

THE WROUGHT IRON AND STEEL TUBE TRADE.

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Introductory.*

The tables on pages 95 and 96 are based on returns received from firms in Great Britain whose business consisted wholly or mainly in the manufacture of wrought iron and steel tubes. The number of such separate returns was 73. No production was recorded in Northern Ireland in 1924 or in Ireland in 1907.

Summary of results.—The following table shows the main results of the Censuses of 1924 and 1907; the information received in connexion with the Census of 1912, when details of output were not required from firms employing five persons or less, was not sufficiently complete to warrant its use for purposes of comparison.

It should be borne in mind that, in the following table and in other tables in this report which show figures for different censal years, 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.

* See also the Notes on pages vii-xv.

Particulars.	Unit.	1924.	1907.
Value of goods made (Gross output)	£'000.	13,781	6,548
Cost of materials used	"	8,390	4,359
Net output	"	5,391	2,189
Average number of persons employed.. ..	No.	24,899	20,223
Net output per person employed	£	217	108
Mechanical power available :—			
Prime movers	H.P.	24,096	23,015
Electric motors driven by purchased electricity	"	68,838	(not recorded).

Production.

The detailed information relating to the output in 1924 of the Wrought Iron and Steel Tube Trade will be found in Table II on page 95.

Principal products.—The following statement shows, for 1907 and 1924, the value and (where recorded) the quantity of the principal products of the Wrought Iron and Steel Tube Trade, the total figures for each year being inclusive of the output of similar goods returned on schedules for other trades.

Kind of goods.	1924.				1907.	
	Returned on schedules for				Total.	
	The Tube Trade.		All trades.			
	Quantity.	Selling value.	Quantity.	Selling value.	Quantity.	Selling value.
	Th. tons.	£'000.	Th. tons.	£'000.	Th. tons.	£'000.
Wrought tubes and fittings	419.5	12,819	437.3	13,398	} 322.5	6,360
Cast malleable fittings	0.4	35	1.8	119		
Other products of the Tube Trade .. .. .	..	134	..	154		
TOTAL .. .. .	..	12,988	..	13,671	322.5	6,360

The output of tubes and fittings in 1924 was 439,100 tons, or 36.4 per cent. more than in 1907. Details of the different kinds of tubes and fittings were not required to be given in 1907.

The totals shown above may be regarded as substantially free from duplication.

In addition to the output set out above, an output of *electrical conduits, poles and fittings*, valued at £454,000, was returned on schedules for the Electrical Engineering and other trades (see page 261).

Other products.—In addition to the output shown in the previous table, firms that made their returns on schedules for the Wrought Iron and Steel Tube Trade recorded the following goods which, being of kinds mainly produced by other trades, are dealt with in the reports on those trades.

Kind of goods.	1924.	1907.
	Selling value.	Selling value.
Scrap iron and steel	£'000. 280	£'000. 128
Other iron and steel manufactures	(Th. tons) (78.6)	(53)
Goods of other metals (zinc, etc.)	191	114
Scrap and waste, other than iron and steel scrap	307	262
	15	3
TOTAL	793	507

Cost of materials.—The cost of materials used by firms that made their returns on schedules for the Wrought Iron and Steel Tube Trade was returned as £8,390,000 for 1924, a sum which does not include, in any substantial degree, goods produced by and purchased from other firms in the same trade; the corresponding figure for 1907 was £4,359,000.

Net output.—The net output in 1924 of the firms that made their returns on schedules for the Wrought Iron and Steel Tube Trade (whose gross output was valued at £13,781,000) was £5,391,000, 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 £217 as compared with £108 in 1907.

Kind of materials used.—In reply to a request for information as to the quantities of different kinds of iron and steel used in the year 1924, firms that made 361,500 tons of wrought iron and steel tubes and fittings (or 86.1 per cent. of the total quantity returned in the Wrought Iron and Steel Tube Trade) stated that they used 439,700 tons of iron and steel as materials, namely :—

	Tons.
Strips for tubes	283,300 329.0
Steel ingots, blooms, billets, etc.	131,000 152.1
Fitting and socket iron	13,300 15.4
Steel plates	12,100 14.1

As the quantity of scrap iron or steel produced and not used by the firms furnishing this information was 71,000 tons, there was left a balance of 7,200 tons of metal available for the manufacture of the "other products of the Tube Trade," valued at £104,000, and of the "other iron and steel manufactures," valued at £144,000, returned by them. The proportion (16.4 per cent.) of the scrap iron and steel to the total output of wrought tubes, etc., and scrap together was, in the case of the firms that furnished information as to materials used, somewhat above the average for all firms in the trade.

Exports and imports.—The following table, relating to the year 1924, shows the total production of tubes, pipes and fittings in relation to the exports and imports of similarly described goods.

Tubes, pipes and fittings.	Production.	Exports.	Net imports.	Available for use in United Kingdom.	Share of home market held by British-made goods.
	Th. tons.	Th. tons.	Th. tons.	Th. tons.	Per cent.
Tubes and pipes, wrought :—					
Weldless	109.2	32.4	14.4	91.2	84.2
Welded	297.7	128.5	18.4	187.6	90.2
Close-joint	11.1	0.8	*	17.3	99.7
Other	7.0				
Total	425.0	161.7	32.8	296.1	88.9
Fittings :—					
Wrought	12.3	6.0	0.5	6.8	92.6
Malleable cast	1.8	0.1	1.5	3.2	53.1
Total	14.1	6.1	2.0	10.0	80.0

* Less than 50 tons.

Except in the small item of malleable cast fittings, the United Kingdom market in 1924 was largely held by British manufacturers. Nevertheless, since 1907 retained imports of wrought iron and steel tubes and fittings have increased from 19,000 tons to 33,300 tons, or by 75 per cent.

British exports rose from 121,300 tons in 1907 to 167,700 tons in 1924, or by 38.3 per cent. (or 36.8 per cent. if the exports of 1,800 tons in 1924 to the Irish Free State be excluded from the comparison).

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 Wrought Iron and Steel Tube Trade which 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, 17,641 operatives, or 79 per cent. of the total of 22,280 operatives for the trade as a whole, and their net output totalled £4,389,000 or 81 per cent. of the aggregate net output of £5,391,000 for the trade as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £2,390,000, representing about 54 per cent. of their aggregate net output.

Employment.

The detailed information relating to employment in 1924 is summarised in Table III on pages 95 and 96. The following table

sets out certain particulars for that year together with those obtained at 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	2,122	21,360	119	594	2,241	21,954
Administrative, etc.	185	2,257	74	688	259	2,945
TOTAL	2,307	23,617	193	1,282	2,500	24,899
1907.						
Wage earners	2,743	18,761	34	146	2,777	18,907
Salaried	389	1,246	10	70	399	1,316
TOTAL	3,132	20,007	44	216	3,176	20,223

The numbers of operatives recorded month by month in 1924 ranged from 347 above the average, in December, to 736 below the average, in January (see Table IIIB, page 96). The numbers increased in the earlier months of the year and averaged 22,170 in the last eight months as compared with 21,520 in the first four. In the later months the variations were narrow, the extremes being 174 below the average, in November, and 131 above, in December.

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 96. 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.
PRIME MOVERS :—	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines ..	14,023	7,016	21,039	22,207
Steam turbines	1,766	—	1,766	—
Gas engines	970	90	1,060	793
Petrol and light oil engines ..	31	—	31	
Heavy oil engines	200	—	200	
Other	—	—	—	15
TOTAL	16,990	7,106	24,096	23,015
ELECTRIC GENERATORS :—	Kw.	Kw.	Kw.	Kw.
Driven by—				
Reciprocating steam engines..	2,199	1,568	3,767	2,087
Steam turbines	1,100	—	1,100	—
Gas engines	59	—	59	—
TOTAL	3,358	1,568	4,926	2,087

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.. ..	13,197	2,122	15,319
Purchased electricity	57,983	10,855	68,838

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 1,507,000.

TABLES.

I.—Summary of results.

Note.—No production was recorded in Northern Ireland.

Particulars.	Unit.	Great Britain.*
Value of goods made (Gross output)	£'000.	13,781
Cost of materials used	"	8,390
Net output	"	5,391
Average number of persons employed	No.	24,899
Net output per person employed	£	217
Mechanical power available:—		
Prime movers	H.P.	24,096
Electric motors driven by purchased electricity.. ..	"	68,838

* In order to avoid the possible disclosure of information relating to individual firms, figures are given only for Great Britain as a whole.

II.—Production.

Goods sold or added to stock.	Great Britain.*	
	Quantity.	Selling value.
	Th. tons.	£'000.
Iron and steel:—		
Tubes, pipes and fittings, wrought:—		
Weldless	104.2	3,891
Welded	288.2	7,488
Close-joint	11.1	179
Other	4.2	319
Fittings for wrought tubes, etc.:—		
Wrought	11.8	942
Malleable cast	0.4	35
Other products of the Tube Trade .. .. .	..	134
Scrap iron and steel	78.6	280
Iron and steel manufactures, other than tubes and fittings .. .. .	..	191
Goods of other metals (zinc, etc.) .. .. .	..	307
Scrap and waste (other than iron and steel scrap).. ..	..	15
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT).. ..	..	13,781

* See footnote to Table I.

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>Great Britain*</i> :—						
Operatives	2,161	21,697	117	583	2,278	22,280
Administrative, technical and clerical staff	185	2,257	74	688	259	2,945
TOTAL	2,346	23,954	191	1,271	2,537	25,225

* See footnote to Table I.

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

Great Britain. (Annual average ; Males, 21,360 ; Females, 594 ; Total, 21,954).

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	20,643	575	21,218	July 19th ..	21,500	597	22,097
Feb. 16th ..	20,745	592	21,337	Aug. 16th ..	21,699	573	22,272
Mar. 15th ..	21,125	607	21,732	Sept. 13th ..	21,566	585	22,151
April 12th ..	21,185	612	21,797	Oct. 18th ..	21,697	583	22,280
May 17th ..	21,429	608	22,037	Nov. 15th ..	21,408	588	21,996
June 21st ..	21,610	617	22,227	Dec. 13th ..	21,705	596	22,301

IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

Power equipment.	Great Britain.*	
	Ordinarily in use.	In reserve or idle.
	H.P.	H.P.
PRIME MOVERS :—		
Reciprocating steam engines	14,023	7,016
Steam turbines	1,766	—
Gas engines	970	90
Petrol and light oil engines	31	—
Heavy oil engines	200	—
TOTAL	16,990	7,106
TOTAL OF PRIME MOVERS INSTALLED	24,096	
	Kw.	Kw.
ELECTRIC GENERATORS :—		
Driven by—		
Reciprocating steam engines	2,199	1,568
Steam turbines	1,100	—
Gas engines	59	—
TOTAL	3,358	1,568
TOTAL OF ELECTRIC GENERATORS INSTALLED	4,926	
	H.P.	H.P.
ELECTRIC MOTORS :—		
Driven by—		
Electricity generated in own works	13,197	2,122
Purchased electricity	57,983	10,855

* See footnote to Table I.