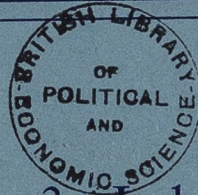


BOARD OF TRADE

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*The Report on the
Census of Production
for 1954*



Volume 3: Industry F

WROUGHT IRON AND STEEL TUBES

*Presented by the Board of Trade to Parliament in pursuance of the
Statistics of Trade Act, 1947 (10 & 11 Geo. 6 Ch. 39, Sec. 7)*

LONDON: HER MAJESTY'S STATIONERY OFFICE

1957

PRICE 1s 6d NET

The Report on the Census of Production for 1954

VOLUME 3 INDUSTRY F

WROUGHT IRON AND STEEL TUBES

THIS REPORT on the Wrought Iron and Steel Tubes Industry relates to establishments engaged wholly or mainly in the manufacture of tubes (including fittings) for boilers, cycles, bedsteads, etc.; metal conduits; gas cylinders and pressure vessels. Melting and rolling in integrated works and the manufacture of flexible tubes are included.

This industry corresponds to minimum list heading 44 in the Standard Industrial Classification.

There were no larger establishments in Northern Ireland in the register for this industry.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

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The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d. net).

Industrial Classification: Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

Specialist producers normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

Intermediate products: For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

Larger establishments: The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

Small firms are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

Gross output (production) is the total value of goods made and other work done during the year: it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out, and, for 1951 and 1954, any transport payments made. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents; rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits.

Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. The value of sales is the net selling value, i.e., the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

Materials and fuel: The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes: packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements. Purchases of goods for merchanting are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

Stocks: Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

Customs and Excise Duty paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

Employment: Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

Working proprietors are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

Administrative, technical and clerical employees include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, i.e., broadly speaking, all manual workers.

Outworkers are persons employed by the firm who work on materials supplied by the firm in their own homes.

Wages and salaries include all overtime payments, bonuses and commissions without any deductions for income tax, insurances, contributory pensions etc. They exclude payments to working proprietors.

Capital expenditure includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

Symbols used:

- .. for not available
- for nil or negligible (less than half the final digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

Industry summary

Estimates for the industry as a whole

TABLE 1

	United Kingdom			Scotland 1954	Wales 1954(a)
	1948	1951	1954		
Gross output (production)	£ million 58.6	£ million 98.2	£ million 114.6	£ million 17.39	..
Net output	22.4	33.8	34.1	4.51	..
Total stocks and work in progress					
At beginning of year	9.8	15.9	22.3	3.71	..
Change during year	+ 1.7	+ 1.4	- 1.0	- 0.54	..
Capital expenditure less disposals (b)	2.7	1.9	6.3	(a)	..
Wages and salaries	12.9	17.5	20.0	3.21	..
	Thousands	Thousands	Thousands	Thousands	Thousands
Total employment (including working proprietors)	38.0	42.6	40.8	6.56	..

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

(b) Capital expenditure on new building work, plant, machinery and vehicles (including (except in 1948) that incurred in Great Britain for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of.

Summary of returns received

TABLE 2

	Unit	Great Britain 1948	United Kingdom	
			1951	1954
FIRMS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS				
Number of establishments	No.	128	156	143
Total value of sales and work done	£'000	58,973	97,034	114,224
Products on hand for sale	"	4,605	7,350	9,906
and work in progress	"	+ 670	+ 680	- 578
Gross output (production) (a)	"	58,252	97,714	113,646
Purchases of materials and fuel	"	36,564	61,339	75,422
Stocks of materials and fuel	"	5,183	8,488	12,169
at beginning of year	"	+ 1,032	+ 735	- 456
change during year	"	35,532	60,604	75,879
Cost of materials and fuel used	"	448	766	738
Payment for work done on materials given out	"	1,391	2,692	3,153
Payment for transport (b)	"			
Net output	"	22,271	33,651	33,877
Average number of employees	No.	30,999	34,073	31,937
operatives	"	6,769 (c)	8,331	8,486
others	"	37,775	42,416	40,430
Total employment (d)	"	590	793	838
Net output per person employed (d)	£			
Wages and salaries	£'000	10,047	13,368	15,134
of operatives	"	2,743	4,035	4,745
of others	"			
Capital expenditure	"			
New building work (e)	"	382	310	1,059
Plant and machinery	"	2,309	1,536	5,012
acquisitions (e)	"	82	74	147
disposals	"	69	143	133
Vehicles	"	14	14	38
acquisitions (e)	"			
disposals	"			
FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS				
Number of returns	No.	28	33	34
Total employment, including working proprietors	"	176	206	217

(a) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold. For subsequent years gross output includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services.

(b) Payments to other firms and undertakings and to firms' own separate transport organisations. For the year 1948 payments cover only transport outwards of finished goods sold. For subsequent years they cover payments for transport of both finished goods sold and materials and fuel purchased.

(c) Number in week ended September 25, 1948.

(d) Excluding outworkers and including working proprietors.

(e) Excluding expenditure for establishments not yet in production.

(58401)

WROUGHT IRON AND STEEL TUBES

Analysis by size, 1954

Larger establishments in the United Kingdom

TABLE 3

Average number employed (a)	Estab-lish-ments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (b)	Net output per person employed (a)
				Operatives	Others	Operatives	Others		
	Number	£'000	£'000	Number	Number	£'000	£'000	£'000	£
11 - 24	26	902	343	380	103	129	60	34	703
25 - 49	26	1,858	678	716	144	293	90	62	789
50 - 99	31	3,079	1,373	1,700	361	638	202	63	666
100 - 199	21	6,212	2,377	2,420	557	1,074	345	128	798
200 - 299	8	5,864	2,500	1,569	440	765	257	210	1,245
300 - 399	6	4,163	1,780	1,777	438	815	229	247	804
400 - 749	8	14,177	3,637	3,497	1,113	1,658	627	2,171	789
750 - 999	4	9,159	2,940	2,809	654	1,363	364	466	849
1,000 and over	13	68,233	18,248	17,069	4,676	8,398	2,571	2,824	839
Total	143	113,646	33,877	31,937	8,486	15,134	4,745	6,205	838

(a) Excluding outworkers and including working proprietors.

(b) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles. Excluding expenditure for establishments not yet in production.

TABLE 4 - Analysis according to specialisation within the industry, 1954

Larger establishments in the United Kingdom

No specialisation within this industry was distinguished.

Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 5

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th. tons	£'000	Th. tons	£'000	Number
Wrought tubes					
Welded	614.4	27,109	581.3	32,814	29
Seamless	544.4	34,965	494.7	42,100	27
Tubes wrought, screwed, bent or otherwise fabricated	..	5,158	11.8	3,220(a)	..
Electric conduit tubes	46.9	2,750	33.2	2,453	14
Close joint tubes (other than electric conduit tubes) and cased tubes (including copper-clad and copper-lined steel tubes)	4.1	288	4.8	326	9
Total wrought tubes	1,209.8	65,112	1,125.8	80,914	..
Wrought fittings for tubes	34.1	5,075	27.2	4,287	44
Purchased tubes screwed, bent or otherwise fabricated, and gas containers (cylinders, bottles, etc.)	159.3	11,851	197.7	16,877	82
	..	2,397	..	3,804	

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WROUGHT IRON AND STEEL TUBES

Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th. tons	£'000	Th. tons	£'000	Number
Purchased tube fittings machined or otherwise fabricated	2.7	494(a)	5.9	970	42
	..	428	..	299	
Flexible metallic tubing	3.1	1,042	2.2	797	12
	..	224	..	290	
Work done for the trade or on commission (b)		663		619	29
Total		93,160		109,602	..
Sales in other industries (see Table 6)		1,630		1,794	..
Principal products of this industry sold by establishments in the industry		91,530		107,808	129

(a) So far as recorded separately.

(b) Amount charged.

Sales of principal products of the industry by establishments classified to other industries: Larger establishments in the United Kingdom

TABLE 6

	1954			Principal industries in which produced (a)
	Quantity	Value	Entries	
	Th. tons	£'000	Number	
Wrought tubes, welded, electric conduit, and other close joint tubes	7.2	457	7	3B, 3K, 5E
Wrought fittings for tubes, and purchased tube fittings machined or otherwise fabricated	0.3	101	6	3C, 4I, 4K, 5E
	..	40		
Purchased tubes screwed, bent or otherwise fabricated, and gas containers (cylinders, bottles, etc.)	0.1	25	8	3G, 3K, 4A, 4F
	..	409		
Flexible metallic tubing	2.2	761	6	3G, 5C, 5E, 11A
Total		1,794	..	

(a) The volume number and industry references given are to the industries shown in the list at the back of this report.

Sales in the industry of other than principal products

TABLE 7

Larger establishments in the United Kingdom

	1954	
	Quantity	Value
	Th. tons	£'000
Iron and steel		
Malleable cast fittings for tubes	1.4	312
Other castings	3.2	324
Iron or steel fabricated (e.g. mast and tower components, etc.)	11.4	1,341
Other goods	..	1,746
Waste products sold		
Scrap iron and steel	231.8	1,469
Other waste products	..	325
Iron and steel structural work (a)		900
Total		6,415

(a) Amount charged, exclusive of the value of goods made at the establishments in this industry and included against other appropriate headings in Tables 5 or 7.

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TABLE 8 - Total make of intermediate products

Larger establishments in the United Kingdom

This table is not applicable to the industry.

Purchases of materials and fuel, 1954

Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th. tons	£'000
Materials		
Malleable cast iron fittings for tubes	3.2	420
Other iron castings in the rough or machined	0.7	45
Steel		
Angles, sections, shapes, bars, rods, girders, beams, joists, tube rounds and squares	183.8	7,429
Steel plates and sheets 1/8inch thick and over (excluding tin-, terne-, and black-plates and sheets) and hoop and strip, including tape of all thicknesses	640.3	22,015
Tubes purchased for further fabrication	208.3	9,858
Fittings for wrought tubes including flanges	18.4	2,229
Iron and steel not specified elsewhere except finished parts and scrap	533.7	19,487
Packing materials	..	416
Replacement parts for firms' machinery, plant and vehicles	..	1,377
Consumable tools bought as replacement including engineers' small tools, jigs, fixtures and measuring instruments	..	1,138
All other purchased materials	..	7,178
Fuel and electricity		
Coal	227.6	890
Coke	29.8	169
Liquid fuels (including creosote/pitch mixtures)		
For use in internal combustion engines	Th.gal.	
Motor spirit (petrol) for use in road vehicles and deriv. fuel	629	124
Other	49	5
For burning in furnaces, boilers, kilns, etc.	11,478	524
Gas purchased	Th.therms	
	29,020	866
Electricity purchased (a)	Th.kWh.	
	260,603	1,152
All other purchased fuel	..	14
Total cost		75,422

(a) Owing to the risk of disclosure of information relating to individual firms, the total quantity of electricity generated in firms' own establishments cannot be given.

Average number of employees, and wages, salaries and superannuation payments(a)

Larger establishments in the United Kingdom

TABLE 10

	1951	1954
	Number	Number
Average number of employees		
Operatives	34,073	31,937
Administrative, technical and clerical employees	8,331	8,486
Total	42,404	40,423
Wages and salaries paid to	£'000	£'000
Operatives	13,368	15,134
Administrative, technical and clerical employees	4,035	4,745
Total	17,403	19,879
Wages and salaries per head	£	£
Operatives	392	474
Administrative, technical and clerical employees	484	559
Superannuation and other pension funds for employees and dependents		£'000
Employers' contributions	..	371
Employees covered	..	Number 15,313 £'000
Pension, etc. payments to former employees and dependents	..	180

(a) The following persons, not included above, were also employed by larger establishments in this industry ('other workers' includes, for example, employees engaged in merchanting)

	United Kingdom	
	1951	1954
Canteen workers		
Males	11	18
Females	363	341
Total	374	359
Other workers		
Males	287	715
Females	190	285
Total	477	1,000
Total excluded employees	851	1,359

Outworkers. The firms in this industry employed 4 male and 23 female outworkers in 1951 and 2 male and 12 female outworkers in 1954, the amounts paid to them being £1,000 in each year.

Employment in a specified week (a)

Larger establishments in the United Kingdom

TABLE 11

	1951			1954		
	Males	Females	Total	Males	Females	Total
Working proprietors	10	2	12	6	1	7
Operatives	29,949	3,688	33,637	29,090	3,146	32,236
Administrative, technical and clerical employees	5,834	2,698	8,532	5,908	2,676	8,584
Total employees	35,783	6,386	42,169	34,998	5,822	40,820

(a) Week ended September 22, 1951, or October 30, 1954.

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