

THE MANUFACTURED FUEL TRADE.

Contents.

	Page.
INTRODUCTORY	29
Summary of results	29
Qualifications affecting comparisons	30
PRODUCTION	30
Manufactured fuel	30
Cost of materials	30
Net output	31
Kind of materials used	31
Exports and imports	31
WAGES IN 1924	31
EMPLOYMENT.. .. .	31
MECHANICAL POWER	32
TABLES	34

Introductory.*

The tables on pages 34 to 36 are based on returns received from firms in Great Britain whose business in 1924 consisted wholly or mainly in the production of briquettes and other kinds of manufactured fuel. The number of such separate returns was 29. No production was recorded in Northern Ireland in 1924.

Summary of results.—The following table shows the main results of the Censuses of 1924, 1912 and 1907, comparisons between the figures for the three years being subject to the qualifications mentioned in the next paragraph :—

Particulars.	Unit.	1924.	1912.	1907.
Value of goods made (Gross output)	£'000	1,898	1,316	1,205
Cost of materials used	„	1,498	1,096	938
Net output	„	400	220	267
Average number of persons employed	No.	1,686	1,912	1,537
Net output per person employed ..	£	238	115	174
Mechanical power available :—				
Prime movers	H.P.	8,673	6,582	5,344
Electric motors driven by purchased electricity	„	1,665	—	(not recorded)

* See also the Notes on pages vii to xv.

Qualifications affecting comparisons.—In considering the above table and the other tables in this report which show figures for different censal years, it should be borne in mind that :—

(1) The comparability of figures relating to value or cost is affected by the changes which have taken place in the general purchasing power of money.

(2) The Censuses of 1907 and 1912 covered Great Britain and the whole of Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. The exclusion of Southern Ireland in 1924 does not, however, appreciably affect the comparability of the figures.

(3) The Censuses of 1907 and 1924 extended to all firms, however small, but in 1912 firms employing not more than five persons (excluding the proprietors) were required to state only the average number of persons employed by them in the year. According to the information so furnished, the average number of persons employed in the establishments thus excluded was 111, or nearly 6 per cent. of the number employed by the remaining firms, as shown in the above table. Moreover, correspondence on defective returns for 1912 had not been completed when the war compelled suspension of this work. In these circumstances detailed information for 1912 is not given in all sections of this report. To what extent the figure of persons employed returned for 1912 may have been affected cannot be estimated.

Production.

Detailed information relating to the output of the Manufactured Fuel Trade in 1924 is summarised in Table II on page 34.

Manufactured fuel.—The reported output of manufactured fuel in 1924 was 1,274,600 tons, valued at £1,777,000, of which 1,200 tons, valued at about £2,000, were returned on schedules for other trades. In 1907, the total quantity made was returned as 1,670,000 tons, valued at £1,205,000, and, in 1912, 1,709,000 tons, valued at £1,316,000. In addition, firms that made their returns on schedules for the Manufactured Fuel Trade, recorded an output in 1924 of 124,300 tons of washed coal, valued at £123,000. The above totals are free from duplication.

The output of manufactured fuel in 1924 was about 23·7 per cent. less than in 1907. The average value per ton at works was 27s. 11d. in 1924 and 14s. 6d. in 1907.

Cost of materials.—The cost of materials used by firms that made their returns on schedules for the Manufactured Fuel Trade was returned as £1,498,000 in 1924; the corresponding figures for 1907 and 1912 were £938,000 and £1,096,000.

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Manufactured Fuel Trade (whose gross output was valued at £1,898,000) was £400,000, that sum representing, without duplication, the total amount by which the value, as delivered, of the aggregate output exceeded the cost, as purchased, of the materials used.

The net output per head of persons employed in the censal year 1924 was £238, as compared with £115 in 1912 and £174 in 1907.

Kind of materials used.—In response to a request for information as to the quantities of coal and coal tar pitch used in the production of manufactured fuel in 1924, firms with an output of 1,052,000 tons of manufactured fuel, or about 83 per cent. of the total quantity recorded, stated that they used 970,000 tons of coal and 90,100 tons of coal tar pitch.

Exports and imports.—In 1924 about 1,067,000 tons of manufactured fuel, or 84 per cent. of the output, were exported, and 4,760 tons were shipped as foreign bunkers; retained imports were only 387 tons.* Exports decreased by about 28 per cent. from the quantity (1,481,000 tons) exported in 1907. In 1912, exports amounted to 1,581,000 tons.

Wages in 1924.

Under the Census of Production Act, 1906, the powers of the Board of Trade to require information do not extend to particulars of the amount of wages paid, and, consequently, no information on this head was secured in connexion with the Census of 1924. As a result, however, of the voluntary enquiry undertaken by the Ministry of Labour into wages and hours in the United Kingdom in 1924, information was obtained as to the total wage-bill of a group of firms in the Manufactured Fuel Trade that made returns both to the Ministry of Labour and to the Census of Production office. According to the Census records this group of firms employed, in the week ended 18th October, 1924, 704 operatives, or 40 per cent. of the total of 1,762 operatives for the trade as a whole, and their net output totalled £208,000, or 52 per cent., of the aggregate net output of £400,000 for the trade as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £109,000, representing about 52 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on page 35. The following table sets out certain particulars for that year together with those relating

* The retained imports consisted wholly or mainly of compressed fuel, not of coal briquettes, to which the figures of production and exports relate.

to the 1907 Census. For the purpose of this comparison, the average numbers of operatives of each sex returned for 1924 have been divided between the two age-groups in the proportions shown by the data relating to the week ended 18th October.

Average number.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1924.						
Operatives	68	1,524	13	36	81	1,560
Administrative, etc. ..	2	121	—	5	2	126
TOTAL	70	1,645	13	41	83	1,686
1907.						
Wage earners	46	1,481	—	—	46	1,481
Salaried	4	55	—	1	4	56
TOTAL	50	1,536	—	1	50	1,537

The numbers of operatives recorded month by month in 1924 ranged from 330 above the average, in April, to 377 below the average, in November (see Table IIIB, page 35).

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 36. The following table sets out the particulars for 1924 and 1907 relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

Power equipment.	1924.			1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—				
Reciprocating steam engines ..	5,399	1,906	7,305	5,316
Steam turbines	1,340	—	1,340	—
Gas engines	—	25	25	} 16
Petrol and light oil engines ..	3	—	3	
Heavy oil engines	—	—	—	
Water power	—	—	—	12
TOTAL	6,742	1,931	8,673	5,344
	Kw.	Kw.	Kw.	Kw.
ELECTRIC GENERATORS :—				
Driven by—				
Reciprocating steam engines..	1,208	742	1,950	239
Steam turbines	1,000	—	1,000	—
Gas engines	—	15	15	—
TOTAL	2,208	757	2,965	239

The capacity of *electric motors* recorded in 1924 was as shown below :—

Electric motors.	1924.		
	Ordinarily in use.	In reserve or idle.	Total.
	H.P.	H.P.	H.P.
Driven by—			
Electricity generated in own works	2,513	1,348	3,861
Purchased electricity	1,325	340	1,665

Corresponding information was not required for 1907. The total number of Board of Trade units of electricity purchased for power and lighting purposes in that year was returned as 3,000.

TABLES.

Note.—No production was recorded in Northern Ireland.

I.—Summary of results.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.
Value of goods made (Gross output)	£'000	1,796	102	1,898
Cost of materials used	"	1,435	63	1,498
Net output	"	361	39	400
Average number of persons employed	No.	1,578	108	1,686
Net output per person employed ..	£	229	368	238
Mechanical power available :—				
Prime movers	H.P.	8,139	534	8,673
Electric motors driven by purchased electricity	"	1,447	218	1,665

II.—Production.

Output sold or added to stock.	England and Wales.		Scotland.		Great Britain.	
	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.
Manufactured fuel	Th. tons.	£'000	Th. tons.	£'000	Th. tons.	£'000
Washed coal	1,211·6	1,673	61·8	102	1,273·4	1,775
	124·3	123	—	—	124·3	123
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT)	..	1,796	..	102	..	1,898

III.—Employment.

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales :—</i>						
Operatives	39	1,625	2	11	41	1,636
Administrative, etc.*	2	115	—	4	2	119
TOTAL	41	1,740	2	15	43	1,755
<i>Scotland :—</i>						
Operatives	39	103	10	23	49	126
Administrative, etc.*	—	6	—	1	—	7
TOTAL	39	109	10	24	49	133
<i>Great Britain :—</i>						
Operatives	78	1,728	12	34	90	1,762
Administrative, etc.*	2	121	—	5	2	126
TOTAL	80	1,849	12	39	92	1,888

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

England & Wales. (Annual average : Males, 1,449 ; Females, 10 ; Total, 1,459.)

Week ended	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th ..	1,115	11	1,126	July 19th ..	1,512	7	1,519
Feb. 16th ..	1,496	11	1,507	Aug. 16th ..	1,510	7	1,517
March 15th ..	1,673	8	1,681	Sept. 13th ..	1,112	5	1,117
April 12th ..	1,773	11	1,784	Oct. 18th ..	1,625	11	1,636
May 17th ..	1,544	9	1,553	Nov. 15th ..	1,026	13	1,039
June 21st ..	1,572	8	1,580	Dec. 13th ..	1,431	14	1,445

Scotland. (Annual average : Males, 75 ; Females, 26 ; Total, 101.)

Jan. 12th ..	74	26	100	July 19th ..	57	27	84
Feb. 16th ..	73	29	102	Aug. 16th ..	54	26	80
March 15th ..	64	27	91	Sept. 13th ..	68	22	90
April 12th ..	79	27	106	Oct. 18th ..	103	23	126
May 17th ..	63	28	91	Nov. 15th ..	118	26	144
June 21st ..	63	26	89	Dec. 13th ..	90	26	116

Great Britain. (Annual average : Males, 1,524 ; Females, 36 ; Total, 1,560.)

Jan. 12th ..	1,189	37	1,226	July 19th ..	1,569	34	1,603
Feb. 16th ..	1,569	40	1,609	Aug. 16th ..	1,564	33	1,597
March 15th ..	1,737	35	1,772	Sept. 13th ..	1,180	27	1,207
April 12th ..	1,852	38	1,890	Oct. 18th ..	1,728	34	1,762
May 17th ..	1,607	37	1,644	Nov. 15th ..	1,144	39	1,183
June 21st ..	1,635	34	1,669	Dec. 13th ..	1,521	40	1,561

IV.—Mechanical 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.
PRIME MOVERS :—						
Reciprocating steam engines	4,865	1,906	534	—	5,399	1,906
Steam turbines	1,340	—	—	—	1,340	—
Gas engines	—	25	—	—	—	25
Petrol and light oil engines	3	—	—	—	3	—
TOTAL	6,208	1,931	534	—	6,742	1,931
TOTAL OF PRIME MOVERS INSTALLED	8,139		534		8,673	
ELECTRIC GENERATORS :—	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by—						
Reciprocating steam engines	1,208	742	—	—	1,208	742
Steam turbines	1,000	—	—	—	1,000	—
Gas engines	—	15	—	—	—	15
TOTAL	2,208	757	—	—	2,208	757
TOTAL OF ELECTRIC GENERATORS INSTALLED	2,965		—		2,965	
ELECTRIC MOTORS :—	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by—						
Electricity generated in own works	2,513	1,348	—	—	2,513	1,348
Purchased electricity	1,107	340	218	—	1,325	340