11	3,677	17	6,015	23	8,711
401 to 500	9	3,990	8	3,494		
501 to 750	10	6,262	8	5,137	13	8,783
751 and over						
TOTAL	2,313	64,972	2,676	65,653	2,902	72,181
Average Number Employed per Factory	28		25		25	

In Table VI, the factories in the industrial group - Plant, Equipment and Machinery (incl. Foundries), have been classified separately for the year 1947-48 according to the average number employed during the actual period worked.

TABLE VII : FACTORIES CLASSIFIED ACCORDING TO HANDS EMPLOYED :AUSTRALIA, 1947-48.

Number of Persons Employed in each Factory	Foundries (Ferrous)		Plant, Equipment and Machinery		Other Engineering		Total	
	No. of Fac- tories	No. Em- ployed	No. of Fac- tories	No. Em- ployed	No. of Fac- tories	No. Em- ployed	No. of Fac- tories	No. Em- ployed
Under 4	121	220	214	497	533	1,106	868	1,823
4	18	72	63	252	126	504	207	828
5 to 10	75	532	303	2,145	338	2,306	716	4,983
11 to 20	51	704	244	3,591	143	2,048	438	6,343
21 to 50	58	1,940	237	7,509	76	2,283	371	11,732
51 to 100	18	1,364	113	8,173	29	1,876	160	11,413
101 to 200	8	1,868	56	7,828	14	1,885	106	17,565
201 to 300			23	5,388	8	2,374		
301 to 400			15	5,275			23	8,711
401 to 500			7	3,698				
501 to 750	10	6,262	8	5,137	13	8,783	13	8,783
751 and over								
<u>TOTAL</u>	349	6,640	1,286	51,159	1,267	14,382	2,902	72,181
Average Number Employed per Factory	19		39		11		25	

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

Further details of employment in each of the Industries - Foundries (Ferrous), Plant, Equipment and Machinery and Other Engineering are furnished in the next four tables. In Table VIII and IX, the numbers of males employed are shown according to the nature of their employment in the above mentioned industries for the years 1945-46 to 1947-48:-

TABLE VIII : MALES EMPLOYED ACCORDING TO OCCUPATIONAL STATUS :
AUSTRALIA, 1947-48.

Occupational Status	Foundries (Ferrous)	Plant, Equipment and Machinery	Other Engineering	Total
Working Proprietors ..	323	901	1,267	2,491
Managerial and Clerical Staff, incl. Salaried Managers and Working Directors ..	377	4,010	913	5,300
Chemists, Draftsmen and Other Laboratory and Research Staff ..	72	1,252	223	1,547
Foremen and Overseers ..	221	2,179	567	2,967
Workers in Factory (Skilled and Unskilled) ..	5,319	38,516	10,337	54,172
Carters (excl. Delivery only), Messengers and Persons Working Regularly at Home ..	22	118	47	187
<u>TOTAL</u> { Males	6,334	46,976	13,354	66,664
{ Females (a)	263	3,933	878	5,074
{ Persons	6,597	50,909	14,232	71,738

(a) Mainly Clerical Staff.

TABLE IX : MALES EMPLOYED CLASSIFIED ACCORDING TO OCCUPATIONAL STATUS :
AUSTRALIA

Occupational Status	1945-46	1946-47	1947-48
<u>Males</u> ..			
Working Proprietors ..	1,941	2,342	2,491
Managerial and Clerical Staff, incl. Salaried Managers and Working Directors ..	4,306	4,880	5,300
Chemists, Draftsmen and other Laboratory and Research Staff ..	1,372	1,497	1,547
Foremen and Overseers ..	2,368	2,739	2,967
Workers in Factory (Skilled and Unskilled) ..	49,246	48,855	54,172
Carters (excl. Delivery only), Messengers and Persons Working regularly at Home ..	212	205	187
<u>TOTAL</u> { Males	59,445	60,518	66,664
{ Females (a)	5,134	4,730	5,074
{ Persons	64,579	65,248	71,738

(a) Mainly Clerical Staff.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

The next table shows the number of persons employed (excluding Working Proprietors) in the individual industries - Foundries (Ferrous); Plant, Equipment and Machinery; and Other Engineering - on the pay-day nearest to the 15th of each month for the year 1947-48.

TABLE X : PERSONS EMPLOYED ON PAY-DAY NEAREST TO THE 15TH OF
EACH MONTH : AUSTRALIA 1947-48
 (Excluding Working Proprietors)

Month	Foundries (Ferrous)	Plant, Equip- ment and Machinery	Other Engineering	T o t a l		
	Persons	Persons	Persons	Males	Females	Persons
July	6,041	45,562	12,662	62,421	4,844	67,265
August	6,082	45,527	12,790	62,870	4,929	67,799
September	6,110	45,292	12,862	64,293	4,971	68,264
October	6,203	45,430	12,856	63,520	4,969	68,489
November	6,216	45,234	12,760	63,275	4,935	68,210
December	6,177	45,196	12,768	63,535	4,906	68,441
January	6,216	45,777	12,808	63,908	4,893	68,801
February	6,316	45,771	12,978	64,079	4,906	69,065
March	6,363	50,281	12,995	64,622	5,017	69,639
April	6,304	50,503	13,216	65,093	5,030	70,123
May	6,447	50,763	13,157	65,277	5,090	70,367
June	6,455	51,120	13,149	65,624	5,100	70,724

The numbers of persons employed on or about the 15th June for the years 1946 to 1948 in the four industries combined are shown distributed according to age and sex in Table XI.

TABLE XI : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE AND SEX :
AUSTRALIA
 (Excluding Working Proprietors)

June	Under 16 yrs.	16 yrs.	17 yrs.	18 yrs.	19 yrs.	20 yrs.	Total 16 to 20 years	21 yrs. and over	Total All Ages
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Males

1946	892	1,514	1,004	2,187	2,095	1,972	9,652	48,267	58,811
1947	679	1,320	1,646	1,922	1,990	1,925	8,813	51,957	61,449
1948	693	1,184	1,486	1,695	1,633	1,924	8,120	56,811	65,624

Females

1946	97	181	285	337	295	271	1,369	3,183	4,649
1947	67	145	226	298	286	286	1,241	3,410	4,718
1948	99	168	217	243	310	310	1,253	3,748	5,100

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FURNITURE) - (Continued)

6. POWER EQUIPMENT: Statistics of the power equipment of the factories included in the individual industries - Foundries (Ferrous); Plant, Equipment and Machinery; and Other Engineering, - are given in the next table for the year 1947-48. The details include the rated horsepower of engines ordinarily in use together with those in reserve or idle

TABLE XII : TYPES AND RATED HORSE-POWER OF ENGINES :
AUSTRALIA : 1947-48.

Class of Engine	Rated Horse-Power of Engines							
	Ordinarily in Use				Reserve or Idle			
	Foundries (Ferrous)	Plant Equipmt. & Machinery	Other Engineering	Total	Foundries (Ferrous)	Plant Equipmt. & Machinery	Other Engineering	Total
Steam - Reciprocating	30	2,427	154	2,611	33	487	126	646
Turbine	-	1	-	1	-	-	-	-
Internal Combustion -								
Gas	53	3	210	266	-	77	47	124
Petrol or other								
Light Oils	270	294	1,248	1,812	134	526	173	893
Heavy Oils	16	504	237	757	46	134	40	220
Water	-	-	-	-	-	-	-	-
Total Prime Movers:	369	3,229	1,849	5,447	273	1,224	386	1,883
Motors driven by								
Electricity								
Purchased	17,616	109,706	29,955	157,277	854	4,368	673	5,895
Own Generation	-	1,829	349	2,178	-	75	128	203
Total Electricity:	17,616	111,535	30,304	159,455	854	4,443	801	6,098
Total Power Used (a):	17,905	112,935	31,804	162,724	1,127	5,667	1,187	7,981

(a) Without duplication.

7. POWER, FUEL AND LIGHT, ETC., USED: Details of the quantities and values of the various items of power, fuel and light used in the industries, Foundries (Ferrous); Plant, Equipment and Machinery; and Other Engineering are shown in the following table for the year 1947-48.

TABLE XIII : POWER, FUEL, LIGHT, ETC., USED : AUSTRALIA, 1947-48.

Particulars	Quantity				Value (£)			
	Foundries (Ferrous)	Plant Equipmt. & Machinery	Other Engineering	Total	Foundries (Ferrous)	Plant Equipmt. & Machinery	Other Engineering	Total
	ton	ton	ton	ton				
Power, Fuel & Light -								
Coal - Black	2,794	12,069	1,632	16,495	5,975	23,084	3,586	32,645
- Brown	876	24	70	970	1,305	30	96	1,431
Brown Coal								
Briquettes	56	-	-	56	126	-	-	126
Coke	27,578	17,683	5,250	50,511	110,131	53,602	19,118	182,851
Wood	5,122	16,885	6,844	28,851	9,928	14,481	9,021	33,430
	gal.	gal.	gal.	gal.				
Fuel Oil	723,389	2,333,548	304,100	3,361,037	32,152	104,290	17,136	153,578
Tar (Fuel)	4,175	640,850	6,358	651,383	140	10,535	120	10,795
Electricity	(a)	(a)	(a)	(a)	64,456	366,520	86,584	517,560
Gas	(a)	(a)	(a)	(a)	9,528	62,144	9,646	81,318
Other (Charcoal etc.)	(a)	(a)	(a)	(a)	1,308	2,813	4,549	8,750
Water & Lubricating Oil Used	(a)	(a)	(a)	(a)	11,336	92,509	21,065	125,910
Total:	(a)	(a)	(a)	(a)	246,465	730,008	171,721	1,148,194

(a) Value only available.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

8. VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY: Particulars of the book values of premises occupied and plant used in factories in the industries, Foundries (Ferrous; Plant, Equipment and Machinery; and Other Engineering, at 30th June for the years 1945-46 to 1947-48 are shown in the next table. Details of the values of additions and replacements made and depreciation allowed during the same period are also shown. It should be noted that the amounts shown are those recorded by factories which were operating during each year and that changes in their number, as well as other factors, affect comparison from year to year.

TABLE XIV : VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY, ETC. :AUSTRALIA

Year	Book Value as at 30th June (a)		Additions & Replacements made during year		Depreciation allowed during year	
	Land and Buildings	Plant and Machinery	Land and Buildings	Plant and Machinery	Land and Buildings	Plant and Machinery
1946	10,584,258	9,755,254	504,767	1,054,778	157,990	960,863
1947	12,049,619	10,372,077	693,769	2,504,179	207,075	1,066,014
1948	13,922,217	12,419,197	856,244	2,649,324	107,620	1,250,979

(a) Includes estimated value of rented premises and Machinery.

9. OVERSEA TRADE: The values of imports and exports of a number of items connected with Plant, Machinery and Equipment are given for each of the years 1938-39 and 1944-45 to 1947-48 in the following tables:-

TABLE XV : IMPORTS AND EXPORTS OF SPECIFIED ITEMS CONNECTED WITHPLANT, EQUIPMENT AND MACHINERY : AUSTRALIA

(£A. f.o.b.)

Particulars	1938-39	1944-45	1945-46	1946-47	1947-48
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IMPORTS

Boilers, including Parts	138,916	41,173	132,037	136,728	380,705
Engines -					
Diesel	361,369	1,722,587	708,708	721,889	1,111,240
Steam, including Parts	289,062	56,648	500,149	16,437	12,714
Traction, including Road					
Rollers and Parts	232,430	6,365,133	3,652,880	2,886,155	4,231,781
All Other, except Motor	412,784	2,999,136	2,469,343	1,705,240	1,749,443
Machines -					
Adding and Computing	179,203	263,822	242,576	368,431	355,809
Lawn Mowers	25,306	1,702	25,392	104,073	537,479
Machinery -					
Printing	384,804	42,867	112,347	251,516	795,644
Textile-working	451,959	323,839	613,336	1,157,889	1,769,166
Typewriters, including Parts	255,539	134,516	114,320	261,651	349,029
Weighing Machines, Weighbridges,					
Scales and Balances, etc.	83,517	49,983	67,743	65,972	125,480
Woodworking Machinery, n.e.i.	66,568	24,447	86,030	114,278	241,665
Metal-working	1,501,118	1,189,227	751,767	1,774,855	4,252,510
Mining	313,184	299,284	159,570	204,502	425,219
Refrigerators and Parts	326,294	27,064	88,908	131,415	192,923
Paper-working	93,909	6,450	64,123	333,011	418,253

EXPORTS

Engines	45,725	25,056	91,241	856,710	965,249
Mining Machinery	57,696	50,960	61,827	148,220	278,929
Machine Tools	8,566	399	38,800	116,256	170,092
Sewing, Stitching, etc., Machines	22,830	5,233	37,878	49,764	108,238
Typewriters and Parts	6,197	6,769	7,257	16,001	9,973
Other Machinery	397,332	375,799	817,048	1,829,450	2,961,998

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)

10. MINIMUM WEEKLY RATES OF WAGE: The following table shows, in respect of certain occupations, the minimum weekly rates of wage in operation at 30th June, 1948. These rates are taken from awards and determinations of Commonwealth and State Industrial Tribunals and from industrial agreements. Where no rate is shown it indicates that the particular occupation is not specifically provided for in the award, etc. In cases where rates are not uniform throughout a State, the rates shown are, in general, those applying in the capital city. In all cases the number of hours constituting a full week's work is 40.

TABLE XVI : MINIMUM WEEKLY RATES OF WAGE AS AT 30TH JUNE, 1948

Occupation	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.
	C.	C.	S.	C.	S.	C.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
<u>ADULT MALES:</u>						
<u>FOUNDRIES (FERROUS)</u>						
Furnaceman	150. 0	149. 0	139. 0	145. 0	143. 3	146. 0
	to	to	to	to	to	to
	153. 0	152. 0	157. 6	148. 0	147. 9	149. 0
Jobbing moulder and Coremaker	168. 0	167. 0	162. 0	163. 0	167. 9	164. 0
Plate and machine moulder and/or coremakers	144. 0	143. 0	149. 0	139. 0	137. 9	140. 0
	to	to	to	to	to	to
	155. 0	154. 0	162. 0	150. 0	153. 3	151. 0
Ladleman	144. 0	143. 0	.	139. 0	.	140. 0
Dresser and grinder	144. 0	143. 0	.	139. 0	137. 9	140. 0
	to	to	.	to	to	to
	154. 0	153. 0	162. 0	149. 0	140. 3	150. 0
<u>BOILER MAKING AND STEEL CONSTRUCTION</u>						
Boilermaker and/or structural steel tradesman	168. 0	167. 0	162. 0	163. 0	167. 9	164. 0
Boilersmith	172. 6	171. 6	.	167. 6	172. 3	168. 6
Machinist (steel construction)	140. 0	139. 0	.	135. 0	134. 9	136. 0
	and	and	.	and	and	and
	146. 0	145. 0	.	141. 0	143. 9	142. 0
Plate setter and frame bender	171. 0	170. 0	.	166. 0	170. 9	167. 0
<u>WELDING</u>						
Welder	140. 0	139. 0	.	135. 0	134. 9	136. 0
	to	to	.	to	to	to
	172. 6	171. 6	166. 6	167. 6	172. 3	168. 6
<u>SMITHING</u>						
Smith	169. 6	168. 6	.	164. 6	.	165. 6
	to	to	.	to	.	to
	172. 6	171. 6	166. 6	167. 6	167. 9	168. 6
Forger	.	.	173. 2	.	.	.
	.	.	to	.	.	.
	186. 6	185. 6	180. 6	181. 6	163. 3	182. 6
<u>GENERAL ENGINEERING</u>						
Brassfinisher	153. 0	152. 0	.	148. 0	.	149. 0
	and	and	.	and	.	and
	168. 0	167. 0	162. 0	163. 0	167. 9	164. 0
Fitter and Turner	168. 0	167. 0	162. 0	163. 0	167. 9	164. 0
Machinist	144. 0	143. 0	.	139. 0	150. 9	140. 0
	to	to	.	to	to	to
	168. 0	167. 0	.	163. 0	167. 9	164. 0
Patternmaker, toolmaker and scientific instrument maker	181. 0	180. 0	175. 0	176. 0	180. 9	177. 0

PLANT, EQUIPMENT AND MACHINERY (INCLUDING FOUNDRIES) - (Continued)TABLE XVI : MINIMUM WEEKLY RATES OF WAGE AS AT 30TH JUNE, 1948 (Contd.)

Occupation	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.
	C. s. d.	C. s. d.	S. s. d.	C. s. d.	S. s. d.	C. s. d.
<u>IRONWORKING</u>						
Furnaceman	145. 0 and 147. 0	144. 0 and 146. 0	139. 0 and 147. 0	140. 0 and 142. 0	136. 3 and 142. 3	141. 0 and 143. 0
Dresser and grinder	139. 0 to 149. 0	138. 0 to 148. 0	162. 0	134. 0 to 144. 0	136. 3 to 139. 3	135. 0 to 145. 0
Painter	139. 0 and 140. 0	138. 0 and 139. 0		134. 0 and 135. 0	133. 3 and 134. 9	135. 0 and 136. 0
Employee assisting employee with margin of 22/- or more	139. 0	138. 0		134. 0		135. 0
Labourer	119. 0	118. 0	125. 10	114. 0	115. 9	115. 0
<u>ADULT FEMALES</u>	74. 6 and 85. 6	74. 0 and 85. 0		71. 6 and 82. 6	74. 9	72. 0 and 83. 0

C. denotes Commonwealth Court Award. S. denotes State Awards, etc.

Junior and apprenticeship rates are based generally on commencing age, experience and occupation.

The Commonwealth Court Award applies in all States except Western Australia, but the State Award rates are shown for Queensland. State Awards or Determinations are framed on similar lines to the decisions of the Commonwealth Industrial Authority.

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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS

CANBERRA, A.C.T.

2ND DECEMBER, 1949