

### THE BRICK AND FIRECLAY 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 bricks and fireclay goods other than pottery, including the extraction of brick-earth, fireclay or other minerals from the firms' own workings, quarries or mines. At both Censuses certain firms engaged in the manufacture of refractory goods recorded the number of persons employed at their own workings in producing fireclay and silica stone in returns on schedules for the Mining and Quarrying Trades (in most cases that for Coal Mines) as well as in their returns on schedules for the Brick and Fireclay Trade; a proportion of the persons employed in raising fireclay and silica stone was thus recorded twice. While the extent of the duplication of employees is not known exactly, it is believed that, in 1930, the number of persons concerned was in the neighbourhood of 3,500 and that the figure for 1924 was roughly the same; the output of fireclay and silica stone involved in 1930 was about 1,414,000 tons and 71,000 tons respectively.

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 :—

Particulars	Unit	1930	1924
Value of goods made and work done (Gross output)	£'000	20,726	20,505
Cost of materials used ... ..	"	6,066	6,355
Net output ... ..	"	14,660	14,150
Average number of persons employed ... ..	No.	72,434	67,653
Net output per person employed ... ..	£	202	209
Power available :—			
Prime movers ... ..	H.P.	137,727	127,415
Electric motors driven by purchased electricity	"	61,982	31,128
Number of returns ... ..	No.	1,130	1,274
Number of establishments ... ..	"	1,247	*

\* 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 2,973, the corresponding figure for 1924 being 1,850. The value of the gross output of the small firms in 1924 was £398,000, and particulars of the items included in this figure are given below :—

	Quantity Million Th. tons	Value £'000
Building bricks, all kinds ... ..	103·9	302
Tiles (excluding glazed wall and hearth tiles and tiles for tessellated pavements) ... ..	3·8	20
Agricultural pipes, unglazed ... ..	14·8	25
Fireclay sold :—		
Ground ... ..	12·1	7
Unground ... ..	1·2	1
Silica stone sold :—		
Ground ... ..	14·0	14
Unground ... ..	4·7	2
Other products (including work done) ... ..	...	27
<b>TOTAL</b> ... ..	...	<b>398</b>

In addition, 76 firms to which schedules were sent at the 1930 Census and 80 at that of 1924 furnished no information; these firms either had small businesses or had ceased productive operations before the end of the censal year.

**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 ... ..	329	1,457	978	5,851	167
25-49 ... ..	416	4,080	2,848	14,565	196
50-99 ... ..	226	4,359	3,017	15,810	191
100-199 ... ..	114	4,313	3,063	15,568	197
200-299 ... ..	25	1,908	1,371	6,269	219
300-399 ... ..	4	335	239	1,407	170
400-499 ... ..	7	939	617	3,055	202
500 and over ... ..	9	3,335	2,527	9,909	255
<b>TOTAL</b> ... ..	<b>1,130</b>	<b>20,726</b>	<b>14,660</b>	<b>72,434</b>	<b>202</b>

**Regional distribution.**—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the areas\* into which Great Britain has been sub-divided:—

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed	
	No.	£'000	£'000	No.	£	
1	1930	67	847	629	2,819	223
	1924	79	757	525	2,623	200
2	1930	124	1,967	1,401	7,132	196
	1924	145	2,134	1,452	6,374	228
3	1930	127	2,082	1,409	7,307	193
	1924	160	2,489	1,542	8,207	188
4	1930	75	1,017	620	3,479	178
	1924	112	1,468	958	4,251	225
5	1930	164	4,000	2,766	13,990	198
	1924	163	3,465	2,327	12,333	189
6	1930	397	8,351	6,216	27,860	223
	1924	413	6,900	5,146	23,445	219
7	1930	50	451	283	1,817	156
	1924	65	768	527	2,266	233
8	1930	35	493	332	1,894	175
	1924	38	590	405	2,031	199
9	1930	35	480	327	2,126	154
	1924	45	778	518	2,780	186
10	1930	56	1,038	677	4,010	169
	1924	54	1,156	750	3,343	224
TOTAL	1930	1,130	20,726	14,660	72,434	202
	1924	1,274	20,505	14,150	67,653	209

**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 and work done (Gross output)	£'000	242	198
Cost of materials used	"	70	64
Net output	"	172	134
Average number of persons employed	No.	887	821
Net output per person employed	£	194	164
Power available:—			
Prime movers	H.P.	1,702	1,199
Electric motors driven by purchased electricity	"	8	—

\* For particulars see page xviii.

The principal items included in the gross output values shown in the above table were as follows:—

	1930	1924
	£'000	£'000
Building bricks, not glazed or enamelled	212	170
	(73·5 mill.)(55·1 mill.)	
Tiles, fireclay pipes, firebricks and other goods	30	28
TOTAL	242	198

### Production

**Brick-earth, clay, etc.**—The following statement shows the total quantities of brick-earth, fireclay, and other minerals raised in 1930 and 1924 from the workings, quarries or mines of firms that made their returns on schedules for the Brick and Fireclay Trade (whether sold direct from the workings, etc., or transferred to the firms' own works for use in making bricks, etc.):—

Kind of product	1930		1924*
	Quantity	Entries	Quantity
	Th. tons	No.	Th. tons
Fireclay	1,602·7	196	1,189·4
Other clays, except china or ball clay:—			
Brick-earth and clay	14,691·2	791	12,103·5
Sand and marl	936·7	67	379·8
Shale	1,198·6	78	1,040·6
Other and unclassified clay, earth, etc.	107·7	8	23·9
Silica stone	177·3	38	186·8
TOTAL	18,714·2	...	14,924·0

\* These figures contain certain necessary amendments to those published in the Final Report on the Third Census.

**Principal products.**—The following table shows the value and, where available, the quantity of bricks, tiles, sanitary ware, etc., made in 1930 and 1924. Comparison of the returns made by individual firms for the two years revealed certain cases of mis-description of the output of bricks in 1924, and the figures for that year given in this report should be regarded as substituting those previously published.

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Brick and Fireclay Trade			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
	Million	£'000	No.	Million	£'000	No.	Million	£'000
Building bricks:—								
Glazed or enamelled ...	27.9	494	22	28.0	494	23	21.8	436
Sand lime bricks <sup>φ</sup>	30.0	61	7	30.0	61	7	3,884.0	10,724
All other classes	4,608.1	10,866	900	4,619.8	10,894	915		
TOTAL — Building bricks ...	4,666.0	11,421	...	4,677.8	11,449	...	3,905.8	11,160
	Th. tons			Th. tons			Th. tons	
Tiles:—								
Roofing ...	598.5*	2,040	191	607.8†	2,072	195	376.3	1,629
Street paving and other tiles‡	96.8	320	89	111.8	438	94	112.9	473
TOTAL—Tiles ...	695.3	2,360	...	719.6	2,510	...	489.2	2,102
Sanitary ware (excluding sanitary earthenware, white or cane and white††):—								
Enamelled sanitary ware of fireclay ...	30.0	512	24	54.4	1,116	38	44.7 §	846 252
Pipes and tubes of stoneware or fireclay ...	371.0	2,033	88	426.3	2,333	98		
Agricultural pipes, unglazed ...	65.4	120	137	66.5	124	145	64.3	130
Other and unclassified sanitary ware ...	17.3	118	14	18.8	136	19	87.0 §	614 123
TOTAL — Sanitary ware ...	483.7	2,783	...	566.0	3,709	...		
Pipes and tubes of stoneware or fireclay for electrical and other purposes (not sanitary ware) ...	70.7	317	31	71.0	319	32		
Refractory bricks:—								
Firebricks up to and including bricks of 9 in. by 4½ in. by 3 in. ...	620.2	1,008	188	620.8	1,009	189	825.6	1,384

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Brick and Fireclay Trade			All trades				
	Quantity	Value	Entries	Quantity	Value	Entries	Quantity	Value
	Th. tons	£'000	No.	Th. tons	£'000	No.	Th. tons	£'000
Refractory bricks:—								
Firebricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ...	205.5	759	157	205.5	759	157	250.6	819
Silica bricks up to and including bricks of 9 in. by 4½ in. by 3 in. ...	115.3	374	37	115.3	374	37	164.6	496
Silica bricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ...	55.9	323	34	55.9	323	34	64.0	309
TOTAL — Firebricks and silica bricks	996.9	2,464	...	997.5	2,465	...	1,304.8	3,008
Magnesite bricks	4.3	51	8	5.3	66	9	¶	¶
Chrome and other refractory bricks ...	8.1	61	11	8.1	61	11	¶	¶
Fireclay retorts ...	107.3	52	22	107.3	52	22	193.6	117
Other refractory goods ...	...	193	51	...	193	51	...	271
TOTAL — Refractory goods ...	...	2,821	...	...	2,837	...	...	3,396
	Th. cubic ft.			Th. cubic ft.			Th. cubic ft.	
Architectural terracotta and faience, glazed and unglazed (excluding charges for fixing)	277.6	187	14	277.6	187	14	343.6	166
Bath bricks, hearth stones, etc. <sup>φ</sup> ...	§	83	6	§	83	6		
TOTAL — PRINCIPAL PRODUCTS	...	20,019	...	...	21,147	...	...	21,118

<sup>φ</sup> So far as recorded separately.

\* Equivalent to 528,200,000 tiles.

† Equivalent to 536,600,000 tiles.

‡ Excluding *Glazed wall and hearth tiles and tiles for tessellated pavements* for which see report on the China and Earthenware Trade (page 126).

†† For *Sanitary earthenware* see report on the China and Earthenware Trade (page 126).

§ Quantity not stated.

\*\* Including those used for other purposes.

|| Included in *Sanitary ware—Pipes and tubes of stoneware or fireclay*.

¶ Not separately distinguished.

**Prices.**—The average selling values in 1930 and 1924 of the principal classes of goods included in the previous table, as calculated from the Census returns, are shown below. It should be borne in mind that these comparisons do not take account of any changes that may have occurred since the earlier year in the quality or kind of goods included under the specified descriptions.

Kind of goods	Average value		1930 as a percentage of 1924
	1930	1924	
	£ per 1,000	£ per 1,000	Per cent.
<b>Building bricks :—</b>			
Glazed or enamelled ... ..	17.65	19.99	88.3
Other classes ... ..	2.36	2.76	85.5
<b>Tiles :—</b>	£ per ton	£ per ton	
Roofing ... ..	3.41	4.33	78.8
Street paving and other tiles (excluding glazed wall and hearth tiles and tiles for tessellated pavements) ...	3.92	4.19	93.6
<b>Sanitary ware (excluding sanitary earthenware) :—</b>			
Enamelled sanitary ware of fireclay...	20.50	18.93	108.3
Agricultural pipes, unglazed ... ..	1.86	2.02	92.1
Pipes and tubes of fireclay or stoneware (including those used for other purposes) ... ..	5.33	5.65	94.3
<b>Refractory goods :—</b>			
Firebricks up to and including bricks of 9 in. by 4½ in. by 3 in. ... ..	1.63	1.68	97.0
Firebricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ... ..	3.69	3.27	112.8
Silica bricks up to and including bricks of 9 in. by 4½ in. by 3 in. ... ..	3.25	3.02	107.6
Silica bricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ... ..	5.82	4.83	120.5
Fireclay retorts ... ..	0.49	0.60	81.7
	£ per cub. ft.	£ per cub. ft.	
Architectural terra-cotta and faience, glazed and unglazed ... ..	0.67	0.48	139.6

**Volume of production in 1930 and 1924.**—The following table compares the volume of production of bricks, fireclay goods, 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	
<b>Building bricks :—</b>				
Glazed or enamelled ... ..	494	436	385	128
All other classes ... ..	10,955	10,724	9,169	119
<b>Total—Building bricks ...</b>	<b>11,449</b>	<b>11,160</b>	<b>9,554</b>	<b>120</b>
<b>Tiles :—</b>				
Roofing ... ..	2,072	1,629	1,284	161
Street paving and other tiles (excluding glazed wall and hearth tiles and tiles for tessellated pavements) ... ..	438	473	443	99
<b>Total—Tiles ... ..</b>	<b>2,510</b>	<b>2,102</b>	<b>1,727</b>	<b>145</b>
<b>Sanitary ware (excluding sanitary earthenware) :—</b>				
Enamelled sanitary ware of fireclay ... ..	1,116	1,098	1,189	94
Pipes and tubes of stoneware or fireclay* ... ..	2,652	2,279	2,149	123
Agricultural pipes, unglazed ... ..	124	130	120	103
Other and unclassified sanitary ware ... ..	136	737	759	§
<b>Total—Sanitary ware* ... ..</b>	<b>4,028</b>	<b>4,244</b>	<b>4,217</b>	<b>96</b>
<b>Refractory goods :—</b>				
Firebricks up to and including bricks of 9 in. by 4½ in. by 3 in. ... ..	1,009	1,384	1,342	75
Firebricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ... ..	759	819	924	82
Silica bricks up to and including bricks of 9 in. by 4½ in. by 3 in. ... ..	374	496	534	70
Silica bricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ... ..	323	309	372	87
Fireclay retorts ... ..	52	117	96	54
Other refractory goods ... ..	320	271	283†	113
Architectural terra-cotta and faience, glazed and unglazed ... ..	270	166	232	116
Other principal products ... ..	53	50	46‡	115
<b>TOTAL ... ..</b>	<b>21,147</b>	<b>21,118</b>	<b>19,327</b>	<b>109</b>

\* Including pipes and tubes of stoneware or fireclay for electrical and other purposes (not sanitary ware).

§ This figure would have no significance.

† Based on average values of all specified refractory goods.

‡ Based on average value of all preceding items.

**Fixing architectural terra-cotta, etc.**—A total sum of £6,000 was recorded for 1930 as received for fixing architectural terra-cotta and faience, the total recorded for 1924 being £18,000. The figures for both years are exclusive of the value of the goods fixed; this value is included against the appropriate heading in the table of "Principal products" (p. 111).

**Production, exports and imports.**—The following table shows, in relation to production, the quantities of the principal classes of bricks and fireclay goods exported from the United Kingdom in 1930 and 1924, together with the quantities imported and retained. The figures for 1930 include the recorded output of building bricks in Northern Ireland, but not the minor output of other products, while those for 1924 cover the output of all firms in the United Kingdom, including the small firms.

Kind of goods	Production	Exports	Proportion of production exported	Retained imports	Available for use in the United Kingdom		Share of home market held by British products
					Million	Million	
Building bricks ...	1930	4,751.3	3.3	0.07	202.8	4,950.8	95.9
	1924	4,066.1	5.9	0.15	85.0	4,145.2	97.9
Roofing tiles ...	1930	607.8	1.9	0.31	82.7	688.6	88.0
Street paving and other tiles*	1930	111.8	9.5	8.50	1.9	104.2	98.2
Total — Roofing, street paving and other tiles*	1930	719.6	11.4	1.58	84.6	792.8	89.3
	1924	495.2	8.3	1.68	41.9	528.8	92.1
Refractory bricks†	1930	1,010.9	122.8	12.15	16.1	904.2	98.2
	1924	1,307.9	127.4	9.74	10.1	1,190.6	99.2
Enamelled sanitary ware of fireclay	1930	54.4	7.4	13.60	0.7	47.7	98.5
	1924	51.7‡	8.4	16.25	§	43.3	100.0

\* Except glazed wall and hearth tiles and tiles for tessellated pavements.

† Firebricks, silica bricks, magnesite bricks, chrome bricks, etc.

‡ Including an estimate in respect of sanitary ware recorded by value only.

§ Less than 50 tons.

**Other products.**—In addition to the output shown in the table of principal products on pages 110-1, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Brick and Fireclay Trade. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods	1930	1924
Glazed tiles and other earthenware ...	£'000 48	£'000 44
Red pottery and terra-cotta ware, glazed and unglazed (including chimney pots) ...	76	141
Cement, lime and artificial stone ...	190	57
Fireclay sold:—		
Ground ...	173	249
Unground ...	69	59
Silica stone sold:—		
Ground ...	42	144
Unground ...	9	10
Other quarry products sold ...	82	60
Other products and work done ...	12	67
TOTAL ...	701	831

### 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)	8,479	63,795	648	4,308	9,127	68,103
Administrative, technical and clerical staff (as at 18th October) ...	341	3,777	68	554	409	4,331
TOTAL ...	8,820	67,572	716	4,862	9,536	72,434
1924						
Operatives (average for the year)	7,819	57,495	1,000	5,684	8,819	63,179
Administrative, technical and clerical staff (as at 18th October) ...	466	3,910	92	564	558	4,474
TOTAL ...	8,285	61,405	1,092	6,248	9,377	67,653

**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
<b>PRIME MOVERS</b>	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines ... ..	102,296	6,398	108,694	105,119	6,080	111,199
Steam turbines ... ..	3,539	455	3,994	156	12	168
Internal combustion engines :—						
Gas ... ..	6,733	1,560	8,293	10,598	1,173	11,771
Petrol, kerosene, or other light oils ... ..	1,958	340	2,298	1,592	76	1,668
Heavy oils ... ..	13,043	1,037	14,080	2,450	3	2,453
Water engines ... ..	284	—	284	142	14	156
Other prime movers ... ..	—	84	84	—	—	—
<b>TOTAL ... ..</b>	<b>127,853</b>	<b>9,874</b>	<b>137,727</b>	<b>120,057</b>	<b>7,358</b>	<b>127,415</b>
<b>ELECTRIC GENERATORS</b>	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by						
Reciprocating steam engines ... ..	9,011	1,056	10,067	4,660	496	5,156
Steam turbines ... ..	1,900	250	2,150	15	—	15
Internal combustion engines :—						
Gas ... ..	519	653	1,172	827	294	1,121
Petrol, kerosene, or other light oils ... ..	64	51	115	55	35	90
Heavy oils ... ..	1,364	453	1,817	437	7	444
Water engines ... ..	89	—	89	59	40	99
<b>TOTAL ... ..</b>	<b>12,947</b>	<b>2,463</b>	<b>15,410</b>	<b>6,053</b>	<b>872</b>	<b>6,925</b>
<b>ELECTRIC MOTORS</b>	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by						
Electricity generated in same works ... ..	12,774	2,534	15,308	6,948	1,162	8,110
Electricity generated in other works under same ownership ... ..	9,226	497	9,723	3,226	70	3,296
Purchased electricity ... ..	58,557	3,425	61,982	28,871	2,257	31,128
<b>TOTAL ... ..</b>	<b>80,557</b>	<b>6,456</b>	<b>87,013</b>	<b>39,045</b>	<b>3,489</b>	<b>42,534</b>

**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 ... ..	906,376	2,061,193*	29,804
Coke ... ..	11,352	23,094*	191
Electricity used for all purposes :—			B.T.U. (Kw.-hrs.) '000
Generated in same works ... ..			24,878
Generated in other works under same ownership ... ..			13,095
Purchased ... ..			68,793
<b>TOTAL—Electricity ... ..</b>			<b>106,766</b>

\* These figures were recorded by firms representing 84.6 per cent. of the net output of the whole trade.

## TABLES

## I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of goods made and work done (Gross output) ... ..	£'000	19,208	1,518	20,726
Cost of materials used ... ..	"	5,552	514	6,066
Net output ... ..	"	13,656	1,004	14,660
Average number of persons employed...	No.	66,298	6,136	72,434
Net output per person employed ...	£	205	164	202
Power available :—				
Prime movers ... ..	H.P.	125,191	12,536	137,727
Electric motors driven by purchased electricity ... ..	"	53,560	8,422	61,982

## II. Production

## A.—TOTAL QUANTITY OF CERTAIN KINDS OF CLAY AND STONE RAISED DURING THE YEAR, AS RETURNED ON SCHEDULES FOR THE BRICK AND FIRECLAY TRADE

Kind of product	England and Wales	Scotland	Great Britain
Fireclay ... ..	Th. tons 1,114.2	Th. tons 488.5	Th. tons 1,602.7
Other clays, except china or ball clay :—			
Brick-earth and clay ... ..	14,013.3	677.9	14,691.2
Sand and marl ... ..	*	*	936.7
Shale ... ..	1,198.6	—	1,198.6
Other and unclassified clay, earth, etc. ...	*	*	107.7
Silica stone ... ..	151.4	25.9	177.3
TOTAL ... ..	17,520.5	1,193.7	18,714.2

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

## B.—OUTPUT SOLD OR ADDED TO STOCK AND WORK DONE

Kind of goods made and work done	Unit	England and Wales	Scotland	Great Britain
Building bricks :—				
Glazed or enamelled ... ..	<i>Million</i> £'000	26.6 470	1.3 24	27.9 494
Sand-lime bricks† ... ..	<i>Million</i> £'000	30.0 61	—	30.0 61
All other classes ... ..	<i>Million</i> £'000	4,356.6 10,387	251.5 479	4,608.1 10,866
TOTAL—Building bricks ... ..	<i>Million</i> £'000	4,413.2 10,918	252.8 503	4,666.0 11,421
Tiles :—				
Roofing... ..	<i>Million</i> <i>Th. tons</i> £'000	* * *	* * *	528.2 598.5 2,040
Street paving and other tiles (excluding glazed wall and hearth tiles and tiles for tessellated pavements) ... ..	<i>Th. tons</i> £'000	* *	* *	96.8 320
TOTAL—Tiles ... ..	<i>Th. tons</i> £'000	* *	* *	695.3 2,360
Sanitary ware (excluding sanitary earthenware) :—				
Enamelled sanitary ware of fire-clay ... ..	<i>Th. tons</i> £'000	19.0 377	11.0 135	30.0 512
Pipes and tubes of stoneware or fire-clay ... ..	<i>Th. tons</i> £'000	339.0 1,880	32.0 153	371.0 2,033
Agricultural pipes, unglazed... ..	<i>Th. tons</i> £'000	47.5 89	17.9 31	65.4 120
Other and unclassified sanitary ware ... ..	<i>Th. tons</i> £'000	17.3 118	—	17.3 118
TOTAL—Sanitary ware ... ..	<i>Th. tons</i> £'000	422.8 2,464	60.9 319	483.7 2,783
Pipes and tubes of stoneware or fire-clay for electrical and other purposes (not sanitary ware) ... ..	<i>Th. tons</i> £'000	* *	* *	70.7 317
Refractory goods :—				
Fireclay sold :—				
Ground ... ..	<i>Th. tons</i> £'000	151.7 140	43.6 33	195.3 173
Unground ... ..	<i>Th. tons</i> £'000	97.4 59	25.8 10	123.2 69
Silica stone sold :—				
Ground ... ..	<i>Th. tons</i> £'000	* *	* *	40.6 42
Unground ... ..	<i>Th. tons</i> £'000	* *	* *	15.5 9

Kind of goods made and work done	Unit	England and Wales	Scotland	Great Britain
<i>Refractory goods—contd.</i>				
<i>Refractory bricks:—</i>				
Firebricks up to and including bricks of 9 in. by 4½ in. by 3 in. ...	<i>Th. tons</i>	395.5	224.7	620.2
	£'000	647	361	1,008
Firebricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ...	<i>Th. tons</i>	160.7	44.8	205.5
	£'000	580	179	759
Silica bricks up to and including bricks of 9 in. by 4½ in. by 3 in. ...	<i>Th. tons</i>	*	*	115.3
	£'000	*	*	374
Silica bricks or lumps, including quarries, tiles and bricks exceeding 9 in. by 4½ in. by 3 in. ...	<i>Th. tons</i>	*	*	55.9
	£'000	*	*	323
Magnesite bricks ...	<i>Th. tons</i>	4.3	—	4.3
	£'000	51	—	51
Chrome and other refractory bricks ...	<i>Th. tons</i>	*	*	8.1
	£'000	*	*	61
Fireclay retorts ...	<i>Th. ft.</i>	93.9	13.4	107.3
	£'000	44	8	52
Other refractory goods ...	£'000	162	31	193
	£'000	2,450	664	3,114
<i>TOTAL—Refractory goods ...</i>				
Architectural terra-cotta and faience, glazed and unglazed (excluding charges for fixing) ...	<i>Th. cub. ft.</i>	277.6	—	277.6
	£'000	187	—	187
	Quantity not stated	83	—	83
Bath bricks, hearth-stones, etc.† ...	<i>Th. tons</i>	0.6	—	0.6
	£'000	2	—	2
	Quantity not stated	45	—	45
Red pottery and terra-cotta ware, glazed and unglazed (including chimney pots)† ...	<i>Th. tons</i>	*	*	7.0
	£'000	*	*	41
	Quantity not stated	*	*	35
Glazed tiles and other earthenware ...	"	48	—	48
Cement, lime and artificial stone ...	"	190	—	190
Other quarry products sold ...	"	74	8	82
Other products and work done ...	"	12	‡	12
Fixing architectural terra-cotta and faience ...	"	6§	—	6§
<i>TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ...</i>				
£'000	19,208	1,518	20,726	

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

† So far as recorded separately.

‡ Less than £500.

§ Amount received.

### 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
<i>England and Wales:—</i>						
Operatives ...	7,655	58,629	510	3,487	8,165	62,116
Administrative, etc.* ...	312	3,462	57	473	369	3,935
<b>TOTAL ...</b>	<b>7,967</b>	<b>62,091</b>	<b>567</b>	<b>3,960</b>	<b>8,534</b>	<b>66,051</b>
<i>Scotland:—</i>						
Operatives ...	766	4,733	134	792	900	5,525
Administrative, etc.* ...	29	315	11	81	40	396
<b>TOTAL ...</b>	<b>795</b>	<b>5,048</b>	<b>145</b>	<b>873</b>	<b>940</b>	<b>5,921</b>
<i>Great Britain:—</i>						
Operatives ...	8,421	63,362	644	4,279	9,065	67,641
Administrative, etc.* ...	341	3,777	68	554	409	4,331
<b>TOTAL ...</b>	<b>8,762</b>	<b>67,139</b>	<b>712</b>	<b>4,833</b>	<b>9,474</b>	<b>71,972</b>

\* Administrative, technical and clerical staff.

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

Week ended	Males and females			Week ended	Males and females		
	England and Wales	Scotland	Great Britain		England and Wales	Scotland	Great Britain
Jan. 18 ...	59,412	5,693	65,105	July 19 ...	64,974	5,950	70,924
Feb. 15 ...	59,744	5,756	65,500	Aug. 16 ...	64,456	5,852	70,308
Mar. 15 ...	60,761	5,814	66,575	Sept. 13 ...	64,354	5,666	70,020
April 12 ...	62,644	5,938	68,582	Oct. 18 ...	62,116	5,525	67,641
May 17 ...	64,373	5,981	70,354	Nov. 15 ...	60,898	5,430	66,328
June 21 ...	64,849	6,066	70,915	Dec. 13 ...	59,775	5,209	64,984
<b>AVERAGE FOR THE TWELVE MONTHS ...</b>					<b>62,363</b>	<b>5,740</b>	<b>68,103</b>



## IV. Power

## PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS

Power equipment	England and Wales		Scotland		Great Britain	
	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
<b>PRIME MOVERS</b>						
Reciprocating steam engines ... ..	91,139	6,230	11,157	168	102,296	6,398
Steam turbines ... ..	2,639	455	900	—	3,539	455
Internal combustion engines :—						
Gas ... ..	6,733	1,560	—	—	6,733	1,560
Petrol, kerosene, or other light oils ...	1,892	332	66	8	1,958	340
Heavy oils ... ..	12,806	1,037	237	—	13,043	1,037
Water engines ... ..	284	—	—	—	284	—
Other ... ..	—	84	—	—	—	84
<b>TOTAL ... ..</b>	<b>115,493</b>	<b>9,698</b>	<b>12,360</b>	<b>176</b>	<b>127,853</b>	<b>9,874</b>
<b>TOTAL OF PRIME MOVERS INSTALLED</b>	<b>125,191</b>		<b>12,536</b>		<b>137,727</b>	
<b>ELECTRIC GENERATORS</b>	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by						
Reciprocating steam engines ... ..	7,914	1,025	1,097	31	9,011	1,056
Steam turbines ... ..	1,600	250	300	—	1,900	250
Internal combustion engines :—						
Gas ... ..	519	653	—	—	519	653
Petrol, kerosene, or other light oils ... ..	64	51	—	—	64	51
Heavy oils ... ..	1,334	453	30	—	1,364	453
Water engines ... ..	89	—	—	—	89	—
<b>TOTAL ... ..</b>	<b>11,520</b>	<b>2,432</b>	<b>1,427</b>	<b>31</b>	<b>12,947</b>	<b>2,463</b>
<b>TOTAL OF ELECTRIC GENERATORS INSTALLED</b>	<b>13,952</b>		<b>1,458</b>		<b>15,410</b>	
<b>ELECTRIC MOTORS</b>	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by						
Electricity generated in same works ...	11,121	2,534	1,653	—	12,774	2,534
Electricity generated in other works under same ownership ... ..	6,864	392	2,362	105	9,226	497
Purchased electricity ... ..	50,984	2,576	7,573	849	58,557	3,425
<b>TOTAL ... ..</b>	<b>68,969</b>	<b>5,502</b>	<b>11,588</b>	<b>954</b>	<b>80,557</b>	<b>6,456</b>
<b>TOTAL OF ELECTRIC MOTORS INSTALLED</b>	<b>74,471</b>		<b>12,542</b>		<b>87,013</b>	

## V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
Coal used for power* ... ..	Tons 812,272	Tons 94,104	Tons 906,376
Coke used for power* ... ..	11,352	—	11,352
Electricity used for all purposes :—	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Generated in same works ... ..	22,459	2,419	24,878
Generated in other works under same ownership ... ..	8,898	4,197	13,095
Purchased ... ..	61,301	7,492	68,793
<b>TOTAL—Electricity ... ..</b>	<b>92,658</b>	<b>14,108</b>	<b>106,766</b>

\* In addition, 29,804 tons of coal (20,250 tons in England and Wales and 9,554 tons in Scotland) and 191 tons of coke (all in England and Wales) were recorded as used for power and for other purposes, not separately distinguished.