

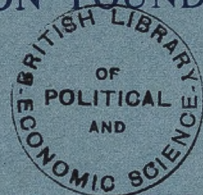
BOARD OF TRADE

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*The Report on the  
Census of Production  
for 1954*

Volume 3: Industry C

IRON FOUNDRIES



*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)*

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# The Report on the Census of Production for 1954

VOLUME 3 INDUSTRY C

## IRON FOUNDRIES

THIS REPORT on the Iron Foundries Industry relates to establishments engaged wholly or mainly in the manufacture of cast iron goods of all descriptions.

Owing to the increasing proportion of gas appliances made from sheet steel instead of from cast iron, a number of establishments classified to this industry for 1948 and 1951 were re-classified for 1954 to the Hardware, Hollow-ware, Metal Furniture and Sheet Metal Industry (Volume 5, Industry E) in 1954. In 1951 these establishments employed 9,024 persons and had a net output of £6,291,000.

This industry corresponds to minimum list heading 42 in the Standard Industrial Classification.

### LIST OF TABLES

Table No.	Title	Page	Table No.	Title	Page
1	Industry summary: estimates for the industry as a whole	3/C/3	6	Sales of principal products of the industry by establishments classified to other industries	3/C/7
2	Summary of returns received	3/C/3	7	Sales in the industry of other than principal products	3/C/8
3	Analysis by size, 1954	3/C/4	8	Total make of intermediate products	3/C/8
4	Analysis according to specialisation within the industry, 1954	3/C/4	9	Purchases of materials and fuel, 1954	3/C/10
5	Sales of principal products of the industry, including sales of these products by establishments classified to other industries	3/C/5	10	Average number of employees and wages, salaries and superannuation payments	3/C/12
			11	Employment in a specified week	3/C/12

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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42  
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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
	1948	1951	1954		
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	115.2	151.7	153.8	19.43	6.00
Net output	67.9	80.7	79.7	10.48	2.52
Total stocks and work in progress					
At beginning of year	13.0	16.1	18.9	2.47	0.71
Change during year	+ 3.0	+ 2.7	+ 0.7	+ 0.04	-
Capital expenditure less disposals (a)	3.9	5.4	4.3	0.46	0.43
Wages and salaries	42.0	50.5	52.8	7.45	1.72
Total employment (including working proprietors)	Thousands 120.9	Thousands 120.7	Thousands 105.4	Thousands 16.29	Thousands 3.53

(a) 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
<b>FIRMS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS</b>				
Number of establishments	No.	870	902	838
Total value of sales and work done	£'000	114,101	148,939	150,226
Products on hand for sale and work in progress	{ at beginning of year change during year	6,184 + 1,475	7,585 + 838	8,634 + 493
Gross output (production) (a)	"	113,366	149,777	150,718
Purchases of materials and fuel	"	46,940	66,042	66,089
Stocks of materials and fuel	{ at beginning of year change during year	6,578 + 1,472	8,264 + 1,847	9,846 + 153
Cost of materials and fuel used	"	45,468	64,195	65,936
Payment for work done on materials given out	"	1,048	1,525	1,849
Payment for transport (b)	"	2,210	4,320	4,847
Net output	"	66,850	79,737	78,086
Average number of employees	{ operatives others	No. 104,226	103,870	89,263
Total employment (d)	"	118,942	119,193	103,340
Net output per person employed (d)	£	562	669	756
Wages and salaries	{ of operatives of others	£'000 34,965	41,994	43,350
Capital expenditure	"	6,314	7,868	8,381
New building work (e)	"	932	1,394	971
Plant and machinery	{ acquisitions (e) disposals	" 2,740	3,539	2,857
Vehicles	{ acquisitions (e) disposals	" 87	90	102
	"	297	579	518
	"	38	102	135
<b>FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS</b>				
Number of returns	No.	195	176 (f)	212
Total employment, including working proprietors	"	1,269	1,197 (f)	1,389

(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.

(f) Excluding Northern Ireland. No information about small firms was collected in Northern Ireland for 1951.

## IRON FOUNDRIES

Analysis by size, 1954: Larger establishments in the United Kingdom

TABLE 3

Average number employed (a)	Establishments	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(c)	173	3,107	1,992	2,641	404	1,230	230	63	641
25 - 49	236	9,203	5,674	7,447	994	3,455	644	244	668
50 - 99	177	14,571	8,665	10,995	1,418	5,129	974	362	697
100 - 199	133	25,048	14,154	16,698	2,157	8,142	1,418	1,098	750
200 - 299	37	12,668	6,568	7,873	1,396	3,679	858	316	709
300 - 399	25	12,485	6,451	7,261	1,328	3,443	745	292	751
400 - 499	13	10,978	4,805	4,918	819	2,366	473	291	838
500 - 749	26	29,724	13,342	13,560	2,079	7,027	1,212	828	853
750 - 999	8	8,750	4,443	5,905	1,026	2,867	517	174	641
1,000 - 1,499	6	12,626	5,962	5,755	1,185	3,034	657	309	859
1,500 and over	4	11,558	6,031	6,210	1,137	2,978	653	369	821
Total	838	150,718	78,086	89,263	13,943	43,350	8,381	4,346	756

(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.

(c) Including a small number of establishments with fewer than 11 persons employed, particulars of which were included with those for larger establishments on a single return.

Analysis according to specialisation within the industry, 1954

Larger establishments in the United Kingdom

TABLE 4

	Unit	Specialist producers of										Total
		Cast iron pipes and fittings therefor	Cast iron stoves, grates, etc.	Cisterns, baths and other sanitary goods	Ingot moulds and bottoms for steel and non-ferrous metals	Marine castings	Motor and cycle industry castings	Railway castings	Other iron engineering castings	Remainder of the industry		
Number of establishments	No.	66	46	15	17	25	40	8	464	157	838	
Total value of sales and work done	£'000	33,871	13,454	5,749	10,962	2,146	21,026	1,251	37,112	24,656	150,226	
Sales of characteristic products	"	29,778	10,954	4,937	7,904	1,765	17,176	998	31,247			
Products on hand for sale at beginning of year	"	2,781	900	153	1,070	85	666	59	1,454	1,467	8,634	
Change during year	"	+ 97	+ 138	+ 43	+ 24	- 2	+ 50	+ 23	- 37	+ 156	+ 493	
Gross output (production)	"	33,968	13,591	5,792	10,985	2,143	21,076	1,274	37,075	24,813	150,718	
Purchases of materials and fuel	"	17,657	5,352	2,431	6,774	864	8,786	684	13,703	9,837	66,089	
Stocks of materials and fuel at beginning of year	"	2,528	892	318	1,410	171	1,274	149	1,661	1,443	9,846	
Change during year	"	+ 145	+ 12	+ 24	- 191	+ 8	- 4	- 23	+ 88	+ 93	+ 153	
Cost of materials and fuel used	"	17,512	5,340	2,407	6,965	856	8,790	707	13,615	9,744	65,936	
Payment for work done on materials given out	"	93	571	24	50	10	140	7	487	466	1,849	
Payment for transport	"	2,072	495	95	290	35	390	24	679	768	4,847	
Net output	"	14,291	7,185	3,266	3,680	1,243	11,755	536	22,294	13,834	78,086	
Average number of employees	No.	15,321	7,891	2,763	3,737	1,830	13,046	800	28,051	15,824	89,263	
Operatives	"	2,588	1,820	368	783	216	1,489	102	3,732	2,845	13,943	
Others	"	17,919	9,712	3,131	4,521	2,048	14,535	907	31,872	18,695	103,340	
Total employment (a)	"	17,919	9,712	3,131	4,521	2,048	14,535	907	31,872	18,695	103,340	
Net output per person employed (a)	£	798	740	1,043	814	607	809	591	699	740	756	
Wages and salaries of operatives	£'000	7,376	3,532	1,427	1,888	863	6,945	364	13,786	7,168	43,350	
of others	"	1,508	921	242	417	133	1,055	61	2,412	1,632	8,381	
Capital expenditure New building work (b)	"	114	83	51	105	9	113	72	275	149	971	
Plant and machinery acquisitions (b)	"	351	175	178	338	17	511	82	812	392	2,857	
disposals	"	5	19	1	14	-	10	-	28	26	102	
Vehicles acquisitions (b)	"	41	86	29	12	5	59	1	165	119	518	
disposals	"	12	15	3	1	1	18	-	50	35	135	

(a) Excluding outworkers and including working proprietors.

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

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## IRON FOUNDRIES

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
Iron (including malleable iron)	Th. tons	£'000	Th. tons	£'000	Number
Pressure pipes and fittings and malleable cast iron fittings	706.6	25,436	735.0	28,098	138
Other pipes and fittings including rainwater, hot water and soil pipes and gutters	..	745	133.3	6,699	103
Cast iron hot water boilers, (including washing boilers) radiators and radiator fittings using solid fuel	70.2	5,020(a)	66.2	5,618	49
Stoves, fires, ranges and cooking apparatus other than hollow-ware					
Using gas (including gas radiators)(b)	69.6	13,168	8.7	1,144	51
Using electricity (including electric radiators)	..	267	..	..	..
Using oil (including oil radiators)	11.4	1,940	5.5	495	31
Using solid fuel (other than cast iron hot water boilers (including washing boilers) radiators and radiator fittings)	1.9	231	0.3	68	7
	..	31	..	27	..
Hollow-ware of cast iron	116.4(c)	13,407	105.3	13,529	150
Sanitary cisterns, baths and other sanitary cast iron goods, enamelled or not, such as sinks, basins, lavatories, etc.	4.1	355	4.2	400	22
Cast iron bedsteads and furniture trades castings, including piano frames	79.0	6,225	88.1	7,728	64
Iron castings for other domestic appliances, i.e., refrigerators, irons, etc.	..	63	..	..	..
Builders' ironmongery of cast iron, not elsewhere specified	4.5	282	4.4	318	30
Manhole covers, ventilation and coal covers, drain gratings and frames therefor, service boxes and the like and other castings for roads and drainage, excluding cast iron pipes	10.6	708	17.3	1,390	82
Marine castings (such as castings for turbines and parts, other marine engines and parts, deck and hull auxiliary machinery, propellers, but excluding dockyard plant and harbour machinery)	..	74	..	430	..
Castings for prime movers for land, such as turbines, gas, oil and steam engines	13.4	1,199	12.0	1,293	129
Castings for pumps and compressors	68.8	2,448	69.5	2,836	262
Castings for boilers and boiler house plant	59.4	3,994	46.1	3,623	222
Colliery castings excluding colliery tubs and parts	32.7	2,210	30.9	2,257	127
Electrical engineering castings	18.1	1,179(d)	14.3	1,196	195
Cases for small switch and fuse boxes, meter cases and similar castings	..	227	..	220	..
Castings for chemical and gas plant	28.5	1,467	20.6	1,227	226
Castings for textile machinery	16.9	1,089	16.9	1,182	188
Agricultural implements and machinery castings excluding castings for tractors	48.7	3,615	47.0	3,928	263
Castings for food preparation, processing and sterilising machinery	10.3	777	7.7	727	89
Castings for machine tools, including jigs, tools and dies	28.3	1,779	21.2	1,919	219
	33.6	2,268	20.3	1,564	248
	62.2	4,061(e)	23.6	1,923	205
	15.0	1,060	10.1	842	173
	126.6	8,129	110.8	8,197	467

(86192)

TABLE 5 (contd.)

	1951		1954		Entries
	Quantity	Value	Quantity	Value	
	Th. tons	£'000	Th. tons	£'000	Number
Iron (including malleable iron) (contd.)					
Castings for printing, book binding, paper working, etc. machinery	12.3	820	13.9	1,000	153
Motor and cycle industry castings					
For tractors (engine, transmission, power take-off and chassis castings)	256.7	17,878	58.8	4,233	81
For cars, commercial vehicles, buses, trolley buses, works trucks, etc. (including castings for engines)			216.5	15,546	156
For cycles and motor cycles			7.7	991	50
Railway castings					
Castings for locomotives, not elsewhere specified	11.3	476	20.1	634	59
Tunnel segments	..	(f)	8.5	339	..
Chairs and other castings for the permanent way	157.1	2,530	152.0	2,783	48
Castings for carriages and wagons (including colliery tubs) not elsewhere specified	33.4	997	34.1	1,070	64
Railway material, not elsewhere specified	9.4	310	2.7	174	51
Castings for cranes and lifting and conveying appliances	16.4	943	18.3	1,335	212
Ingot moulds and bottoms for steel and non-ferrous metals	307.9	6,816	326.7	9,816	88
Castings for iron and steel works plant (other than rolls)	56.0	2,437	65.9	3,110	184
Iron castings in the rough or machined, not elsewhere specified	206.2	12,449	126.0	8,839	446
Unclassified iron castings			17.9	1,828	318
Work done for the trade or on commission (g)	..	4,182	..	5,213	..
		182		262	35
Total		154,404(c)		158,563	..
Sales in other industries (see Table 6)		17,250		18,929	..
Principal products of this industry sold by establishments in the industry		137,154(c)		139,633	808

(a) Recorded as:

	Th. tons	£'000
Cast iron hot water boilers for coal and other solid fuel	43.9	3,458
Cooking and washing boilers of cast iron (including portable boilers and furnace pans)	3.0	359
Radiators, including parts and fittings (other than gas radiators)	23.3	1,203

(b) See preamble. In 1951 the value includes £10,776,000 recorded by establishments reclassified in 1954 to the Hardware, Hollow-ware, Metal Furniture and Sheet Metal Industry (Volume 5, Industry E).

(c) Amended figure.

(d) Excluding compressors.

(e) May include some castings for tractors.

(f) Not recorded separately.

(g) 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	
Iron (including malleable iron)				
Pressure pipes and fittings and malleable cast iron fittings	12.5	1,743	12	3F, 4B, 4I
Other pipes and fittings including rainwater, hot water and soil pipes and gutters	2.2	118	9	3B, 4I, 5F
Stoves, fires, ranges and cooking apparatus other than hollow-ware and cast iron hot water boilers, (including washing boilers) radiators and radiator fittings using solid fuel	2.3	526	8	3J, 4B, 4I, 5E
Hollow-ware of cast iron and iron castings for domestic appliances i.e. refrigerators, irons, etc.	..	27		
Sanitary cisterns, baths and other sanitary cast iron goods, enamelled or not, such as sinks, basins, lavatories, etc.	..	547	6	4I, 4K, 5E
Sanitary cisterns, baths and other sanitary cast iron goods, enamelled or not, such as sinks, basins, lavatories, etc.	8.8	824	..	4I, 5E, 5F
Builders' ironmongery of cast iron, not elsewhere specified	0.2	20	6	4I, 5C
Manhole covers, ventilation and coal covers, drain gratings and frames therefor, service boxes and the like and other castings for roads and drainage, excluding cast iron pipes	2.5	111	9	4I, 4J, 5F
Marine castings (such as castings for turbines and parts, other marine engines and parts, deck and hull auxiliary machinery, propellers, but excluding dockyard plant and harbour machinery), and castings for prime movers for land, such as turbines, gas, oil and steam engines	6.1	420	10	3B, 4B, 4I, 5A
Colliery castings excluding colliery tubs and parts	2.3	108	7	3B, 4G, 4I
Electrical engineering castings and cases for small switch and fuse boxes, meter cases and similar castings	1.6	160	13	3B, 4I, 4K, 5E
Castings for textile machinery	0.1	8	..	4I
Agricultural implements and machinery castings excluding castings for tractors	0.5	40	6	3B, 5E
Castings for machine tools, including jigs, tools and dies	3.9	246	18	4C, 4F, 4G, 4I
Motor and cycle industry castings	32.1	1,687	23	3B, 3I, 4I, 5E
	..	1,343		
Railway castings				
Castings for locomotives, not elsewhere specified	17.4	420	5	3B, 3L
Chairs and other castings for the permanent way	88.1	1,479	13	3B, 3L, 12C
Castings for carriages and wagons (including colliery tubs) not elsewhere specified	17.6	337	5	3B, 3L, 3M
Castings for cranes and lifting and conveying appliances	2.2	139	7	3B, 4G, 4I
Castings for iron and steel works plant (other than rolls)	4.9	255	13	3B, 4B', 4I, 4J
Iron castings in the rough or machined, not elsewhere specified	28.4	1,122	..	
	..	209		
Unclassified iron castings	17.9	1,828	318	
	..	5,213		
Total		18,929	..	

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

Sales in the industry of other than principal products  
Larger establishments in the United Kingdom

TABLE 7

	1954	
	Quantity	Value
	Th. tons	£'000
Rolls for metal rolling mills, of iron	1.9	140
Rolls for machinery other than metal working (sugar, flour, rubber, etc. mills), of iron	2.2	100
Machinery and parts, not elsewhere specified	..	12
Wood and metal patterns	..	1,380
Iron or steel fabricated (staircases, etc.)	2.0	230
Other and unclassified engineering products	..	212
Castings of non-alloy steel	..	108
Casting for blast furnaces and steel works plant, including steel and non-ferrous metal rolling mills, but excluding rolls	..	1,078
Other castings in the rough or machined	1.1	116
Castings of alloy steel in the rough or machined	4.1	601
Refined pig iron and other manufactures of iron and steel	..	50
Castings of brass and other alloys of copper including nickel silver and cupro-nickel, but excluding all other nickel alloys	..	844
Castings of aluminium and aluminium alloys	4.3	1,689
Other manufactures of non-ferrous metals	2.9	1,170
Other goods	..	422
Scrap metal sold	..	380
Work done (a)	36.8	259
Structural work carried out in the United Kingdom (b)	..	32
Work done as main contractors		149
Work done as sub-contractors		216
General and jobbing engineering		1,165
Other work		240
Total		10,593

(a) Amount charged.

(b) Value of work done during the year, exclusive of the value of goods used by firms and recorded as their output. The value of these goods was £29,000.

Total make of intermediate products (a)  
Larger establishments in the United Kingdom

TABLE 8

	Returned in this industry, 1954			
	Grey and high duty iron castings		Malleable iron castings (white or black heart)	
	Quantity	Entries	Quantity	Entries
	Th. tons	Number	Th. tons	Number
Pressure pipes and fittings and malleable cast iron fittings	689.9	98	8.6	31
Other pipes and fittings including rainwater, hot water and soil pipes and gutters	129.0	87	5.5	7
Cast iron hot water boilers, (including washing boilers) radiators and radiator fittings using solid fuel	66.9	44	0.2	..

TABLE 8 (contd.)

	Returned in this industry, 1954			
	Grey and high duty iron castings		Malleable iron castings (white or black heart)	
	Quantity	Entries	Quantity	Entries
	Th. tons	Number	Th. tons	Number
Stoves, fires, ranges and cooking apparatus other than hollow-ware				
Using gas (including gas radiators)	8.4	46	-	5
Using electricity (including electric radiators)	5.5	31	-	-
Using oil (including oil radiators)	0.3	6	-	-
Using solid fuel (other than cast iron hot water boilers (including washing boilers) radiators and radiator fittings)	95.0	141	0.8	..
Hollow-ware of cast iron	3.3	18	-	..
Sanitary cisterns, baths and other sanitary cast iron goods, enamelled or not, such as sinks, basins, lavatories, etc.	80.8	61	-	-
Cast iron bedsteads and furniture trades' castings, including piano frames	4.2	27	0.1	8
Iron castings for other domestic appliances i.e. refrigerators, irons, etc.	17.2	72	0.1	7
Builders' ironmongery of cast iron, not elsewhere specified	9.4	109	2.2	21
Manhole covers, ventilation and coal covers, drain gratings and frames therefor, service boxes and the like and other castings for roads and drainage, excluding cast iron pipes	66.0	244	0.5	9
Marine castings (such as castings for turbines and parts, other marine engines and parts, deck and hull auxiliary machinery, propellers, but excluding dockyard plant and harbour machinery)	43.3	203	0.6	18
Castings for prime movers for land, such as turbines, gas, oil and steam engines	28.1	112	0.4	14
Castings for pumps and compressors	16.5	178	0.3	17
Castings for boilers and boiler house plant	20.1	216	0.1	8
Colliery castings excluding colliery tubs and parts	14.2	165	0.4	19
Electrical engineering castings	41.4	222	4.1	39
Cases for small switch and fuse boxes, meter cases and similar castings	6.0	79	1.7	13
Castings for chemical and gas plant	19.1	202	0.2	12
Castings for textile machinery	19.6	224	0.8	30
Agricultural implements and machinery castings excluding castings for tractors	17.9	164	4.8	45
Castings for food preparation, processing and sterilising machinery	10.4	160	0.2	17
Castings for machine tools, including jigs, tools and dies	102.8	422	3.3	41
Castings for printing, bookbinding, paper working, etc. machinery	13.4	140	0.1	16
Motor and cycle industry castings				
For tractors (engine, transmission, power take-off and chassis castings)	39.0	62	9.4	21
For cars, commercial vehicles, buses, trolley buses, works trucks, etc. (including castings for engines)	165.4	102	44.9	41
For cycles and motor cycles	4.5	23	3.0	24

TABLE 8 (contd.)

	Returned in this industry, 1954			
	Grey and high duty iron castings		Malleable iron castings (white or black heart)	
	Quantity	Entries	Quantity	Entries
	Th. tons	Number	Th. tons	Number
Rolls for metal rolling mills	2.1	12	-	..
Rolls for machinery other than metal working (sugar, flour, rubber, etc. mills)	2.4	15	-	..
Railway castings				
Castings for locomotives, not elsewhere specified	2.8	47	0.1	7
Chairs and other castings for the permanent way	63.2	34	-	..
Castings for carriages and wagons (including colliery tubs) not elsewhere specified	16.6	50	0.6	11
Railway material, not elsewhere specified	9.0	44	0.4	9
Castings for cranes and lifting and conveying appliances	13.7	180	2.4	30
Ingot moulds and bottoms for steel and non-ferrous metals	307.3	76	-	-
Castings for iron and steel works plant (other than rolls)	62.2	170	0.5	9
Iron castings in the rough or machined, not elsewhere specified	108.4	389	11.1	62
Total	2,325.1	..	107.6	..

(a) 678,000 tons of iron castings were recorded as having been made in other industries in 1954. The quantity made was, however, not recorded in all industries in which iron foundries are operated, and the total of 3.1 million tons recorded in the Census of Production therefore falls short of the total production of iron castings in the United Kingdom.

Purchases of materials and fuel, 1954  
Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th. tons	£'000
Materials		
Iron		
Pig iron	1,652.3	26,397
Iron castings in the rough	8.9	427
	..	56
Steel		
Angles, shapes, sections, bars, rods, girders, beams, joists and pillars (not fabricated)	9.8	384
Plates and sheets (excluding tin-, terne-, and black-plates and sheets)		
1/8 in. thick and over, and hoop and strip (including tape) of all thicknesses	6.8	260
	..	36
Other steel sheets and plates under 1/8 in. thick	5.2	247
Iron and steel in all forms except finished parts and scrap	5.6	290
	..	148
Iron and steel scrap	923.6	7,121
Ferro-alloys		
Spiegeleisen and ferro-manganese (other than refined)	2.1	108
	..	27
Other ferro-alloys	9.5	669
Other alloying materials	0.4	68
	..	53

(86192)

TABLE 9 (contd.)

	Quantity	Cost
	Th. tons	£'000
Materials (contd.)		
Other non-ferrous metals in all forms except finished parts and scrap		
Aluminium	3.5	562
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys)	5.5	1,351
Moulding sand	768.5	936
Organic and inorganic bonds	33.0	946
	..	143
Moulding boxes	1.9	121
	..	232
Refractories	79.4	355
	..	241
Grinding wheels	0.3	41
	..	290
Packing materials for transport	Th. cu. ft.	
Packing cases (wood or mainly of wood)	246.9	147
	..	101
Other packing materials	..	407
Replacement parts for firms' own machinery, plant and vehicles	..	2,342
Consumable tools bought as replacement, including engineers' small tools, jigs, fixtures and measuring instruments	..	656
All other purchased materials	..	11,576
	Th. tons	
Fuel and electricity		
Coal	316.4	1,135
Coke	662.6	4,896
Liquid fuel (including creosote/pitch mixtures)		
For use in internal combustion engines	Th. gal.	
Motor spirit (petrol) for use in road vehicles and derv. fuel	1,844	371
Other	229	22
For burning in furnaces, boilers, kilns, etc.	10,456	430
	Th. therms	
Gas purchased (a)		
From Gas Boards	12,366	582
From other sources, including other departments of the same firms	16,950	114
	3,530,191	81
	Th. cu. ft.	
Electricity purchased (b)		
From Electricity Boards	276,204	1,432
From other sources, including other departments of the same firms	40,642	188
All other purchased fuel	..	101
Total cost		66,089

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

(b) The total quantity of electricity generated in firms' own establishments in this industry in 1954 was 23,488 Th.kWh.

(86192)

## IRON FOUNDRIES

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	103,870	89,263
Administrative, technical and clerical employees	15,155	13,943
Total	119,025	103,206
	£'000	£'000
Wages and salaries paid to		
Operatives	41,994	43,350
Administrative, technical and clerical employees	7,868	8,381
Total	49,862	51,731
	£	£
Wages and salaries per head		
Operatives	404	486
Administrative, technical and clerical employees	519	601
		£'000
Superannuation and other pension funds for employees and dependents (b)		
Employers' contributions	..	482
		Number
Employees covered	..	22,801
		£'000
Pension, etc. payments to former employees and dependents (b)	..	75

(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):

	1951	1954
	Number	Number
Canteen workers		
Males	50	32
Females	758	523
Total	808	555
Other workers		
Males	372	257
Females	115	122
Total	487	379
Total excluded employees	1,295	934

Outworkers. The firms in this industry employed 29 outworkers in 1951 and 10 outworkers in 1954, the amounts paid to them being £5,000 and £2,000 respectively.

(b) The figures given relate to larger establishments in Great Britain only.

## Employment in a specified week (a)

Larger establishments in the United Kingdom

TABLE 11

	Number					
	1951			1954		
	Males	Females	Total	Males	Females	Total
Working proprietors	162	6	168	130	4	134
Operatives	95,124	8,673	103,797	83,817	7,022	90,839
Administrative, technical and clerical employees	10,580	4,757	15,337	9,797	4,300	14,097
Total employees	105,704	13,430	119,134	93,614	11,322	104,936

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

## LIST OF INDUSTRY REPORTS

## VOLUME 1

- A. Coal Mines
- B. Non-Metalliferous Mines and Quarries (other than Coal, Salt and Slate)
- C. Salt Mines, Brine Pits and Salt Works
- D. Slate Quarries and Mines
- E. Metalliferous Mines and Quarries
- F. Brick and Fireclay
- G. China and Earthenware
- H. Glass Containers
- I. Glass (other than Containers)
- J. Cement
- K. Abrasives
- L. Building Materials
- M. Manufactured Fuel

## VOLUME 2

- A. Coke Ovens and By-products
- B. Dyes and Dyestuffs
- C. Fertiliser, Disinfectant, Insecticide and Allied Industries
- D. Coal Tar Products
- E. Chemicals (General)
- F. Drugs and Pharmaceutical Preparations
- G. Toilet Preparations and Perfumery
- H. Explosives and Fireworks
- I. Paint and Varnish
- J. Soap, Candles and Glycerine
- K. Polishes
- L. Ink
- M. Match
- N. Mineral Oil Refining
- O. Oils and Greases
- P. Seed Crushing and Oil Refining
- Q. Glue, Gum, Paste and Allied Industries
- R. Plastics Materials

## VOLUME 3

- A. Blast Furnaces
- B. Iron and Steel (Melting and Rolling)
- C. Iron Foundries
- D. Steel Sheets
- E. Tinplate
- F. Wrought Iron and Steel Tubes
- G. Non-Ferrous Metals (Smelting, Rolling, etc.)
- H. Scrap Metal Processing
- I. Motor Vehicles and Cycles (Manufacturing)
- J. Motor Vehicles and Cycles (Repairing)
- K. Aircraft Manufacture and Repair
- L. Railway Locomotive Shops and Locomotive Manufacturing
- M. Railway Carriages and Wagons and Trams
- N. Carts, Perambulators, etc.

## VOLUME 4

- A. Shipbuilding and Ship Repairing
- B. Marine Engineering
- C. Machine Tools
- D. Textile Machinery and Accessories
- E. Small Arms
- F. Constructional Engineering
- G. Mechanical Handling Equipment

## VOLUME 4 (contd.)

- H. Printing and Bookbinding Machinery
- I. Mechanical Engineering (General)
- J. Mechanical Engineering (Repairing)
- K. Electrical Engineering (General)
- L. Electric Wires and Cables
- M. Radio and Telecommunications
- N. Batteries and Accumulators
- O. Electric Lighting Accessories and Fittings

## VOLUME 5

- A. Tool and Implement
- B. Cutlery
- C. Chain, Nail, Screw and Miscellaneous Forgings
- D. Wire and Wire Manufactures
- E. Hardware, Hollow-ware, Metal Furniture and Sheet Metal
- F. Brass Manufactures
- G. Needles, Pins, Fish Hooks and Metal Smalwares
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- A. Cotton Spinning and Doubling
- B. Cotton Weaving
- C. Woollen and Worsted
- D. Rayon, Nylon, etc. Production
- E. Rayon, Nylon, etc. Weaving, and Silk
- F. Flax Processing
- G. Linen and Soft Hemp
- H. Jute
- I. Rope, Twine and Net
- J. Hosiery and Other Knitted Goods
- K. Lace
- L. Carpets
- M. Narrow Fabrics
- N. Canvas Goods and Sacks
- O. Textile Converting
- P. Made-up Household Textiles
- Q. Textile Finishing
- R. Textile Packing

## VOLUME 7

- A. Asbestos
- B. Flock and Rag
- C. Hair, Fibre and Kindred Industries
- D. Leather (Tanning and Dressing)
- E. Fellmongery
- F. Leather Goods
- G. Fur
- H. Tailoring, Dressmaking, etc.
- I. Hats, Caps and Millinery
- J. Glove
- K. Umbrella and Walking Stick
- L. Boot and Shoe

## VOLUME 8

- A. Grain Milling
- B. Bread and Flour Confectionery
- C. Biscuit
- D. Bacon Curing and Sausage

## VOLUME 8 (contd.)

- E. Preserved Meat
- F. Milk Products
- G. Ice Cream
- H. Sugar and Glucose
- I. Cocoa, Chocolate and Sugar Confectionery
- J. Preserved Fruit and Vegetables

## VOLUME 9

- A. Margarine
- B. Fish Curing
- C. Cattle, Dog and Poultry Foods
- D. Vinegar and Other Condiments
- E. Starch
- F. Ice
- G. Miscellaneous Preserved Foods
- H. Brewing and Malting
- I. Wholesale Bottling
- J. Spirit Distilling
- K. Spirit Rectifying and Compounding
- L. Soft Drinks, British Wines and Cider
- M. Tobacco

## VOLUME 10

- A. Timber
- B. Furniture and Upholstery
- C. Soft Furnishings
- D. Shop and Office Fitting
- E. Wooden Containers and Baskets
- F. Paper and Board
- G. Wallpaper
- H. Cardboard Box, Carton and Fibre-board Packing Case
- I. Manufactured Stationery, Paper Bag and Kindred Industries
- J. Newspaper and Periodical Printing and Publishing
- K. Printing and Publishing, Bookbinding, Engraving, etc.

## VOLUME 11

- A. Rubber
- B. Linoleum, Leathercloth and Allied Industries
- C. Brushes and Brooms
- D. Toys and Games
- E. Sports Requisites
- F. Miscellaneous Stationers Goods
- G. Cinematograph Film Production
- H. Cinematograph Film Printing
- I. Plastic Goods and Fancy Articles
- J. Incandescent Mantles

## VOLUME 12

- A. Building and Contracting
- B. Local Authorities (Building and Civil Engineering)
- C. Railways (Civil Engineering)
- D. Tramway, Trolley Bus and Omnibus Undertakings (Civil Engineering)
- E. Canal, Dock and Harbour Undertakings (Civil Engineering)
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