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CANBERRA
OFFICIAL STATISTICS, COMMONWEALTH OF AUSTRALIA.

MANUFACTURING INDUSTRIES,
1932-40.

No. 1. CEMENT AND CEMENT GOODS.

Commonwealth
Bureau of Census and Statistics
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by

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13th May, 1941.

PREFACE

1. Industries included in the Series: The list of industries included in this series is the same as in previous years. Summaries of the various industries will appear as the information becomes available and not necessarily in any given order.
2. Classification of Factories: The classification of factories in Australia is based on 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 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. In consequence, and to an extent which will vary with individual industries, 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. This qualification is not important in the case of Cement and Cement Goods, the industry with which this summary is concerned.
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, and retailing storemen. The figures do include, however, proprietors who work in their own business and "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.

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CEMENT AND CEMENT GOODS.

Prior to the introduction of the present factory classification in 1930-31, factories engaged in the manufacture of Cement and Cement Goods were included in the industrial group, "Lime, Plaster, Cement and Asphalt", and consequently a statistical analysis of the development of this industry prior to the year 1930-31 is not readily available.

The industries covered by this report include, in addition to Portland Cement, those engaged in the manufacture of cement building sheets, cement pipes, tiles, posts etc. and other cement goods.

A summary of the principal statistics of these industries since the introduction of the present classification is shown in the following table:-

1. CEMENT AND CEMENT GOODS: AUSTRALIA, 1930-31 TO 1939-40.

Year	Number and Factories	Persons Employed (a)	Salaries and Wages Paid (b)	Power, Fuel and Light Used	Other Materials Used	Value of Production	Value of Output
	No.	No.	£'000	£'000	£'000	£'000	£'000
1930-31	78	1,690	419	324	620	1,043	1,987
1931-32	72	1,287	286	207	381	695	1,283
1932-33	80	1,620	335	233	552	960	1,751
1933-34	88	2,004	387	276	677	1,204	2,157
1934-35	91	2,321	458	375	825	1,573	2,773
1935-36	101	2,698	569	424	949	1,828	3,201
1936-37	102	3,224	677	502	1,171	1,988	3,661
1937-38	125	3,832	863	573	1,429	2,311	4,313
1938-39	132	3,932	897	576	1,528	2,385	4,469
1939-40	132	3,766	864	573	1,487	2,358	4,418

(a) Including Working Proprietors. (b) Excluding amounts drawn by Working Proprietors.

In the following table particulars of these industries are given for each State during the year 1939-40.

2. CEMENT AND CEMENT GOODS: STATES 1939-40.

Particulars	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	AUSTRALIA
	No.	No.	No.	No.	No.	No.	No.
Number of Factories	40	42	16	12	16	6	132
Number Employed(a)-							
Males ..	1,166	1,292	492	257	329	172	3,710
Females..	15	18	8	6	4	5	56
Total ..	1,183	1,310	500	263	333	177	3,766
Value of -	£	£	£	£	£	£	£
Salaries and Wages Paid (b) ..	286,012	288,813	119,088	63,124	73,167	34,245	864,449
Fuel used ..	203,115	137,693	65,607	44,334	78,362	44,332	573,443
Materials, etc. used	444,835	494,088	248,811	98,352	115,786	84,524	1,486,396
Production ..	890,674	724,833	263,547	142,194	181,348	155,615	2,358,211
Output ..	1,538,624	1,356,000	577,965	284,880	375,496	284,471	4,418,050
Land and Buildings	611,169	329,788	158,284	71,629	36,977	112,464	1,320,311
Plant and Machinery	1,055,500	702,175	202,293	228,666	102,325	96,431	2,387,391
H.P. of Engines Ordinarily in use ..	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
	18,816	5,694	5,686	3,591	3,827	3,208	40,882

(a) Includes Working Proprietors. (b) Exclusive of amounts drawn by Working Proprietors.

/Particulars

Particulars of the average salary and wage paid per employee, together with the average values of output and production per person engaged, are shown in the following table for each of the years indicated.

3. AVERAGE SALARIES AND WAGES PAID, OUTPUT ETC. PER EMPLOYEE:
AUSTRALIA, 1930-31 TO 1939-40.

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
	£	£	£	%
1930-31	266	1,242	652	40.15
1931-32	226	997	540	41.15
1932-33	210	1,081	593	34.86
1933-34	196	1,076	600	32.13
1934-35	200	1,195	678	29.09
1935-36	214	1,187	677	31.13
1936-37	213	1,139	618	34.05
1937-38	227	1,126	603	37.35
1938-39	231	1,142	607	37.62
1939-40	233	1,173	626	36.66

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

Particulars of the materials used and articles produced in Cement and Cement Goods factories during 1939-40 are shown in the following table. The quantities and values shown here are those furnished by the establishments included in this summary only. The figures do not include similar materials used or articles produced in establishments not classified as Cement and Cement Goods Factories.

4. MATERIALS USED AND ARTICLES PRODUCED: AUSTRALIA, 1939-40.

Materials Used	Quantity	Value	Articles Produced	Quantity	Value
	tons	£		tons	£
Clay Materials	107,787	16,897	Cement, Portland	864,917	2,931,394
Limestone, Shell and Coral ..	1,299,627	350,936	Cement Building Sheets	sq.yds. 5,027,651	443,908
Gypsum ..	35,451	58,354	Cement Pipes ..	(a)	506,392
Asbestos ..	5,076	140,508	Cement Tiles	No. 4,273,166	43,479
Reinforcing Steel	3,589	52,857	Cement Posts, Poles and Piles ..	(a)	39,042
Cement ..	63,958	269,618	Other Articles Produced	(a)	153,835
Other Materials	(a)	185,824	Total Value of Output:	Value Only	4,418,050
Total Materials Used:	Value Only	1,074,996			

(a) Not collected.

The quantity and value of Cement produced in Australia during each of the last ten years are given in the next table:-

5. PRODUCTION OF PORTLAND CEMENT: AUSTRALIA, 1930-31 TO 1939-40.

Year	Quantity	Value	Year	Quantity	Value
	tons	£		tons	£
1930-31	389,278	1,630,785	1935-36	645,234	2,389,899
1931-32	247,396	1,046,642	1936-37	720,093	2,566,740
1932-33	320,910	1,324,793	1937-38	851,914	2,991,927
1933-34	410,343	1,650,480	1938-39	867,849	3,023,707
1934-35	550,131	2,132,865	1939-40	864,917	2,931,394

Official records of the total production of Cement in Australia are available only from 1923-24, when 491,976 tons were manufactured. In the early years of the century the industry was unimportant, for the New South Wales Mines Department reported that the output in New South Wales, always a relatively large producer, was valued at only £46,500 in 1902. According to the same authority the value of production rose to an average output of £153,000 for the three years ended 1908 and to

2362,000 during the three years ended 1913. For the three years ended 1939-40 the average value of output in New South Wales amounted to £1,398,609 or 425,381 tons of cement.

So far as the figures are available, the consumption of Cement in Australia may be seen from the following table:-

6. CONSUMPTION OF CEMENT IN AUSTRALIA.

Period	Production tons	Net Imports tons	Available for Consumption tons
1928-29	708,462	20,393	728,855
1929-30	696,569	13,159	709,728
1930-31	389,278	-1,238	388,040
1931-32	247,396	-3,377	244,019
1932-33	320,910	- 420	320,490
1933-34	410,343	430	410,773
1934-35	550,131	3,405	553,536
1935-36	645,234	12,593	657,827
1936-37	720,033	12,898	732,931
1937-38	851,914	9,025	860,939
1938-39	867,249	6,613	874,462
1939-40	864,317	2,451	867,068

Note: Minus sign (-) signifies net export.

The numbers employed shown in Table 2 have 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 have been classified according to the average number employed during the actual period worked.

**7. FACTORIES CLASSIFIED ACCORDING TO MALES EMPLOYED: AUSTRALIA,
1930-31 TO 1938-39.**

Number of Persons Employed in each Factory	1930-31		1935-36		1936-37		1937-38		1938-39 (a)	
	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed	Number of Fac- tories	Number Em- ployed
Under 4	18	42	14	38	13	30	15	38	21	57
4	10	40	9	36	6	24	8	32	11	44
5 to 10	25	174	34	239	38	261	36	269	38	264
11 to 20	7	94	16	238	18	280	30	437	26	384
21 to 50	6	272	11	365	13	406	17	551	16	487
51 to 100	6	106	7	462	10	685	9	680	8	587
Over 100	4	791	10	1,480	10	1,509	10	1,946	12	2,174
TOTAL:	78	1,819	101	2,858	108	3,265	125	3,953	132	3,997
Average number employed per factory:		23		28		30		32		30

(a) 1939-40 not yet available.

Further details of employment are furnished in the following three tables. In the first the employees have been classified according to the nature of their employment.

**8. MALES EMPLOYED CLASSIFIED ACCORDING TO GRADE OF OCCUPATION:
AUSTRALIA, 1930-31 TO 1939-40.**

Grade of Occupation	1930-31	1936-37	1937-38	1938-39	1939-40
	No.	No.	No.	No.	No.
Working Proprietors ..	24	32	36	47	49
Managers and Overseers ..	114	150	181	184	164
Clerical Staff ..	92	149	160	189	159
Engine Drivers and Firemen ..	58	67	55	74	61
Workers, Skilled and Unskilled	1,252	2,734	3,310	3,372	3,244
Other (Carters and Messengers)	26	44	40	32	33
Total Males:	1,566	3,176	3,722	3,878	3,710
Total Females (a):	4	38	50	54	56
TOTAL ALL PERSONS:	1,600	3,214	3,832	3,932	3,766

(a) Mainly Clerical Staff.

The next table shows the actual number of persons employed (excluding Working Proprietors) on the pay-day nearest to the 15th of each month for the years 1938-39 and 1939-40.

9. NUMBER OF PERSONS EMPLOYED IN AUSTRALIA ON PAY-DAY NEAREST TO THE 15TH OF EACH MONTH (WORKING PROPRIETORS EXCLUDED).

Month	1938-39			1939-40		
	Males No.	Females No.	Total No.	Males No.	Females No.	Total No.
July ..	3,842	45	3,887	3,748	53	3,801
August ..	3,698	47	3,745	3,667	54	3,721
September ..	3,886	48	3,934	3,754	54	3,808
October..	3,873	50	3,923	3,628	54	3,682
November	4,011	52	4,063	3,700	55	3,755
December	3,962	52	4,014	3,573	57	3,630
January..	3,859	53	3,912	3,608	57	3,665
February	3,950	54	4,004	3,637	57	3,694
March ..	3,850	55	3,905	3,654	57	3,711
April ..	3,661	57	3,718	3,684	59	3,743
May ..	3,859	56	3,915	3,659	58	3,727
June ..	3,815	57	3,872	3,838	60	3,893
Average:	3,856	52	3,908	3,680	56	3,736

The distribution according to age of those employed on or about the 15th June, 1940 is shown in the next table.

10. PERSONS EMPLOYED CLASSIFIED ACCORDING TO AGE, JUNE, 1940.

Sex	Under 16 years	16 and under 21 years	Adults	Total
	No.	No.	No.	No.
Males ..	103	574	3,161	3,838
Per Cent of Total	3%	15%	82%	100%
Females ..	-	21	39	60
Per Cent of Total	-	35%	65%	100%
Persons ..	103	595	3,200	3,898
Per Cent of Total	3%	15%	82%	100%

Statistics of the power equipment of the factories included in this group are given in the next table. The details given include the rated horse power of engines ordinarily in use, together with those in reserve or idle for the years 1938-39 and 1939-40.

11. POWER EMPLOYED TO DRIVE MACHINERY: AUSTRALIA.

Class of Engine	Rated H.P. of Engines			
	Ordinarily in Use		In Reserve or Idle	
	1938-39	1939-40	1938-39	1939-40
Steam - Reciprocating ..	1,920	1,842	-	70
Turbine ..	18,000	18,000	6,000	6,000
Internal Combustion -				
Gas ..	-	-	-	-
Petrol or Other Light Oils ..	158	162	92	83
Heavy Oils ..	30	22	-	-
Water ..	-	-	-	-
Total Prime Movers:	20,108	20,026	6,092	6,153
Motors driven by electricity -				
Purchased ..	19,509	20,856	3,059	3,174
Own Generation ..	30,448	32,748	3,110	10,718
Total Electricity:	49,957	53,604	12,169	13,892
TOTAL POWER USED (a):	39,617	40,882	18,261	20,045

(a) Without duplication.

Details of the quantities and values of the various items of power, fuel and light used in Cement and Cement factories are shown in the following table:-

/12. POWER,

12. POWER, FUEL AND LIGHT TAC. USED: AUSTRALIA, 1939-40.

Particulars	Unit of Quantity	Quantity	Value £
Coal - Black ..	ton	339,819	327,003
Brown ..	"		-
Coke ..	"	3,285	2,017
Wood ..	"	2,376	2,006
Fuel Oil..	gallon	50,381	3,095
Electricity ..	"	(a)	218,473
Gas ..	"	(a)	123
Other (Charcoal etc.)	"	(a)	7
Water used ..	"	(a)	5,215
Lubricating Oil ..	"	(a)	15,504
TOTAL:		Value Only	573,443

(a) Value only available.

Particulars of the book values of premises and plant used for factory purposes as at the 30th June for each of the five years ended 1940 are shown in the next table. In addition, details of the values of additions and replacements made and depreciation allowed during the year 1939-40 are also shown. It should be noted that the amounts expended in Additions and Replacements refer to expenditure incurred by existing factories and do not include the costs of erecting and equipping new factories those latter items, however, are included with the book values shown at 30th June. The amounts shown for Depreciation are those returned by factories. Changes in the number of factories operating and other factors affect comparison from year to year.

13. VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY: AUSTRALIA, 1939-40.

Particulars	Land and Buildings	Plant and Machinery
	£	£
Additions and Replacements made during year (a)	54,052	197,151
Depreciation allowed during year (a) ..	55,393	193,651
Book Value (a) as at 30th June -		
1940 ..	1,320,311	2,387,391
1939 ..	1,350,175	2,515,814
1938 ..	1,346,013	2,309,648
1937 ..	1,347,741	2,260,667
1936 ..	1,272,985	2,134,478

(a) See note above.

The next two tables furnish particulars of the quantities of Portland Cement imported and exported for each of the years indicated.

14. IMPORTS OF PORTLAND CEMENT: AUSTRALIA, 1908 TO 1939-40.

Year	Imports	Exports
	ton	ton
1908	45,752	2,456
1913	125,591	911
1921-22	24,261	1,670
1928-29	21,522	1,128
1935-36	14,467	1,874
1936-37	15,006	2,109
1937-38	11,590	2,565
1938-39	9,182	2,569
1939-40	6,120	3,969

The following table shows the weekly minimum rates of wage and hours of labour operating as at 30th June, 1940 as prescribed by State Industrial Tribunals. Where no rate is shown it indicates that the particular occupation is not specifically provided for in the award or determination.

16. CEMENT AND CEMENT GOODS.

Minimum Weekly Rates of Wage and Hours of Labour as at 30th June, 1940.

Occupation	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania	
	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage
QUARRY												
Machine men ..	44	90/- to 99/6	..	..	44	96/10 to 119/1	48	96/6	44	97/1	44	88/-
Assistants ..	44	86/6 to 93/6	..	..	..	..	48	93/6	..	..	..	..
Powder monkey ..	44	97/- & 100/-	44	100/- to 112/-	44	96/10 to 119/1	48	102/6	..	..	44	93/-
Jumpermen ..	..	..	..	..	44	93/2 to 115/5	..	..	..	..	..	..
Hammer and Drill-men ..	..	..	44	100/- to 112/-	44	93/2 to 115/5	48	96/6	44	97/1	44	88/-
Tool sharpener ..	..	..	..	..	44	96/10 to 119/1	48	96/6	..	..	..	..
CEMENT WORKS												
Stone crusher - Leading hand ..	44	81/6 & 84/6	44	96/- & 98/9	..	..	..	..	..	..	..	..
Labourer ..	44	80/- & 83/-	44	88/- & 90/9	44	87/-	48	88/-	..	..	44	78/-
Raw mills - Miller ..	44	88/6 & 91/6	44	100/- & 102/-	44	99/-	48	90/-	44	96/1	44	87/-
Assistant ..	44	80/- & 83/-	..	..	44	93/-	48	88/-	44	90/1	44	81/-
Rotary Kiln-Burners ..	44	87/- & 90/-	44	87/- & 103/3	44	105/-	48	96/-	44	106/1	44	87/- & 92/-
Clinker shedmen ..	44	81/6 & 84/6	..	..	44	92/-	48	88/-	44	90/1	44	86/-
Coal Mill-Coal miller ..	44	87/6 & 90/6	44	102/-	44	104/-	48	90/-	44	96/1	44	87/-
Assistant ..	44	80/- & 83/-	..	..	44	94/-	48	88/-	44	90/1	44	81/-
Cement Mill-Cement miller ..	44	88/6 & 91/6	44	100/- & 102/-	44	104/-	48	90/-	44	96/1	44	87/-
Assistant ..	44	80/- & 83/-	..	..	44	94/-	48	88/-	44	90/1	44	81/-
Laboratory - Mechanical Tester ..	..	..	44	103/3	..	..	..	..	..	..	..	..
Sampler and Tester ..	..	..	..	..	..	..	..	..	..	..	44	72/5
Boys and Youths - 16 years and under ..	44	40/6 & 42/-	44	31/3 & 35/9	..	..	..	..	44	23/9	..	..
17 years and under ..	44	44/- & 46/-	44	39/6 & 44/-	44	46/-	..	..	44	32/9	44	27/-
18 years ..	44	52/6 & 55/-	44	45/6 & 51/9	44	(a)	48	57/6 (b)	44	41/7	44	33/-

CEMENT INDUSTRY (CONTINUED).

Occupation	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania	
	Wages		Wages		Wages		Wages		Wages		Wages	
	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage	Hrs	Weekly Wage
Boys and Youths (Continued) - 19 years ..	44	53/6 ½ 65/6	44	55/6 ½ 60/3	..	..	..	..	44	50/5	44	39/-
20 " ..	..	..	44	63/3 ½ 68/-	..	..	..	..	44	59/4	44	48/-
21 " ..	..	..	44	72/- ½ 75/3	..	..	..	..	44	77/2	44	60/-
<u>CEMENT GOODS</u>												
Leading Hand ..	44	97/-	44	93/-	44	105/6	..	..	44	90/3	..	..
Mixer (machine) ..	44	93/-	44	92/-	44	96/-	44	88/-	44	89/3	..	..
Mixer (Other) ..	44	93/-	44	90/-	44	96/-	44	88/-	44	89/3	..	..
Shoulders -												
Pipe Machine ..	..	..	44	91/-	44	96/-	..	..	44	88/3	..	..
Other ..	..	..	44	90/-	44	96/-	..	..	44	88/3	..	..
Repairers ..	44	90/- ½ 93/-	44	90/-	..	..	..	..	44	88/3	..	..
Should assemblers..	..	..	44	88/6	44	95/-	44	87/6	44	86/3	..	..
Cement spray operator ..	44	(c)	44	88/-	44	92/6	..	..	..	..	..	..
Tile makers ..	44	94/-	44	89/6	..	..	..	..	..	..	..	..
Strippers ..	44	91/-	44	87/6	44	95/-	44	87/6	44	86/3	..	..
Finishers ..	..	..	44	85/-	..	..	..	..	..	..	..	..
All others ..	44	89/-	44	84/-	44	90/-	44	85/-	44	82/2	..	..
Makers of laundry tubs, sinks etc.	44	89/-	44	90/-	44	95/6	..	..	..	..	..	..
Pipemakers(machine)	44	96/-	44	91/-	44	96/-	44	91/-	..	..	..	..
Pipemakers (hand)	44	104/-	..	..	44	96/-	44	91/-	..	..	..	..
<u>Juniors and Apprentices -</u>												
Under 16 years ..	..	..	44	23/6	44	21/-	..	..	44	24/4	..	..
Under 17 " ..	44	30/8	44	31/-	44	30/-	..	..	44	27/5	..	..
" 18 " ..	44	41/1	44	38/6	44	40/-	..	..	44	36/7	..	..
" 19 " ..	44	51/7	44	48/3	44	50/-	..	..	44	48/9	..	..
" 20 " ..	44	61/7	44	56/-	44	58/6	..	..	44	60/10	..	..
" 21 " ..	44	71/7	44	64/3	44	68/-	..	..	44	73/1	..	..

(a) Adult wage to be paid at 18 years of age.

(b) Juniors. (c) One penny per hour is paid in addition to normal rates to employees while on this work.

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Commonwealth Bureau of Census and Statistics,

CANBERRA, A.C.T. 13TH MAY, 1941.