

THE ASBESTOS GOODS AND ENGINE AND BOILER PACKING 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 asbestos goods and engine and boiler packing. 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 10 persons :—

Particulars.	Unit.	1930.	1924.
Value of goods made and work done (Gross output)	£'000	3,809	3,681
Cost of materials used and amount paid for work given out to other firms	"	1,932	1,637
Net output	"	1,877	2,044
Average number of persons employed	No.	7,226	6,345
Net output per person employed	£	260	322
Mechanical power available :—			
Prime movers	H.P.	1,720	5,387
Electric motors driven by purchased electricity...	"	13,736	7,326
Number of returns	No.	63	62
Number of establishments	"	65	*

* Not available.

Deficiencies in 1930 aggregates.—The aggregate number of persons recorded in 1930 by firms that stated that they employed not more than 10 persons on the average was 554, the corresponding figure for 1924 being 374. The value of the gross output of the small firms in 1924 was £174,000.

The principal classes of goods made and work done in 1924 by the small firms and by the few firms in Northern Ireland, for which separate particulars of the output (valued at £58,000) cannot be stated, were as follows :—

	£'000
Engine and boiler packing and coverings	61
Metallic packing	16
Asbestos manufactures	63
Other products	17
Work done in applying compositions	75
Total	232

In addition, 3 firms to which schedules were sent at the 1930 Census and 10 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).	No. of returns.	Gross output.	Net output.	Average number of persons employed.	Net output per person employed.
11-24 ...	20	£'000. 162	£'000. 79	368	£ 214
25-49 ...	14	243	140	512	274
50-99 ...	15	435	225	1,055	213
100-199 ...	7	468	221	1,161	190
200 and over ...	7	2,501	1,212	4,130	294
TOTAL ...	63	3,809	1,877	7,226	260

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.	No. of returns.	Gross output.	Net output.	Average number of persons employed.	Net output per person employed.
		£'000	£'000		£
1 ... { 1930	20	1,192	564	2,504	225
... { 1924	22	1,315	749	2,573	291
2 ... { 1930	17	1,995	986	3,389	291
... { 1924	17	1,900	1,036	2,761	375
3 ... { 1930	6	304	158	652	243
... { 1924	6	235	147	479	307
4, 5, 6 and 7 1930	11	175	96	428	224
4, 6 and 7 1924	8	110	49	237	207
9 and 10 { 1930	9	143	73	253	287
... { 1924	9	121	63	295	214
TOTAL ... { 1930	63	3,809	1,877	7,226	260
... { 1924	62	3,681	2,044	6,345	322

Northern Ireland.—Owing to the possible disclosure of information relating to individual firms, no particulars are available respecting the production of engine and boiler packing and asbestos manufactures in Northern Ireland in 1930.

* For particulars see page xviii.

Production.

Principal products.—The following table shows the value and, where available, the quantity of engine and boiler packing and asbestos goods made in 1930 and 1924 for sale :—

Kind of goods.	1930.						1924.	
	Returned on schedules for						Total.	
	The Asbestos Goods and Engine and Boiler Packing Trades.			All trades.				
Quantity.	Value.	Ent- ries.	Quantity.	Value.	Ent- ries.	Quantity.	Value.	
Engine and boiler packing (not in- cluding asbestos packing)	Tons. 1,360	£'000. 183	No. 14	Tons. 1,460 †	£'000. 203 23	No. 15 5	Tons. 1,416 †	£'000. 176 72
Coverings and com- positions, not in- cluded elsewhere (including slag wool and silicate cotton) ...	...	106	25	...	129	32	...	154*
Metallic packing {	290 †	105 58	12	290 †	105 63	15	...	103*
Asbestos manufactures :— Sheets, slates, etc. of asbestos cement Engine and boiler packing	105,720	852	5	105,720	852	5	{ 68,760 †	2,315 460
Other asbestos manufactures }	2,070	477	18	2,070	477	18		
Asbestos manu- factures not separately dis- tinguished ... }	14,800	1,447	25	14,800 †	1,447 826	28		
TOTAL—Asbestos manufactures }	3,970	142	1	3,970	142	1		
TOTAL VALUE— PRINCIPAL PRO- DUCTS ... }	126,560	2,918	...	126,560 †	2,918 826	...	68,760 †	2,315 460
TOTAL VALUE— PRINCIPAL PRO- DUCTS ... }	...	3,370	...	...	4,267	...	...	3,280

* So far as recorded separately.

† Quantity not stated.

Work done for the trade or on commission, etc.—The total amount received for applying composition to boilers, pipes, etc., in 1930 was £311,000, of which £16,000 was returned on schedules for trades other than the Asbestos Goods and Engine and Boiler Packing Trade; the corresponding figure for 1924 was £212,000.

Prices.—The average selling values of engine and boiler packing and asbestos manufactures in 1930 and 1924, as calculated from the Census returns, are shown in the following table. It should be borne in mind, however, that there is a wide range of prices and, particularly in the case of asbestos goods, a considerable diversity of types of goods included under the specified descriptions, and that the comparisons made do not necessarily reflect the extent of the price changes for goods of similar qualities.

Kind of goods,	Average value.		1930 as a percentage of 1924.
	1930.	1924.	
Engine and boiler packing (not including asbestos packing or metallic packing)	£ per ton.	£ per ton.	Per cent.
Asbestos manufactures	139.4	124.3	129.1
	22.4	33.7	66.5

Volume of production in 1930 and 1924.—The following table compares the volume of production of engine and boiler packing and asbestos manufactures 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.	
Engine and boiler packing (not including asbestos packing)	£'000.	£'000.	£'000.	Per cent.
Asbestos manufactures	226	248	346	65
Coverings and compositions, not included elsewhere (including slag wool and silicate cotton)	3,744	2,775	1,845	203
Metallic packing	129	154	219	59
	168	103	114	147
TOTAL	4,267	3,280	2,524	169

Exports and imports.—The following table shows the quantities and values of engine and boiler packing and of asbestos goods exported from the United Kingdom in 1930 and in 1924, together with the quantities and values of similar products imported and retained. Owing to certain differences in classification and to the absence of complete data regarding the quantities of these goods manufactured in the two years, these figures cannot be compared with those shown under the same headings in the table of principal products.

Kind of goods.	Exports.		Retained imports.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£'000.	Tons.	£'000.
Engine and boiler packing (including metallic packing but not including asbestos packing) } 1930	2,339	169	71	14
... .. } 1924	1,220	119	87	20
Asbestos manufactures:—				
Sheets, slates, etc., of asbestos cement 1930	18,704	231	31,105	240
Other manufactures 1930	9,384	1,034	2,994	182
Total—Asbestos manufactures { 1930	28,088	1,265	34,099	422
... .. } 1924	13,956	957	14,850	231

Other products.—In addition to the output shown in the table of principal products on page 257, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Asbestos Goods and Engine and Boiler Packing Trades. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods.	1930.	1924.
	Value.	Value.
	£'000.	£'000.
Machinery belting of balata, cotton, etc.	93	130
Valves and boiler mountings of all metals, gaskets, etc.	34	174
Other goods	17	
TOTAL	144	304

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)	331	4,432	220	1,618	551	6,050
Administrative, technical and clerical staff (as at 18th October)	88	781	81	395	169	1,176
TOTAL	419	5,213	301	2,013	720	7,226
1924.						
Operatives (average for the year)	348	3,734	275	1,503	623	5,237
Administrative, technical and clerical staff (as at 18th October)	75	734	80	374	155	1,108
TOTAL	423	4,468	355	1,877	778	6,345

Wages.—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 18 and 19.

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.
PRIME MOVERS.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines	1,050	34	1,084	1,000	242	1,242
Steam turbines	—	—	—	—	900	900
Internal combustion engines :—						
Gas	488	10	498	1,336	579	1,915
Petrol, kerosene, or other light oils	—	—	—	90	—	90
Heavy oils	52	—	52	800	400	1,200
Water engines	56	—	56	40	—	40
Other prime movers... ..	—	30	30	—	—	—
TOTAL	1,646	74	1,720	3,266	2,121	5,387
ELECTRIC GENERATORS.	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by						
Reciprocating steam engines	55	—	55	10	20	30
Steam turbines	—	—	—	—	660	660
Internal combustion engines :—						
Gas	—	—	—	175	195	370
Heavy oils	—	—	—	570	375	945
Water engines	37	—	37	—	—	—
TOTAL	92	—	92	755	1,250	2,005
ELECTRIC MOTORS.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by						
Electricity generated in same works	25	15	40	1,552	168	1,720
Purchased electricity	11,595	2,141	13,736	6,264	1,062	7,326
TOTAL	11,620	2,156	13,776	7,816	1,230	9,046

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).
	Tons.	Tons.
Coal	2,884	17,678*
Coke	143	4,308*
		B.T.U. (Kw.-hrs.) '000.
Electricity used for all purposes :—		
Generated in same works		18
Purchased		11,028
TOTAL—Electricity		11,046

* These figures were recorded by firms representing 95.2 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.	3,666	143	3,809
Cost of materials used and amount paid for work given out to other firms	"	1,862	70	1,932
Net output	"	1,804	73	1,877
Average number of persons employed... ..	No.	6,973	253	7,226
Net output per person employed	£	259	287	260
Mechanical power available :—				
Prime movers	H.P.	1,578	142	1,720
Electric motors driven by purchased electricity	"	13,443	293	13,736

II. Production.

Goods sold or added to stock and work done.	Unit.	England and Wales.	Scotland.	Great Britain.
Engine and boiler packing (not including asbestos packing)	Tons. £'000.	*	*	1,360 183
Coverings and compositions, not included elsewhere (including slag wool and silicate cotton)	£'000.	93	13	106
Metallic packing { Quantity stated	Tons. £'000.	290	—	290
{ Quantity not stated	£'000.	105	—	105
	£'000.	*	*	58
Asbestos manufactures :—				
Sheets, slates, etc., of asbestos cement	Tons. £'000.	105,720	—	105,720 852
Engine and boiler packing of asbestos	Tons. £'000.	*	*	2,070 477
Other asbestos manufactures	Tons. £'000.	*	*	14,800 1,447
Asbestos manufactures not separately distinguished	Tons. £'000.	3,970	—	3,970 142
Total—Asbestos manufactures	Tons. £'000.	*	*	126,560 2,918
Machinery belting of balata, cotton, etc.	£'000.	93	—	93
Valves and boiler mountings of all metals, gaskets, etc.	£'000.	34	—	34
Other goods made	£'000.	15	2	17
Work done in covering boilers and pipes, etc.	£'000.	196	99	295
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ...	£'000.	3,666	143	3,809

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

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	335	4,389	218	1,641	553	6,030
Administrative, etc.* ...	88	765	76	370	164	1,135
TOTAL	423	5,154	294	2,011	717	7,165
<i>Scotland :—</i>						
Operatives	8	201	10	34	18	235
Administrative, etc.* ...	—	16	5	25	5	41
TOTAL	8	217	15	59	23	276
<i>Great Britain :—</i>						
Operatives	343	4,590	228	1,675	571	6,265
Administrative, etc.* ...	88	781	81	395	169	1,176
TOTAL	431	5,371	309	2,070	740	7,441

* 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. 18th	5,798	221	6,019	July 19th	5,890	190	6,080
Feb. 15th	5,700	235	5,935	Aug. 16th	5,798	195	5,993
Mar. 15th	5,672	212	5,884	Sept. 13th	5,913	200	6,113
Apl. 12th	5,832	191	6,023	Oct. 18th	6,030	235	6,265
May 17th	5,746	193	5,939	Nov. 15th	5,925	234	6,159
June 21st	5,829	180	6,009	Dec. 13th	5,930	259	6,189
AVERAGE FOR THE 12 MONTHS ...					5,838	212	6,050

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.
PRIME MOVERS.						
Reciprocating steam engines	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Internal combustion engines :—						
Gas	1,034	16	16	18	1,050	34
Heavy oils	400	10	88	—	488	10
Water engines	32	—	20	—	52	—
Other... ..	56	—	—	—	56	—
TOTAL	—	30	—	—	—	30
TOTAL	1,522	56	124	18	1,646	74
TOTAL OF PRIME MOVERS INSTALLED ...	1,578		142		1,720	
ELECTRIC GENERATORS.						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ...	55	—	—	—	55	—
Water engines	37	—	—	—	37	—
TOTAL	92	—	—	—	92	—
TOTAL OF ELECTRIC GENERATORS INSTALLED	92		—		92	
ELECTRIC MOTORS.						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works	25	15	—	—	25	15
Purchased electricity	11,336	2,107	259	34	11,595	2,141
TOTAL	11,361	2,122	259	34	11,620	2,156
TOTAL OF ELECTRIC MOTORS INSTALLED ...	13,483		293		13,776	

V. Consumption of fuel.

Kind of fuel used.	England and Wales.	Scotland.	Great Britain.
	Tons.	Tons.	Tons.
Coal used for power	2,684	200	2,884
Coke used for power	143	—	143
	B.T.U. (Kw.-hrs.) '000.	B.T.U. (Kw.-hrs.) '000.	B.T.U. (Kw.-hrs.) '000.
Electricity used for all purposes :—			
Generated in same works	18	—	18
Purchased	10,989	39	11,028
TOTAL—Electricity	11,007	39	11,046