

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
CANBERRA.
OFFICIAL STATISTICS, COMMONWEALTH OF AUSTRALIA.

MANUFACTURING INDUSTRIES.

1939-40.

NO. 2. BRICKS, POTTERY AND EARTHENWARE.

Prepared Under Instructions From
THE HONORABLE THE TREASURER

by

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Acting Commonwealth Statistician

15th May, 1941.

P R E F A C E

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. The following has already been published: No. 1.
2. Classification of Factories: The classification of factories in Australia is based on the nature of the product. Here 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 Bricks, Pottery and Earthenware, the industry with which this summary is concerned.
3. Basis of the Statistics: The scope of the factory statistics is fully explained in Part 1 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, and retailing storemen. The figures do include, however, proprietors who work in their own factories 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.

S. R. CARVER
Acting Commonwealth Statistician.

Canberra, A.C.T.
15th May, 1941.

BRICKS, TILES, POTTERY AND EARTHEN ARE

The industries covered by this Report include those engaged in the manufacture of Bricks, Firebricks, Tiles, Flue-dry Goods, Stoneware, China, Earthenware, Porcelain and Terra Cotta. A summary of the principal statistics of these industries is given in the following table:-

1. BRICKS, TILES, POTTERY AND EARTHEN ARE : AUSTRALIA, 1908 TO 1939-40.

Year	Number of Factories	Persons Employed (a)	Salaries and Wages Paid (b)	Power, Fuel and Light Used	Value of Other Materials Used	Value of Production	Value of Output
	No.	No.	£'000	£'000	£'000	£'000	£'000
1908	426	(c) 5,466	478	162	85	753	1,000
1913	467	(c) 8,226	938	283	159	1,446	1,888
1920-21	375	(c) 9,114	1,701	581	397	2,621	3,599
1928-29	367	(d) 8,684	2,036	806	685	3,102	4,593
1929-30	356	7,341	1,669	661	575	2,450	3,686
1930-31	271	3,534	686	214	189	973	1,376
1931-32	233	2,815	462	147	143	662	952
1932-33	274	3,935	652	233	224	1,007	1,464
1933-34	316	5,512	880	339	304	1,340	1,983
1934-35	334	7,433	1,239	482	471	1,981	2,934
1935-36	345	8,512	1,510	568	578	2,453	3,599
1936-37	335	9,266	1,749	625	617	2,870	4,112
1937-38	360	10,209	2,045	725	717	3,348	4,790
1938-39	368	10,484	2,178	752	709	3,514	4,975
1939-40	353	9,918	2,109	731	695	3,272	4,698

(a) Including working Proprietors. (b) Exclusive of amounts drawn by Working Proprietors. (c) Average over period worked by factory. (d) For 1928-29 and succeeding years the employment figures have been calculated on the basis of a whole year.

In the following table particulars of the Industries are given for each State during the year 1939-40:-

2. BRICKS, TILES, POTTERY AND EARTHEN ARE : 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	165	83	32	37	26	10	353
Number Employed (a) -							
Males ..	4,539	3,029	671	719	443	152	9,553
Females ..	69	251	30	4	9	2	365
Total ..	4,608	3,280	701	723	452	154	9,918
Value of -	£.	£.	£.	£.	£.	£.	£.
Salaries and Wages Paid (b) ..	1,033,094	666,681	138,349	143,774	97,460	29,727	2,109,085
Fuel used ..	332,530	251,436	36,030	54,598	44,193	12,170	730,957
Materials etc. used	358,652	219,661	26,435	35,300	41,628	12,975	694,651
Production ..	1,650,385	1,016,405	199,794	195,080	161,278	49,016	3,271,958
Output ..	2,341,567	1,467,502	262,259	284,978	247,099	74,161	4,697,566
Land and Buildings	1,082,946	543,885	87,549	113,481	78,966	14,748	1,921,575
Plant and Machinery	1,205,184	607,451	124,728	129,649	123,180	31,070	2,221,462
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
H.P. of Engines Ordinarily in use ..	17,955	14,426	2,936	3,098	2,818	773	42,006

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

/Particulars

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

3. AVERAGE SALARIES AND WAGES PAID, OUTPUT, ETC. PER EMPLOYEE : AUSTRALIA.
1908 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
	£.	£.	£.	%
1908	94	183	138	63.48
1913	119	229	176	64.86
1920-21	192	395	288	64.89
1928-29	240	529	357	65.61
1929-30	233	502	334	68.11
1930-31	201	389	275	70.50
1931-32	171	338	235	69.66
1932-33	172	372	256	64.71
1933-34	165	360	243	65.72
1934-35	171	395	266	62.55
1935-36	182	423	288	61.59
1936-37	193	443	309	60.94
1937-38	205	469	328	61.09
1938-39	212	475	335	61.98
1939-40	217	474	330	64.46

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

Particulars of the articles produced in Bricks, Tiles, Pottery and Earthenware 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 articles produced in establishments not classified in the industrial group "Bricks, Tiles, Pottery and Earthenware".

4. ARTICLES PRODUCED : AUSTRALIA 1939-40.

Articles Produced	Unit of Quantity	Quantity	Value £.
Bricks ..	1,000	629,010	2,150,021
Firebricks and Blocks ..	1,000	24,475	419,675
Tiles - Roofing ..	1,000	39,291	536,654
Flooring and all - Glazed ..	sq.yds.)	166,958	119,479
- Unglazed ..	sq.yds.)		
Agricultural Pipes ..	No. ..	1,837,853	21,906
Stoneware Pipes and Fittings ..	(a)		726,282
Pottery ..	(a)		62,766
Terra Cotta Ware for building purposes ..	(a)		82,536
Terra Cotta Ware Other than for building purposes ..	(a)		20,555
Porcelain Insulators and Electrical Fittings ..	(a)		155,523
Other Porcelain Ware ..	(a)		(b)
Chinaware ..	(a)		(b)
Sanitary Earthenware and Enamelled Fireclay for building purposes including sanitary wall fittings ..	(a)		184,136
Domestic Earthenware and Stoneware ..	(a)		74,552
Other Earthenware, Stoneware and Enamelled Fireclay ..	(a)		76,687
Other Articles Produced ..	(a)		58,065
<u>Total Value of Output:</u>			Value only 4,697,566

(a) Not collected. (b) Not available for publication.

The quantities and values of Bricks produced in Australia are given in the next table for the years indicated.

/5. PRODUCTION

5. PRODUCTION OF BRICKS : AUSTRALIA, 1908 TO 1939-40.

Year	Quantity 1,000	Value £.	Average Value per 1,000	Year	Quantity 1,000	Value £.	Average Value per 1,000
			£. s. d.				£. s. d.
1908	417,524	760,251	1.16. 5	1934-35	525,945	1,421,745	2.13. 9
1913	705,639	1,481,110	2. 1.11	1935-36	523,379	1,755,081	2.16. 4
1920-21	684,591	2,169,599	3. 3. 4	1936-37	636,815	1,986,731	3. 2. 5
1930-31	119,320	395,195	3. 6. 5	1937-38	688,518	2,268,562	3. 5.11
1931-32	83,224	255,549	3. 1. 5	1938-39	717,550	2,407,008	3. 7. 1
1933-34	358,165	925,245	2.12. 3	1939-40	629,010	2,150,521	3. 8. 4

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

6. FACTORIES CLASSIFIED ACCORDING TO HANDS EMPLOYED : AUSTRALIA
1908 TO 1937-38.

Number of Persons Employed in each Factory	1908		1913		1920-21		1928-29		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	57	242	119	283	61	144	62	129	60	137
4	86	344	57	228	27	108	31	124	21	84
5 to 10	119	781	122	852	86	613	70	502	73	509
11 to 20	60	865	54	793	47	652	57	868	56	844
21 to 50	45	1,445	81	2,774	113	3,723	102	3,313	97	3,230
51 to 100	12	825	23	1,581	28	1,791	38	2,609	45	3,168
Over 100	5	352	11	1,715	13	2,083	7	1,583	16	2,587
TOTAL:	426	5,466	467	8,225	375	9,114	367	9,128	368	10,659
Average Number Employed per factory		13		18		24		25		29

(a) 1939-40 not yet available.

Further details of employment in the industrial group "Bricks, Tiles, Pottery and Earthenware" are furnished in the next three tables. In the first the employees have been classified according to the nature of their employment.

7. MALES EMPLOYED CLASSIFIED ACCORDING TO GRADE OF OCCUPATION : AUSTRALIA,
1908 TO 1938-39.

Grade of Occupation	1908 (a)	1913 (a)	1920-21 (a)	1928-29 (b)	1938-40 (b)
Working Proprietors ..	362	374	257	212	210
Managers and Overseers ..	171	231	283	324	341
Clerical Staff ..	124	215	228	257	270
Engine Drivers and Firemen ..	177	237	225	132	83
Workers, Skilled and Unskilled	4,198	6,746	7,578	7,400	8,548
Other (Carters and Messengers)	327	310	252	130	101
Total Males:	5,365	8,113	8,924	8,455	9,553
Total Females:	101	113	190	229	365
TOTAL ALL PERSONS:	5,466	8,226	9,114	8,684	9,918

(a) Average over period of operation. (b) Average over whole year.

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.

/c. PERSONS

8. PERSONS EMPLOYED ON PAY-DAY NEAREST TO THE 15TH OF EACH MONTH : AUSTRALIA.
1938-39 AND 1939-40 (WORKING PROPRIETORS EXCLUDED).

Month	1938-39			1939-40		
	Males	Females	Total	Males	Females	Total
	No.	No.	No.	No.	No.	No.
July ..	10,022	287	10,309	9,673	336	10,009
August ..	10,104	296	10,400	9,724	332	10,056
September ..	10,109	301	10,410	9,580	334	9,914
October ..	9,997	298	10,295	9,642	340	9,982
November ..	10,101	290	10,391	9,640	350	9,990
December ..	10,210	297	10,513	9,614	368	9,982
January ..	9,316	286	10,196	9,478	369	9,847
February ..	9,386	299	10,285	9,440	374	9,814
March ..	9,538	304	10,142	9,154	368	9,522
April ..	9,719	312	10,031	8,875	386	9,261
May ..	9,782	311	10,093	8,587	406	8,993
June ..	9,729	318	10,047	8,976	402	9,378
AVERAGE:	9,959	300	10,259	9,365	364	9,729

A classification of the number of employees according to age on or about the 15th June, 1940 is shown in the next table.

9. CLASSIFICATION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1940.

Sex	Under 15 years	16 and under 21 years	Adults	Total
	No.	No.	No.	No.
Males ..	344	1,539	7,093	8,976
Per Cent. of Total ..	4%	17%	79%	100%
Females ..	33	144	225	402
Per Cent. of Total ..	8%	36%	56%	100%
Persons ..	377	1,683	7,318	9,378
Per Cent. of Total ..	4%	18%	78%	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 1938-1939 and 1939-40.

10. 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 ..	4,658	4,227	876	908
Turbine ..	40	40	-	-
Internal Combustion -				
Gas ..	1,404	1,507	15	15
Petrol or Other Light Oil ..	476	437	10	111
Heavy Oils ..	1,774	1,437	326	156
Water ..	-	2	-	-
Total Prime Movers:	8,352	7,710	1,320	1,190
Motors driven by electricity -				
Purchased ..	33,526	34,296	2,833	3,904
Own Generation ..	12	29	-	14
Total Electricity:	33,538	34,325	2,833	3,918
TOTAL POWER USED (a):	41,890	42,036	4,153	5,108

(a) Without duplication.

Details of the quantities and values of power, fuel and light used in Bricks, Tiles, Pottery and Earthenware factories are shown in the following table.

11. POWER, FUEL AND LIGHT ETC. USED : AUSTRALIA, 1939-40.

Particulars	Unit of Quantity	Quantity	Value £.
Coal - Black ..	ton	360,229	470,352
- Brown ..	"	18,069	22,306
Coke ..	"	4,018	5,341
Wood ..	"	126,832	75,919
Fuel Oil ..	gallon	362,665	12,542
Electricity ..	(a)		108,113
Gas ..	(a)		902
Other (Charcoal etc.) ..	(a)		5,056
Water used ..	(a)		11,705
Lubricating Oil ..	(a)		22,721
TOTAL:		Value only	730,957

(a) Value only available.

/Particulars

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 expenditures incurred by existing factories and do not include the costs of erecting and equipping new factories; these 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.

12. 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)	81,208	87,409
Depreciation allowed during year (a) ..	36,930	122,580
Book Value (a) as at 30th June -		
1940 ..	1,921,575	2,221,462
1939 ..	1,874,442	2,275,050
1938 ..	1,900,852	2,257,456
1937 ..	1,874,375	2,114,382
1936 ..	1,971,562	2,141,465

(a) See Note above.

The values of imports and exports of a number of items included in the group "Bricks, Tiles, Pottery and Earthenware" are given in the following tables:-

13. IMPORTS OF SPECIFIED ITEMS OF EARTHENWARE, CHINAWARE, TILES, ETC. : AUSTRALIA.

Item	1908	1913	1920-21	1928-29	1938-39	1939-40
	£s.	£s.	£s.	£s.	£s.	£s.
Crockery and Other Household Ware of -						
China, Porcelain or Faïence Ware	136,993	173,245	424,715	407,733	700,358	732,087
Earthenware, Brownware or Stoneware ..	181,280	281,401	534,205	333,748		
Tiles -						
Flooring and Mosaic ..				(19,425	7,308	4,706
Glazed, Wall and Hearth ..	34,895	78,240	121,552	(180,842	201,693	237,140
Roofing and all Other ..				(1,074	272	278
Fire Bricks, Other of all kinds ..					39,697	84,640
Glazed Bricks and Lumps ..	10,183	26,072	15,615	45,151	1,043	273
Sanitary and Lavatory articles including Kitchen Sinks and Laundry Troughs of -						
Glazed or Enamelled Fireclay				(	9,582	5,926
Earthenware or Other ..				(44,308		
Materials, n.e.i. ..				(	45,254	44,808
Electrical ware of Earthenware and Porcelain ware including Insulators ..	174,205	257,540	534,205	(47,028	60,692	47,912
All other Chinaware, Faïence Ware, Porcelain Ware, Earthenware, Brownware and Stoneware				(16,426	15,288	11,027

14. EXPORTS OF SPECIFIED ITEMS OF EARTHENWARE, CHINAWARE, TILES ETC. AUSTRALIA.

Item	1908	1913	1920-21	1928-29	1938-39	1939-40
	£s.	£s.	£s.	£s.	£s.	£s.
Bricks - Fire and Glazed and Firelumps ..	(a)338	(a)857	(a)11,650	2,789	7,959	5,093
China, Faïence and Porcelain Ware ..	1,050	2,194	5,170	3,869	2,831	1,978
Earthenware, Brownware and Stoneware including Fireclay manufactures ..	(b)9,854	(b)7,483	(b)57,325	40,765	57,092	4,198
Tiles ..	1,166	2,267	9,284	2,872	5,285	1,976

(a) Excluding Firelumps.

(b) Including Firelumps.

The following table shows the weekly minimum rates of wage and hours of labour in operation 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.

15. BRICKS, POTTERY AND EARTHEN ARE.

Minimum Weekly Rate 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
Brick Trade, Firebricks and Texture Bricks -												
Burners ..	44	113/-	44	93/-	44	92/-	44	87/-	48	98/9	44	90/9
Crusher Attendants ..	44	98/-	44	86/- & 88/6	44	86/6	44	90/-	..	..	44	88/-
Machine Drivers ..	44	104/9	44	88/-	44	86/6	44	90/-	44	85/3 & 88/3	44	88/-
Drawers and Setters ..	44	113/-	44	91/6 & 95/-	44	84/6	44	95/-	44	93/3	44	93/6 & 96/-
Facemen ..	..	..	44	96/- & 98/-	44	86/6	44	89/- & 94/-	44	85/3	44	88/-
Clayholmen ..	44	111/9	44	96/-	44	86/6	44	89/-	44	85/3 & 91/3	44	88/-
Pressers ..	..	..	44	87/6	44	84/6	44	84/-	44	93/3	44	81/-
Other Bricks -												
Burners ..	44	113/-	44	92/-	44	92/-	44	87/-	48	98/9	44	90/9
Machine Drivers ..	44	104/9	44	91/-	44	86/6	44	90/-	44	85/3 & 88/3	44	88/-
Dry pan attendants ..	44	98/- & 113/-	44	89/- & 93/-	44	86/6	44	90/-	..	..	44	88/-
Crusher Attendants ..	44	98/-	44	87/6 & 93/-	44	86/6	44	90/-	..	..	44	88/-
Drawers and Setters ..	44	113/-	44	94/- & 96/6	44	84/6	44	95/-	44	93/3	44	93/6 & 96/-
Facemen ..	44	114/10	44	97/- & 102/-	44	86/6	44	89/- & 94/-	44	85/3 & 91/3	44	88/-
Clayholmen ..	44	111/9	44	96/-	44	86/6	44	89/-	44	85/3 & 91/3	44	88/-
Hand moulders ..	44	113/-	44	91/6	44	88/6	44	96/-	44	93/3	44	88/-
Softmen ..	44	91/-	44	87/-	44	84/6	44	84/-	..	..	44	86/-
Yardmen ..	44	91/-	44	86/-	44	84/6	44	84/-	44	86/3	..	..
Apprentices -												
1st Year ..	..	..	44	19/3	..	..	..	..	..	..	..	..
2nd year ..	..	..	44	25/4	..	..	..	..	..	..	..	..
3rd year ..	..	..	44	29/11	..	..	..	..	..	..	..	..
Improvers -												
14 years ..	..	..	44	27/6	..	..	44	22/-	..	..	..	..
15 years ..	..	..	44	28/6	..	..	44	25/-	..	..	..	..
16 years ..	..	..	44	30/1	..	..	44	31/9	..	..	44	Under 17, 30/-
17 years ..	..	..	44	34/-	..	..	44	38/6	..	..	44	17-19 36/-
18 years ..	..	..	44	41/3	..	..	44	45/6	..	..	44	19-20 48/-
19 years ..	..	..	44	54/3	..	..	44	55/3	..	..	44	20-21 Adult Rates
20 years Juniors ..	..	..	44	56/10	..	..	44	60/-	..	..	..	..
	..	44	61/8 to 75/3	..	44	65/-	44	68/11	44	40/3 to 70/5	..	..

/Pottery