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MANUFACTURING INDUSTRIES 1965-66

No. 28 PULP AND PAPERMAKING



**COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
CANBERRA, AUSTRALIA**

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EXPLANATORY NOTES

GENERAL. The range of bulletins in this series for 1965-66 is the same as for 1964-65. A complete list of the series is shown inside the back cover. Where a number of industries are combined in one bulletin, the introductory paragraph on page 4 specifies the industries so included.

Statistics of the number of factories, persons employed, salaries and wages, value of fuel, materials, production and output, etc., for 1965-66 include details for the Northern Territory and Australian Capital Territory. Prior to 1964-65 details for the Territories were excluded. Statistics of materials used and articles produced do not include details for the Territories.

CLASSIFICATION OF FACTORIES. For purposes of industry classification, factories are classified to sub-classes according to the nature of their products. Where two or more distinct types of industrial activity are carried on in one establishment, a separate return is obtained, wherever practicable, for each activity, in order to allow classification on this basis. In cases where this is not practicable, factories are classified according to predominant activity. These cases are encountered most frequently in the Metal trades (e.g. General engineering firms also producing Agricultural implements or Stoves, etc.) and to a lesser degree in factories concerned with Skins, Leather, Clothing and Wood products.

Each of the summaries in the Manufacturing Industries series relates, in general, to the operations of factories classified to the industry specified. However, the statistics of articles produced represent total recorded production in all factories, irrespective of industry classification.

BASIS OF THE STATISTICS. The scope of the factory statistics is fully explained in the annual bulletin Manufacturing Industry which contains comprehensive statistics both for all factory sub-classes separately and in total.

Briefly, a "factory" is defined as an establishment in which four or more persons are employed or where power (other than manual) is used in any manufacturing process. The figures do not include details relating to small establishments not classified for statistical purposes as factories.

All persons employed in the manufacturing activities of the factory are counted as factory employees. The figures relating to employment, therefore, include working proprietors as well as out-workers, but 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 value of materials, etc., used includes the value, in the usual sense, of the materials used, stores used, containers, tools replaced and materials used in repairs to plant. In general, it does not include the value of customers' articles or materials repaired, assembled or treated by the factory.

The value of power, fuel, light, etc., used includes the cost of lubricants and water.

The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The value of production is the value added to materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel and light used, tools replaced and materials used in repairs to plant (but not depreciation charges). The value of production is the source from which, in addition to wages and salaries, such items as interest, depreciation, profits, taxation, advertising and other sundry charges are met. As details of these other costs of production are not collected, the amount of profit resulting from factory operations cannot be ascertained from figures contained herein.

There are many miscellaneous expenses, such as maintenance of buildings, etc., depreciation, workers' compensation insurance, other insurances, pay-roll tax, income tax, advertising, interest on borrowed money, bad debts and many other sundry charges, which are not taken into account. Consequently it must not be inferred that, when wages and salaries are deducted from value of production, the whole of the surplus is available for profits.

ROUNDING OF FIGURES. Any discrepancies between totals and sums of components in tables are due to rounding.

This bulletin refers, in general, to factories which are classified to sub-class 1209 (Paper making) of the Factory Classification (1945)

TABLE 1. - PULP AND PAPER MILLS : SUMMARY

AUSTRALIA

Year	Factories	Persons employed	Salaries and wages paid	Power Fuel, Light, etc. used	Value of Materials etc. used	Value of Production	Value of Output
	(1)	(a) (2)	(b) (3)	(c) (4)	(d) (5)	(e) (6)	(f) (7)
	No.	No.	£'000	£'000	£'000	£'000	£'000
1961-62	23	8,147	22,437	8,219	53,010	52,911	114,140
1962-63	24	8,678	24,694	9,305	59,800	60,409	129,514
1963-64	26	9,205	28,011	9,944	66,555	66,195	142,695
1964-65	25	9,411	31,000	10,763	76,704	74,466	161,932
1965-66	25	9,782	32,780	11,589	81,786	75,050	168,425

(a) Average over whole year; includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Includes water and lubricating oil. (d) Includes also value of containers, packing, etc., replacements of tools and repairs to plant. (e) Value of production equals column (7) less total of columns (4) and (5). (f) Value at the factory of goods produced.

TABLE 2. - PULP AND PAPER MILLS : SUMMARY

STATES, 1965-66

Particulars	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number									
Factories	4	11	2	2	2	4	..	..	25
Persons employed (a) -									
Males	2,078	2,677	(h)	(h)	(h)	3,029	..	..	8,797
Females	271	96	(h)	(h)	(h)	527	..	..	985
TOTAL	2,349	2,773	(h)	(h)	(h)	3,556	..	..	9,782
£'000									
Salaries and wages paid (b)	8,053	10,621	(h)	(h)	(h)	10,489	..	..	32,780
Value of -									
Power, fuel, light etc. used (c)	2,234	3,843	(h)	(h)	(h)	3,751	..	..	11,589
Materials etc. used (d)	19,755	31,372	(h)	(h)	(h)	20,545	..	..	81,786
Production (e)	18,336	26,546	(h)	(h)	(h)	21,825	..	..	75,050
Output (f)	40,324	61,761	(h)	(h)	(h)	46,121	..	..	163,425
Land and buildings (g)	11,055	14,624	(h)	(h)	(h)	10,097	..	..	44,385
Plant and machinery (g)	18,808	22,409	(h)	(h)	(h)	22,757	..	..	92,452
Horsepower									
Rated hp of engines ordinarily in use	52,389	80,084	(h)	(h)	(h)	108,528	..	..	286,522

For footnotes (a) to (f) see Table 1. (g) Depreciated or book values at end of year.
(h) Not available for publication.

TABLE 3. - PULP AND PAPER MILLS :AVERAGE SALARIES AND WAGES PAID, OUTPUT, PRODUCTION ETC. PER EMPLOYEEAUSTRALIA

Year	Salaries and wages per employee (a)	Value of output per person engaged (b)	Value of production per person engaged (b)	Ratio of Salaries and Wages to value of production %
1961-62	2,754	14,010	6,494	42.40
1962-63	2,846	14,924	6,961	40.88
1963-64	3,043	15,502	7,191	42.32
1964-65	3,294	17,207	7,913	41.63
1965-66	3,351	17,218	7,672	43.67

(a) Excludes working proprietors and amounts drawn by them. (b) Includes working proprietors.

TABLE 4. - PULP AND PAPER MILLS :PERSONS EMPLOYED (a) : AUSTRALIA

Number employed in each factory	1961-62		1962-63		1963-64		1964-65		1965-66	
	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	No. of fac-tories	No. em-ployed
Under 10	..	..	..	..	2	5	3	11	2	9
11 to 20	1	11	1	11	1	14	..	..	..	..
21 to 50	5	147	5	171	5	162	3	93	2	61
51 to 100	4	277	4	281	4	293	5	377	6	441
101 to 200	3	490	3	427	3	418	3	453	3	460
201 to 300	2	588	1	208	1	217	1	215	2	410
301 to 400	1	363	2	690	1	396	..	..	1	391
401 to 500	..	..	1	462	1	454	2	843	1	441
501 and over	7	6,271	7	6,454	8	7,246	8	7,419	8	7,718
<u>TOTAL</u>	23	8,147	24	8,704	26	9,205	25	9,411	25	9,931
Average No. Employed per factory	354		363		354		376		397	

(a) Average number employed during the period of operation whether for the whole or only part of the year. Includes working proprietors.

TABLE 5. - PULP AND PAPER MILLS :
PERSONS EMPLOYED (a) BY OCCUPATIONAL STATUS
AUSTRALIA

Occupational status	Males			Females		
	1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
Working proprietors	1	..	..	..	..	..
Managerial and clerical staff, including salaried managers and working directors	871	885	909	219	227	246
Chemists, draftsmen and other laboratory and research staff	204	231	232	37	33	31
Workers in factory (skilled and unskilled), foremen and overseers, carters (excluding delivery only), messengers and persons working regularly at home.	7,249	7,454	7,656	624	581	708
TOTAL	8,325	8,570	8,797	880	841	985

(a) Average number employed calculated on a "whole year" basis i.e. in factories working less than the full year the average numbers are reduced to whole year equivalents.

TABLE 6. - PULP AND PAPER MILLS:
PERSONS EMPLOYED BY AGE AND SEX : AUSTRALIA
 (Excluding working proprietors)

Last pay day in June	Under 16 years	16 to 20 years	21 years and over	Total all ages
MALES				
1962	8	424	7,217	7,649
1963	14	425	7,627	8,066
1964	4	508	7,889	8,401
1965	6	621	8,045	8,674
1966	12	645	8,329	8,986
FEMALES				
1962	29	320	424	773
1963	25	424	444	893
1964	24	408	406	838
1965	24	438	456	918
1966	30	503	449	982

TABLE 7. - PULP AND PAPER MILLS:
CLASS OF ENGINE AND RATED HORSEPOWER : AUSTRALIA

Class of engine	Rated horsepower of engines					
	Ordinarily in use			In reserve or idle		
	1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
Steam - Reciprocating	600	600	600	..	..	..
Turbine	64,120	63,420	63,420	130	130	130
Internal combustion -						
Petrol or other light oils	}	..	..	200	676	} 626
Heavy oils				1,770	..	
<u>Total hp prime movers</u>	64,720	64,020	64,020	2,100	806	756
Motors driven by electricity -						
Purchased	192,049	206,506	222,502	30,470	31,396	33,546
Own Generation	(a) 72,022	(a) 82,044	(a) 84,558	14,910	14,503	20,265
<u>Total hp electric motors</u>	264,071	288,550	307,060	45,380	45,899	53,811
<u>TOTAL POWER EMPLOYED</u>	256,769	270,526	286,522	47,480	46,705	54,567

(a) These motors are driven by electricity generated by prime movers shown above, and, to avoid duplication, are excluded from statistics of total power employed.

TABLE 8. - PULP AND PAPER MILLS:
POWER, FUEL, LIGHT, ETC., USED : AUSTRALIA

Particulars	Unit of quantity	Quantity			Value (\$'000)		
		1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
Power, fuel and light -							
Coal - Black	ton	218,705	237,542	236,199	1,787	2,012	1,915
Coal - Brown	"	600,392	667,043	632,938	1,337	1,451	1,468
Brown coal briquettes	"	24,052	25,299	23,834	165	172	166
Coke	"	..	..	..	..	..	..
Wood	"	2,954	2,731	2,434	13	14	13
Fuel oil	'000 gal	26,704	27,785	31,165	1,943	1,945	2,172
Electricity	-				3,110	3,421	3,877
Gas	-				45	55	43
Other (charcoal, etc.)	-	(a)	(a)	(a)	529	567	711
Water and lubricating oil	-				1,016	1,125	1,225
<u>TOTAL</u>		(a)	(a)	(a)	9,944	10,763	11,589

(a) Value only available.

TABLE 9. PULP AND PAPER MILLS :
VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY, ETC.,

AUSTRALIA

(\$'000)

Year	Book value as at 30 June (a)		Additions and 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
1961-62	31,809	67,470	863	7,739	806	6,256
1962-63	34,336	73,911	3,280	12,555	1,147	7,278
1963-64	34,310	73,352	1,775	8,626	914	8,634
1964-65	35,915	78,842	3,008	15,262	836	9,221
1965-66	44,985	92,452	6,099	24,980	822	10,600

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

TABLE 10. - PRINCIPAL MATERIALS USED IN SUB-CLASS 1209 - PAPERMAKING :

AUSTRALIA (a)

Materials used	Commodity code no.	Unit of quantity	1962-63	1963-64	1964-65	1965-66
WOOD PULP MAKING						
Wood	236.02	'000 tons	847	921	963	1,095
Limestone	275.31	"	27	28	28	29
Chlorine	405.86	"	7	7	7	8
Sulphur	408.34	"	2	3	3	3

PAPER AND BOARD MAKING

Starch (incl. cornflour)	127.01	'000 lb	11,040	14,773	17,840	21,388
Clay	272.28	'000 tons	20	22	27	27
Old and waste paper	282.11	"	209	219	232	251
Pulp - Chemical	341.11	"	418	468	382	389
Mechanical & other	441.12, 15	"	9	10	150	157
Rosin	399.28	'000 cwt	68	77	66	77

(a) Excludes Northern Territory and Australian Capital Territory.

TABLE 11. - SELECTED ARTICLES PRODUCED IN ALL MILLS : AUSTRALIA (a)

(NOTE. These details relate to production in all factories irrespective of classification.)

('000 tons)

Item	Commodity code no.	1962-63	1963-64	1964-65	1965-66
Wood pulp	341.31-45	259	286	317	331
Paper -					
Newsprint	351.11	90	92	93	93
Printings	351.17,19	48	53	62	74
Blotting	351.21	1	1	(b)	1
Duplicating	351.25	7	7	7	10
Writing (incl. cartridge)	351.29	38	42	39	47
Wrapping -					
Kraft	351.41,43	118	141	161	149
Other	351.49	10	12	16	11
Tissue and sanitary	351.51	25	29	37	40
Other n.e.i.	351.79	9	12	18	20
Total, paper		346	388	435	445
Paperboard (incl. strawboard) -					
Container board - Coated	352.11	..	..	..	..
Uncoated	352.13	129	132	148	155
Box and carton board - Coated	352.21	92	100	10	14
Uncoated	352.23			114	119
Other boards - Coated	352.31	..	..	..	30
Uncoated	352.33	20	27	24	
Total, paperboard		241	258	296	318
Paper felts	353.01	2	2	2	2

(a) Excludes Northern Territory and Australian Capital Territory. (b) Less than 500 tons.

TABLE 12. - IMPORTS OF PULP AND PAPER : AUSTRALIA

Item	1963-64		1964-65		1965-66	
	'000 tons	\$A'000	'000 tons	\$A'000	'000 tons	\$A'000
Pulp for paper making	207	23,390	238	28,609	251	26,249
Paper -						
Newsprint	252	36,214	280	39,148	274	37,680
Other printing	49	9,194	50	9,912	58	10,701
Boards	25	6,700	29	8,399	31	9,074
Wrapping	15	3,600	19	4,027	14	3,027
Writing and typewriting	8	2,478	6	1,931	6	1,924
All other paper	(a)	11,654	(a)	14,240	(a)	9,091
TOTAL	(b) 339	69,840	(b) 384	77,657	(b) 382	71,497

(a) Value only available. (b) Excludes quantity of all other paper.

NOTE. Values are expressed in \$A f.o.b. port of shipment.

TABLE 11. - IMPORTS OF PAPER (a) AND BOARDS : AUSTRALIA
('000 tons)

Year	Paper		Boards	Total
	Newsprint	Other		
1960-61	269	121	38	428
1961-62	188	102	20	310
1962-63	213	78	26	317
1963-64	252	72	15	339
1964-65	280	75	29	384
1965-66	274	77	31	382
1966-67 (b)	276	90	31	397

(a) Excludes waxed paper. (b) Preliminary, subject to revision.

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NOTE. Inquiries concerning these statistics may be made in Canberra by telephoning 63 9111 Extension 2267 or, in each State capital by telephoning the office of the Bureau of Census and Statistics.