

THE CEMENT TRADE

Note.—For information regarding the scope of the Census, instructions given to firms for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

Introductory

This trade comprises firms that were engaged wholly or mainly in the manufacture of cement.

As separate particulars for England and Wales and for Scotland cannot be published for the year 1930 owing to the risk of disclosure of information relating to individual firms, the summary table (I) and the tables showing details of power equipment (IV) and coal, coke and electricity used (V) are not appended to this report. The whole of this information is available in the tables given in the report itself.

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons. The majority of cement manufacturers own the quarries and workings from which their supplies of limestone and chalk are obtained. At the 1924 Census one return covering both the cement works and the quarries was accepted from such firms, but at the 1930 Census separate returns were required for the quarries and the cement works. The effect of this change is that the total number of employees returned on schedules for the Cement Trade for 1930 was understated, as compared with the total shown for 1924, to the extent of 2,275 persons, i.e., the number of persons employed in the firms' own quarries in 1930. With this addition, the total employment figure for 1930, corresponding with that shown for 1924, was 13,652 persons. The amount shown as *cost of materials* for 1930 is greater, and the *net output* of the trade correspondingly less, than would have been shown on the basis adopted for 1924, since the wages and salaries of the above-mentioned 2,275 persons and other costs of production at the quarry are included in the statement of materials used in 1930, instead of the cost of the purchased materials alone, as in 1924. Notwithstanding this, the net output per person employed was substantially higher in 1930 than in 1924.

Particulars	Unit	1930	1924
Value of goods made (Gross output)	£'000	8,267	7,920
Cost of materials used	"	3,509	3,385
Net output	"	4,758	4,535
Average number of persons employed	No.	11,377	13,278
Net output per person employed	£	418	342
Power available :—			
Prime movers	H.P.	86,577	91,731
Electric motors driven by purchased electricity	"	105,548	21,591
Number of returns	No.	73	109
Number of establishments	"	80	*

* Not available.

Deficiencies in 1930 aggregates.—The aggregate number of persons employed in 1930 by firms that stated that they employed not more than ten persons on the average was 219, the corresponding figure for 1924 being 95. The value of the gross output of the small firms in 1924 was £40,000, and particulars of the items included in this figure and in the output of £111,000 recorded for Northern Ireland, for which separate information is not available for publication, are given below :—

	£'000
Chalk, prepared (including whiting)	22
White lime	12
Other products (including cement)	117
TOTAL	151

In addition, 3 small firms to which schedules were sent at the 1930 Census furnished no information.

Size of firms.—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns :—

Size of firm (average numbers employed)	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24 ...	8	44	26	143	181
25-49 ...	13	192	103	446	231
50-99 ...	16	880	462	1,301	355
100-199 ...	18	1,781	1,008	2,461	409
200-299 ...	8	1,531	850	2,001	425
300-499 ...	4	1,250	742	1,692	439
500-749 ...	6	2,589	1,567	3,333	470
TOTAL ...	73	8,267	4,758	11,377	418

Regional distribution.—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the principal areas* of Great Britain in which firms in this trade are situated :—

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1 ... { 1930	16	3,646	2,185	4,602	475
... { 1924	21	3,100	1,777	4,597	387
5 ... { 1930	4	369	155	468	317
... { 1924	13	579	296	1,362	217
6 ... { 1930	44	3,110	1,834	4,707	390
... { 1924	63	2,934	1,830	5,175	354
Other areas ... { 1930	9	1,142	584	1,600	365
... { 1924	12	1,307	632	2,144	295
TOTAL { 1930	73	8,267	4,758	11,377	418
 { 1924	109	7,920	4,535	13,278	342

Northern Ireland.—The following table summarises the particulars recorded at the Census of Production taken by the Government of Northern Ireland for 1930, together with those furnished at the 1924 Census. The 1930 figures relate to firms that employed an average of more than *five* persons, while those for 1924 relate to all firms.

Particulars	Unit	1930	1924
Value of goods made (Gross output)	£'000	153	111
Cost of materials used	"	53	44
Net output	"	100	67
Average number of persons employed	No.	227	217
Net output per person employed	£	441	309
Power available :—			
Prime movers	H.P.	3,081	3,145
Electric motors driven by purchased electricity	"	—	25

Owing to the risk of disclosing particulars relating to individual firms, details of the output of cement in Northern Ireland have not been published.

* For particulars see page xviii.

Production

Principal products.—The following table shows the value and, where available, the quantity of cement, etc., made in 1930 and 1924:—

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Cement Trade			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
Th. tons	£'000	No.	Th. tons	£'000	No.	Th. tons	£'000	
Cement for building and engineering purposes ...	4,875·8	7,498	53	5,046·7	7,757	61	3,230·0	6,904
Cement for other purposes	6·9	34	5	9·3	42	11	3·0 *	26 64
Gypsum, burnt (including plaster of Paris) ...	126·7	266	6	127·2	266	7	151·8	342
Chalk, prepared (including whitening)†	49·1	63	5	50·1	64	8	111·7	169
White lime‡	112·7	141	12	117·0	146	14	*	43
Hydraulic and other lime‡	90·3	120	19	91·0	121	23	*	83
Intermediate products of the Cement Trade, sold as such ...	...	25	5	...	25	5	...	85
TOTAL—								
PRINCIPAL PRODUCTS	...	8,147	...	...	8,421	...	...	7,716

* Quantity not stated.

† The particulars shown do not include whitening recorded on schedules for the Paint, Colour and Varnish Trade, the report on which is dealt with in a separate volume (Part III).

‡ Not including lime returned on mine and quarry schedules, for which see page 390.

Prices.—The average selling values of cement, etc., in 1930 and 1924, as calculated from the Census returns, are shown in the following table:—

Kind of goods	Average value		1930 as a percentage of 1924
	1930	1924	
	£ per ton	£ per ton	Per cent.
Cement for building and engineering purposes ...	1·54	2·14	72·0
Gypsum, burnt (including plaster of Paris)	2·09	2·25	92·9
Chalk, prepared (including whitening) ...	1·28	1·51	84·8

Volume of production in 1930 and 1924.—The following table compares the volume of production of cement, etc., in 1930 and 1924:—

Kind of goods	Total production			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	Per cent.
	£'000	£'000	£'000	
Cement:—				
For building and engineering purposes ...	7,757	6,904	4,971	156
For other purposes ...	42	90	65*	65
Gypsum, burnt (including plaster of Paris) ...	266	342	318	84
Chalk, prepared (including whitening)	64	169	143	45
White lime ...	146	43	155†	188
Hydraulic and other lime ...	121	83		
Intermediate products of the Cement Trade, sold as such ...	25	85		
TOTAL ...	8,421	7,716	5,652	149

* Based on average value of cement for building and engineering purposes.

† Based on average value of preceding items.

Production, exports and imports.—In the following table, exports and retained imports of cement in 1930 and 1924 are shown in relation to the quantities manufactured in the two years. The 1930 figure of production relates only to firms in Great Britain, while that for 1924 relates to all firms in the United Kingdom. The overseas trade figures for both years relate to the United Kingdom.

Cement for building and engineering purposes	1930	1924
	Th. tons	Th. tons
Production ...	5,046·7	3,281·4
Exports ...	1,039·9	651·2
	Per cent.	Per cent.
Proportion of production exported ...	20·6	19·8
	Th. tons	Th. tons
Retained imports ...	224·7	160·3
Available for use in the United Kingdom ...	4,231·5	2,790·5
	Per cent.	Per cent.
Share of home market held by British products ...	94·7	94·3

Other products.—In addition to the output shown in the table of principal products on page 156, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Cement Trade. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods	1930	1924
	£'000	£'000
Casks (not included in value of cement or other goods) ...	64	402
Paving materials (setts and kerbs, crushed stone, tar macadam, etc.)	10	—
Other products	46	—
TOTAL	120	402

Employment and Wages

Employment.—The following table shows the average numbers of persons employed in 1930 and 1924 :—

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
1930						
Operatives (average for the year)	397	9,982	11	128	408	10,110
Administrative, technical and clerical staff (as at 18th October)	86	1,036	30	231	116	1,267
TOTAL	483	11,018	41	359	524	11,377
1924						
Operatives (average for the year)	625	12,007	12	243	637	12,250
Administrative, technical and clerical staff (as at 18th October)	52	842	13	186	65	1,028
TOTAL	677	12,849	25	429	702	13,278

In comparing the figures shown above for the two years, the important qualification referred to in the introductory paragraphs of this report should not be overlooked. The staff returned by cement manufacturers on schedules for Non-Metaliferous Mines and Quarries consisted almost entirely of operatives.

Wages.—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 98 and 99.

Power

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS						
Reciprocating steam engines	10,528	2,625	13,153	30,212	2,400	32,612
Steam turbines	38,815	17,825	56,640	24,730	11,130	35,860
Internal combustion engines :—						
Gas	5,371	2,333	7,704	14,927	2,255	17,182
Petrol, kerosene, or other light oils ...	171	120	291	297	135	432
Heavy oils	4,699	4,090	8,789	3,695	1,620	5,315
Water engines	—	—	—	330	—	330
TOTAL	59,584	26,993	86,577	74,191	17,540	91,731
	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
ELECTRIC GENERATORS						
Driven by						
Reciprocating steam engines	3,605	1,816	5,421	8,622	2,032	10,654
Steam turbines	28,811	12,800	41,611	17,400	7,800	25,200
Internal combustion engines :—						
Gas	2,170	1,280	3,450	4,492	411	4,903
Petrol, kerosene, or other light oils	30	75	105	21	38	59
Heavy oils	2,693	2,525	5,218	2,002	1,025	3,027
Water engines	—	—	—	7	—	7
TOTAL	37,309	18,496	55,805	32,544	11,306	43,850
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ELECTRIC MOTORS						
Driven by						
Electricity generated in same works ...	46,295	3,485	49,780	42,966	4,852	47,818
Electricity generated in other works under same ownership	586	217	803	450	—	450
Purchased electricity	96,774	8,774	105,548	18,038	3,553	21,591
TOTAL	143,655	12,476	156,131	61,454	8,405	69,859

Consumption of fuel

The following table shows the quantities of coal, coke and electricity recorded as used in 1930 :—

Kind of fuel used	For power (driving engines)	For other purposes (so far as recorded)	For power and other purposes, not separately distinguished
	Tons	Tons	Tons
Coal	198,204	1,423,061*	1,408
Coke	1,401	32,470*	—
Electricity used for all purposes :—			B.T.U. (Kw.-hrs.) '000
Generated in same works			114,874
Generated in other works under same ownership			1,139
Purchased			282,449
TOTAL—Electricity			398,462

* These figures were recorded by firms representing 92.7 per cent. of the net output of the whole trade.

TABLES

Note.—Owing to the possible disclosure of information relating to individual firms, separate particulars for England and Wales and for Scotland cannot be given.

I. Summary of results (see page 154)

II. Production

Kind of goods made	Great Britain	
	Quantity	Value
	Th. tons	£'000
Cement for building and engineering purposes ...	4,875.8	7,498
Cement for other purposes	6.9	34
Gypsum, burnt (including plaster of Paris)	126.7	266
Chalk, prepared (including whitening)	49.1	63
White lime	112.7	141
Hydraulic and other lime	90.3	120
Intermediate products of the Cement Trade sold as such ...	...	25
Casks (not included above in value of cement, etc.) ...	...	64
Paving materials (setts and kerbs, crushed stone, tar macadam, etc.) ... ..	...	10
Other products ... ..	...	46
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT) ...	...	8,267

III. Employment

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930

Persons employed	Males		Females		Males and females	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
Operatives	405	10,183	11	131	416	10,314
Administrative, technical and clerical staff	86	1,036	30	231	116	1,267
TOTAL	491	11,219	41	362	532	11,581

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1930

Week ended	Males and females	Week ended	Males and females
January 18 ...	10,033	July 19	10,201
February 15 ...	9,944	August 16	10,150
March 15	10,238	September 13 ...	10,298
April 12	10,248	October 18	10,314
May 17	10,326	November 15 ...	9,884
June 21	10,170	December 13 ...	9,509
AVERAGE FOR THE TWELVE MONTHS			10,110

IV. Power (see page 159)

V. Consumption of fuel (see page 160)