



BOARD OF TRADE

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[HA 251]

Report on the Census of Production 1963

39 Iron castings, etc.

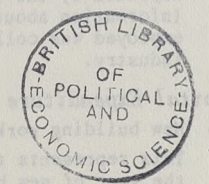


LONDON: HER MAJESTY'S STATIONERY OFFICE
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BOARD OF TRADE

Report on the Census of Production 1963

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



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Notes

These notes give the main information needed for interpreting the figures in the industry reports. (More detailed information about the Census is given in a separate booklet - 'Introductory Notes': Part 1 of the Report on the Census of Production for 1963.)

GENERAL INFORMATION

Changes in the 1963 census

There were few changes resulting from amendments to the Standard Industrial Classification and only minor changes in the scope of certain industry reports compared with 1958. Any such changes are explained in the introductions to the industry reports concerned or by footnotes to the tables.

Industrial Classification

Establishments were classified to industries on the basis of major activity in conformity with the second edition of the Standard Industrial Classification (Consolidated Edition 1963, incorporating Amendment 1). Each industry was basically defined in terms of its principal products, these being of a similar nature or commonly associated in production. Normally, an establishment was classified to an industry if its sales of the principal products of that industry accounted for a greater proportion of its total sales than did its sales of the principal products of any other industry. However, where the application of this rule would have resulted in a change of classification between 1958 and 1963, the establishment was reclassified only if the sales of principal products of the newly predominant industry was more than one third greater than the sales of principal products of the previously predominant industry. This modification of the general rule was introduced for 1958 to avoid discontinuities which would result from marginal changes in sales between successive censuses.

The principle of classification by major output was also normally followed in compiling the analysis by sub-divisions of an industry.

In certain industries, classification was dealt with in a different way. Details of any non-standard treatment are given in the introductions to the relevant industry reports.

TERMS USED IN THE CENSUS REPORT

Average number employed

Firms were required to state the number of persons on the payroll (i.e. whose National Insurance cards were held by them) on the average during the year of return, whether full-time or part-time employees. Separate figures were required for (a) administrative, technical and clerical employees and (b) operatives (see below). Averages could be calculated from figures relating to the last week of each calendar month; figures shown in respect of the average number employed relate to the sum of these averages. Firms were also required to state the number of working proprietors (see below) where appropriate and these are included in total employment figures. Outworkers are excluded.

The figures include persons engaged in merchanting or factoring and canteen workers where particulars in respect of these activities could not be excluded from the return.

Working Proprietors

These include all persons regarded as 'self-employed' for National Insurance purposes, and members of their families who worked in the business without receiving a fixed wage or salary; but persons who worked less than half the normal number of working hours are excluded. For Great Britain, directors working in the business but not in receipt of a definite wage, salary or commission are included under this heading for 1963, but are excluded for 1958. For Northern Ireland, directors of limited companies, other than those paid by fee only, are included for both years. (Directors paid by fee only are not included in any of the employment figures for either year.)

Employees

(i) Administrative, technical and clerical employees include managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; editorial staff, staff reporters, canvassers, competition and advertising staff; travellers; and office (including works office) employees. For Great Britain, but not for Northern Ireland, they include also managing and other directors in receipt of a definite wage, salary or commission.

(ii) Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work, stores, warehouses, shops and canteens; inspectors, viewers and similar workers; maintenance workers; and cleaners. Operatives engaged in outside work of erection, fitting, etc. are also included, but outworkers (i.e. persons employed by the firm who worked in their own homes, etc. on materials supplied by the firm) are excluded. Information about the numbers of outworkers employed was collected only for the gloves industry.

Capital Expenditure

(i) New building work.

This represents the cost incurred during the year of new building and other new constructional work (including office buildings, canteens and the like used in connection with the business covered by the return but not dwelling houses for employees). The value is that charged to capital account during the year of return; it includes expenditure on new buildings or on the extension or reconstruction of old buildings, the value of work of a capital nature carried out by firms' own staff, and the cost of any newly constructed buildings purchased. The figures shown include any legal charges, stamp duties, agents' commissions, etc.

39 Iron castings, etc.

This Report on the Iron Castings, etc. Industry relates to establishments engaged wholly or mainly in manufacturing pig iron and iron castings. Blast furnaces forming part of integrated steel works are, however, not included, and for this reason establishments in this industry account for only a part of total production of pig iron.

This industry corresponds to minimum list heading 313 in the Standard Industrial Classification (Consolidated edition, 1963).

METHOD OF CLASSIFICATION

The classification of returns to this industry followed the standard procedure as outlined in the notes on page (ii). A different procedure was used in classifying returns to the sub-divisions of the industry shown in Table 2. Returns were initially classified on the basis of major output to one of three main categories, namely 'Unrefined pig iron', 'Refined pig iron' or 'Iron castings'. Within the category 'Unrefined pig iron' returns were allocated on a similar basis to either the 'Forge and foundry' sub-division or the 'Hematite and basic' sub-division. Returns classified to the 'Iron castings' category were allocated among the nine sub-headings shown in the table on the basis of information obtained from the short period production statistics collected by the Iron and Steel Board which, for this industry, contain more product detail than the census. Since a product breakdown of sales of iron castings was not collected in the census, the total value of 'characteristic products' shown in Table 2 for the iron castings section of the industry relates to sales of iron castings of all kinds, not only those appropriate to the sub-division.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which appear on pages (ii), (iii), and (iv).

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TABLE 1 Industry summary: United Kingdom
Estimates for all firms, 1958 and 1963 (a)

	Unit	1958	1963	
Number of enterprises	No.	1,006	1,058	
Number of establishments	"	1,120	1,196	
Gross output	£'000	261,285	308,250	
Net output	"	108,693	143,208	
Net output per head	£	975	1,272	
Sales and work done	{ goods produced and work done	£'000	251,093	294,407(b)
	{ merchanted goods and canteen takings	"	7,033	13,454
Purchases	{ materials for processing and packaging, and fuel	"	137,535	142,180
	{ goods for merchenting and canteen purchases	"		
Payments to other organisations	{ for work done on materials given out	"	1,703	2,316
	{ for transport	"	10,645	7,492
Stocks and work in progress				
Total stocks and work in progress	{ change during year	"	+ 450	- 417
	{ at end of year	"	37,680	39,841
Goods on hand for sale	{ change during year	"	+ 3,517	- 558
	{ at end of year	"	15,409	14,824
Work in progress	{ change during year	"	- 358	+ 947
	{ at end of year	"	5,792	7,392
Materials, stores and fuel	{ change during year	"	- 2,709	- 806
	{ at end of year	"	16,479	17,625
Average number employed	{ total, including working proprietors	Th.	111.5	112.6
	{ operatives	"	95.0	95.2
	{ other employees (c)	"	16.3	16.4
Wages and salaries	{ of operatives	£'000	58,730	75,563
	{ of other employees (c)	"	12,070	15,030
Employers' contributions to National Insurance and private pension schemes, etc. (d)	"	..	4,803	
Capital expenditure (e)				
Total	"	..	12,112	
New building work	"	2,630	4,277	
Land and existing buildings (f)	"	..	- 254	
Plant and machinery (f)	"	10,939	7,429	
Vehicles (f)	"	524	660	

(a) For 1963, estimates for small firms and for firms not making satisfactory returns accounted for about 7 per cent. of the total figures in which they were incorporated. (For 1958 the comparable figure was 6 per cent.) A summary of the detailed returns received is given in Table 2.

(b) Including services rendered to other organisations (amounts charged for hiring out plant, machinery and other goods, for providing transport, or for technical or other services rendered).

(c) Administrative, technical and clerical employees.

(d) Including pensions and gratuities paid other than from pension funds.

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

(f) Acquisitions less disposals.

TABLE 2 Analysis of larger firms by sub-divisions within the industry, 1958 and 1963

Firms employing 25 or more persons: United Kingdom (a)

	Unit	Sub-divisions of the industry (b)				
		Unrefined pig iron				
		Forge and foundry		Hematite and basic		
		1958(c)	1963	1958	1963	
Number of enterprises (d)	No.	7	3	11	4	
Number of establishments	"	7	3	11	6	
Gross output	£'000	17,508	12,949	32,158	21,022	
Net output	"	3,945	3,149	5,655	4,133	
Net output per head	£	1,700	2,362	1,216	1,402	
Sales and work done	goods produced and work done	£'000	16,688	12,808(e)	30,628	21,302(e)
	merchanted goods and canteen takings	"	7	16	-	62
Sales of characteristic products	"	13,012	11,405	27,630	17,697	
Index of specialisation (h)	Per cent.	78	89	90	83	
Purchases	materials for processing and packaging, and fuel	£'000	12,385	9,125	22,738	15,974
	goods for merchandising and canteen purchases	"	-	-	-	62
Payments to other organisations	for work done on materials given out	"	-	-	-	-
	for transport	"	1,201	471	2,620	652
Stocks and work in progress						
Goods on hand for sale	change during year	"	+ 815	+ 126	+ 1,542	- 352
	at end of year	"	2,314	1,248	2,944	1,957
Work in progress	change during year	"	- 1	- 1	- 12	+ 11
	at end of year	"	11	7	46	23
Materials, stores and fuel	change during year	"	+ 23	- 205	- 1,144	- 202
	at end of year	"	657	485	2,069	2,146
Average number employed	total, including working proprietors	No.	2,321	1,333	4,649	2,948
	operatives	"	2,026	1,124	4,048	2,526
	other employees (i)	"	295	209	601	422
Wages and salaries	of operatives	£'000	1,326	983	2,670	1,845
	of other employees (i)	"	214	228	459	377
Wages and salaries per head	operatives	£	655	875	660	731
	other employees (i)	"	726	1,093	764	894
Employers' contributions to National Insurance (j)	£'000	..	42	..	85	
Employers' contributions to private pension schemes, etc. (k)	"	..	33	..	52	
Capital expenditure (l)						
New building work	"	*	*	359	9	
Land and existing buildings	acquisitions	"	..	..	..
	disposals	"	..	..	..
Plant and machinery	acquisitions	"	53	120	1,311	307
	disposals	"	4	8	10	2
Vehicles	acquisitions	"	4	3	60	79
	disposals	"	-	1	3	2

		Sub-divisions of the industry (b)							
Refined pig iron		Iron castings							
		Pressure pipes and fittings		Other pipes and fittings		Stoves, grates, etc.		Cisterns, baths and other sanitary goods	
1958	1963	1958	1963	1958	1963	1958	1963	1958	1963
6	3	21	15	19	14	23	20	11	9
6	4	32	25	25	19	32	26	14	13
3,970	3,586	37,165	38,385	11,734	9,581	10,987	17,377	5,809	11,836
729	790	13,447	15,148	5,927	4,664	5,899	9,075	2,917	7,081
1,028	1,834	986	1,239	950	1,081	885	1,315	1,109	2,079
3,956	3,628(e)	35,461	37,612(e)	10,547	7,551(e)	10,611	15,787(e)	5,678	10,967(e)
-		1,146	990	1,041	1,975	554	1,438	55	1,038
3,674	3,422	25,936(f)	29,257(f)	9,500(f)	6,701(f)	10,455(f)	14,092(f)	4,795(f)	10,127(f)
93	94	73	78	90	89	99	89	84	92
2,882	2,632	20,414	20,319	5,327	2,737	4,347	6,371	2,729	3,539
-	-	47	2,045	71	85	349	329	35	29
202	173	2,815		363	236	346	375	140	171
+ 21	- 41	+ 593	- 238	+ 137	+ 47	- 97	+ 83	+ 92	- 145
68	107	4,292	3,835	1,019	725	553	680	205	571
- 7	-	- 35	+ 22	+ 9	+ 7	- 81	+ 69	- 16	- 24
10	-	748	335	306	207	446	792	139	146
- 158	+ 9	- 443	+ 46	- 46	- 22	- 45	+ 74	+ 12	- 50
192	163	3,462	3,786	739	268	723	939	306	449
709	431	13,644	12,225	6,241	4,314	6,669	6,899	2,631	3,405
558	351	11,334	9,927	5,174	3,660	5,289	5,426	2,261	2,803
151	77	2,310	2,298	1,063	643	1,380	1,467	370	601
350	310	6,953	7,360	2,935	2,467	2,827	3,777	1,401	2,377
101	88	1,686	1,968	639	535	831	1,096	302	450
627	884	613	741	567	674	535	696	620	848
670	1,143	730	856	601	832	602	747	815	748
..	16	..	366	..	132	..	212	..	113
..	9	..	277	..	23	..	55	..	41
*	-	351	167	42	*	17	106	41	37
..	-	..	1(m)	..	5	..	-	..	-
..	-	-	..	41
57	124(m)	2,783	694(m)	136	96	110	282	113	180(m)
-		13		*	6	2	36	*	
3	11(m)	45	33	31	35	54	110	53	
2		18	4	6	11	17	34	14	

Continued on next page

TABLE 2 (continued)

	Unit	Sub-divisions of the industry (b)			
		Iron castings (continued)			
		Ingot moulds and bottoms for steel and non-ferrous metals		Marine castings	
		1958	1963	1958	1963
Number of enterprises (d)	No.	19	14	20	9
Number of establishments	"	19	15	20	9
Gross output	£'000	15,093	16,181	2,665	1,752
Net output	"	4,859	6,224	1,559	989
Net output per head	£	1,223	1,713	780	906
Sales and work done	£'000	goods produced and work done		2,650	1,713(e)
		merchanted goods and canteen takings		21	
Sales of characteristic products	"	14,451(f)	14,919(f)	2,563(f)	1,565(f)
Index of specialisation (h)	Per cent.	95	95	97	91
Purchases	£'000	materials for processing and packaging, and fuel		1,011	724
		goods for merchandising and canteen purchases		33	
Payments to other organisations	"	for work done on materials given out		13	25
		for transport		30	
Stocks and work in progress	"				
Goods on hand for sale	"	change during year		+ 8	+ 4
		at end of year		60	13
Work in progress	"	change during year		- 14	+ 34
		at end of year		25	62
Materials, stores and fuel	"	change during year		- 52	- 13
		at end of year		258	136
Average number employed	No.	total, including working proprietors		1,999	1,092
		operatives		1,753	956
		other employees (i)		246	132
Wages and salaries	£'000	of operatives		1,028	706
		of other employees (i)		188	128
Wages and salaries per head	£	operatives		587	739
		other employees (i)		764	969
Employers' contributions to National Insurance (j)	£'000	..	109	..	37
Employers' contributions to private pension schemes, etc. (k)	"	..	79	..	8
Capital expenditure (l)	"				
New building work	"	369	48	47	65
Land and existing buildings	"	acquisitions		..	-
		disposals		..	-
Plant and machinery	"	acquisitions		112	48
		disposals		-	-
Vehicles	"	acquisitions		9	1(m)
		disposals		2	

For notes to this table - see page 39/9

	Sub-divisions of the industry (b)						Total	
	Iron castings (continued)							
	Motor cycle industry castings		Other engineering castings including railway castings		Unclassified castings and other products		1958	1963
	1958	1963	1958(c)	1963	1958	1963		
	27	24	301	245	96	100	534	429
	40	45	321	265	111	114	638	544
	30,541	66,760	51,768	53,917	26,456	31,942	245,854	285,289
	15,439	32,998	28,109	30,421	13,789	17,869	102,273	132,540
	1,016	1,329	861	1,090	966	1,176	975	1,272
	30,114	62,916(e)	50,934	52,305(e)	23,809	30,329(e)	236,264	272,477(e)
	246	3,931	950	1,527	2,589	1,367	6,618	12,452
	28,723(f)	59,640(f)	45,891(f)	47,581(f)	(g)	(g)	(g)	(g)
	95	95	90	91	..	..	94	94
	14,470	29,103	21,785	20,226	11,695	11,282	129,413	131,589
		3,508		1,406		1,227		11,337
	136	178	715	986	217	476	1,603	2,143
	508	909	758	829	708	779	10,017	6,934
	+ 88	- 145	+ 26	+ 29	+ 92	+ 123	+ 3,309	- 517
	479	1,055	1,093	1,108	1,164	2,182	14,499	13,720
	+ 93	+ 58	- 145	+ 56	- 34	+ 124	- 337	+ 877
	531	1,355	1,203	1,478	1,531	1,096	5,450	6,841
	+ 13	- 63	- 402	- 48	- 47	- 309	- 2,549	- 746
	1,799	2,398	2,405	1,944	1,322	1,951	15,506	16,312
	15,191	24,832	32,641	27,905	14,278	15,191	104,946	104,209
	13,492	22,109	28,482	24,234	11,832	12,675	89,546	88,687
	1,699	2,716	4,145	3,555	2,434	2,437	15,369	15,288
	9,384	21,577	17,664	17,949	6,703	8,738	55,359	70,412
	1,428	2,979	3,245	3,346	1,759	2,141	11,377	14,005
	696	976	620	741	567	689	618	794
	841	1,097	783	941	723	879	740	916
	..	754	..	862	..	451	..	3,181
	..	296	..	266	..	156	..	1,295
	351	2,776	478	464	407	258	2,475	3,958
	..	2	..	72	..	21	..	113
	..	-	..	274	..	11	..	348
	1,876	3,075	1,475	1,275	1,329	756	10,418	7,336
	16	67	59	119	14	74	124	460
	58	73	191	171	148	161	692	867
	16	20	69	61	47	49	198	256

TABLE 3 Analysis of larger firms by size of enterprise within the industry, 1963

(i) Output, employment, capital expenditure and stocks

Firms employing 25 or more persons: United Kingdom

Average number employed by the enterprise in the industry (a)	Enterprises		Average number employed (a)	Gross output	Net output	Net output per head	Capital expenditure (b)	Total value of stocks and work in progress at end of year
	Number	Number						
25-49	139	142	5,120	9,037	5,260	1,027	358	731
50-99	123	129	8,742	15,677	8,885	1,016	628	1,247
100-199	72	81	9,905	20,990	11,239	1,135	282	1,726
200-299	34	46	8,555	20,304	11,089	1,296	639	1,906
300-399	20	28	6,672	15,517	7,660	1,148	872	1,922
400-499	8	10	3,518	8,844	3,301	938	129	2,756
500-749	8	13	5,111	15,671	6,960	1,362	354	1,778
750-999	8	21	7,117	17,789	8,543	1,200	278	1,581
1,000-1,499	7	18	7,615	28,879	9,626	1,264	806	5,902
1,500-2,499	3	11	6,563	17,589	8,968	1,366	322	3,454
2,500-3,999	3	10	8,980	20,516	11,216	1,249	1,743	1,851
4,000 and over	4	35	26,311	94,476	39,793	1,512	4,798	12,020
Total	429	544	104,209	285,289	132,540	1,272	11,210	36,873

(ii) Employees, wages and salaries, and employers' contributions

Firms employing 25 or more persons: United Kingdom

Average number employed by the enterprise in the industry (a)	Employees		Wages and salaries		Employers' contributions		Wages and salaries per head	
	Operatives	Others (c)	Operatives	Others (c)	National Insurance (d)	Private pension schemes, etc. (e)	Operatives	Others (c)
25-49	4,398	612	3,090	592	162	35	703	967
50-99	7,581	1,082	5,368	1,045	279	65	708	966
100-199	8,648	1,232	6,330	1,247	304	90	732	1,012
200-299	7,279	1,266	5,221	1,107	257	98	717	874
300-399	5,655	1,013	4,073	916	196	89	720	905
400-499	3,010	508	2,093	470	101	29	695	926
500-749	4,350	761	3,482	699	149	51	801	918
750-999	6,073	1,040	4,872	870	222	36	802	837
1,000-1,499	6,293	1,322	4,499	1,170	216	112	715	885
1,500-2,499	5,280	1,283	3,791	1,083	215	98	718	844
2,500-3,999	7,908	1,070	7,061	1,032	282	117	893	964
4,000 and over	22,212	4,099	20,534	3,775	797	474	924	921
Total	88,687	15,288	70,412	14,005	3,181	1,295	794	916

(a) Including working proprietors.

(b) Acquisitions less disposals.

(c) Administrative, technical and clerical employees.

(d) Including both flat rate and graduated contributions.

(e) Including pensions and gratuities paid other than from pension funds. These amounted in total to £143,000.

TABLE 4 Percentage analysis of employees, by age and sex, all firms, 1963: United Kingdom (a)

Ages	Males	Females	All employees
	Per cent.	Per cent.	Per cent.
Under 18	4	1	5
18 and over	85	10	95
All ages	89	11	100

Source: Ministry of Labour

(a) The percentages relate to the numbers employed (excluding working proprietors) at mid-June, 1963.

Footnotes to Table 2.

(a) The following information relates to small firms (employing fewer than 25 persons) in this industry. It includes an estimate for small firms not making satisfactory returns, which account for 2 per cent. of the employment shown for 1963 and also 2 per cent. for 1958.

	1958	1963
Number of firms	475	630

Average number employed:

Working proprietors	} 6,147	{ 777
Other persons employed			} 6,169

(b) The method of classifying returns to sub-divisions of the industry is explained in the introduction to this report.

(c) Revised figures.

(d) The sum of the figures for the sub-divisions exceeds the total for the industry to the extent that enterprises made returns for more than one sub-division.

(e) Including services rendered to other organisations (amounts charged for hiring out plant, machinery and other goods, for providing transport, or for technical or other services rendered).

(f) Sales of castings for all types, not only those characteristic of the narrower sub-division.

(g) Characteristic products relate only to specific sub-divisions of the industry.

(h) For sub-divisions of the industry, this is the ratio of sales of characteristic products to total sales of goods produced and work done. Where appropriate, the denominator includes the value of merchant goods and canteen takings. For the industry as a whole, this is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.

(i) Administrative, technical and clerical employees.

(j) Including both flat rate and graduated contributions.

(k) Including pensions and gratuities paid other than from pension funds.

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

(m) Acquisitions less disposals.

TABLE 5 Sales of principal products of the industry by larger firms, including sales by establishments classified to other industries, 1958 and 1963

Firms employing 25 or more persons: United Kingdom

	1958		1963			
	Quantity	Value	Quantity	Value	Enter-prises	Entries
	Th.tons	£'000	Th.tons	£'000	Number	Number
Pig iron including direct iron castings						
Forge and foundry	1,106	26,241(a)	833	19,065	10	12
Hematite	946	25,454	529	13,125	6	7
Basic	2,080	43,248	2,340	47,458	14	20
Refined	164	4,651	160	4,017	9	11
Wood and metal patterns	..	2,714	..	4,636	277	312
Iron castings in the rough or machined	2,739	179,714(a)	2,733	205,064	604	717
Other products							..	23,370	49	55
Waste and by-products						
Scrap metals						
Iron and steel	39.6	371	51.4	434	112	123
Other scrap metals			4.9	67	39	42
Blast furnace slag	1,354	560	718	309	11	12
Other waste products			9.5	63	24	26
Work done on commission, sub-contract work, etc.		529		114	10	11
Total		283,482		319,083	..	..
Sales in other industries (see Table 6)		61,335		62,825	..	..
Principal products of this industry sold by establishments in the industry		222,147		256,259	429	496(b)

(a) Revised figures.

(b) This figure represents the total number of returns made by larger firms in this industry, which is less than the total number of establishments in Table 2 on account of combined returns covering more than one establishment.

TABLE 6 Sales of principal products of the industry by establishments classified to other industries, 1958 and 1963

Firms employing 25 or more persons: United Kingdom

	1958		1963			
	Quantity	Value	Quantity	Value	Entries	Principal industries in which produced (a)
	Th.tons	£'000	Th.tons	£'000	Number	
Pig iron including direct iron castings						
Forge and foundry			50.1	1,289	*	37, 52, 74
Hematite	1,538	31,849	241	6,041	*	37, 40
Basic			..	10,345	1,709	34,526	16	37, 40
Refined		
Iron castings in the rough or machined	229	14,354	188	14,468	251	(b)
Wood and metal patterns	..	3,717	..	5,234		
Wood and metal patterns	..	1,070	..	1,267	94	(b)
Total		61,335		62,825	..	

(a) The references given are to the list of industries at the back of this report.

(b) Production is widely distributed.

TABLE 7 Sales of other than principal products by larger firms in the industry, 1958 and 1963

Firms employing 25 or more persons: United Kingdom

	1958		1963	
	Quantity	Value	Quantity	Value
	Th.tons	£'000	Th.tons	£'000
Steel castings and forgings, including manufactures of iron and steel	{ 16.9 ..	{ 1,688 520	{ 21.9	{ 3,397
Castings of aluminium and aluminium alloys	{ 1.4 ..	{ 707 132	{ 0.9	{ 457
Castings of brass, machined	{ 0.3	{ 262	{ 1.3	{ 675
Rough castings of brass	{ 4.2 ..	{ 1,858 14	{ 2.2	{ 1,042
Manufactures of copper and brass and other copper alloys	..	38	..	43
Other manufactures of non-ferrous metals	..	68	..	59
Machine tools and parts	..	242	}	131
Engineers' small tools	..	42		
Internal combustion reciprocating engines and parts	..	67	-	-
Contractors' plant and parts, including mechanical handling and mining machinery and parts	..	370	..	564
Iron and steel rolls for metal rolling mills and for other machinery (sugar, flour, rubber, etc. mills)	8.1	910	1.8	153
Machinery and parts unclassified	..	1,128	..	266
Iron or steel fabricated	..	290	..	463
Other and unclassified engineering products	..	501	..	972
Other goods	..	3,130	..	5,478
Work done				
Structural work carried out in the United Kingdom (a)				
Work done as main contractors		160		140
Work done as sub-contractors		109		140
Other work including general and jobbing engineering		1,881		1,673
Services rendered to other organisations (b)		..		425
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	..	6,240	..	11,901
Canteen takings		377		551
Total		20,735(c)		28,670

- (a) Value of work done, exclusive of the value of goods used by firms and recorded as their output. The value of these goods was £18,000 in 1958 and £41,000 in 1963.
- (b) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered to other organisations.
- (c) Excluding amounts charged for services rendered to other organisations.

TABLE 8 Production of certain principal products of the industry by larger firms, including production by establishments classified to other industries, 1958 and 1963

This table is not applicable to this industry.

TABLE 9 Purchases of selected principal products of the industry by larger firms, 1963

This table is not applicable to this industry.

The main purchasing industries of iron castings, etc. are listed in Table 9 of the report on Iron and Steel (General)(Part 37) together with the details of the quantity and value purchased by each industry.

TABLE 10 Purchases by larger firms in the industry, 1954 and 1963
Firms employing 25 or more persons: United Kingdom

	1954		1963	
	Quantity	Cost	Quantity	Cost
	Th.tons	£'000	Th.tons	£'000
Materials for processing				
Iron ore and manganese ore	6,124	12,992	2,947	10,839
Iron				
Pig iron, including refined pig iron, and other irons for re-melting	1,688	27,051	1,076	25,480
Castings	{ 8.9 ..	{ 433 52	{ 48.5	{ 2,276
Steel				
Bars and rods (including wire rods), angles, shapes and sections, girders, beams, joists and pillars rolled (not fabricated), including tube rounds and squares	8.8	343	10.8	591
Plates, 3 mm. thick and over (a)	{ 6.5 ..	{ 249 37	{ 4.7	{ 242
Sheets under 3 mm. thick (including electrical sheets)	5.0	239	4.2	297
Iron and steel not elsewhere specified except finished parts, wire and scrap (b)	{ 6.2 ..	{ 354 165	{ 12.6 ..	{ 474 67
Iron and steel scrap	1,459	10,330	2,152	23,078
Lime, limestone and dolomite (c)	762	653	600	784
Cinder and scale	156	430	156	445
Pyrites residue	{ ..	{ (d)	{ 1,026	{ 576
Other ores, concentrates and residues	{ ..	{ ..	{ ..	{ 606
Spiegeleisen and blast furnace ferro-manganese	{ 2.4 ..	{ 125 26	{ 3.4	{ 166
Other ferro-alloys	12.6	901	42.1	2,699
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap (b)				
Aluminium and aluminium alloys (e)	5.5	569	2.2	326
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys)	8.4	1,338	3.5	854
Moulding sand	751	914	{ 1,238 ..	{ 1,891 58
Heavy chemicals (acids, alkalis, alcohols, other inorganic and organic chemicals, compressed gases, etc.)			Mn.cu.ft.	
Oxygen	{ ..	{ ..	{ 52 ..	{ 48 50
Other heavy chemicals	{ ..	{ (d)	{ ..	{ 629
Phenolic and cresylic resins, solutions, emulsions, dispersions, moulding and extrusion compounds	{ ..	{ ..	{ 310 ..	{ 659 195
Other bonding materials	..	1,072	..	4,360
Moulding boxes	..	348	..	487
Refractories	..	852	..	1,010
Grinding wheels	..	328	..	661

TABLE 10 (continued)

	1954		1963	
	Quantity	Cost	Quantity	Cost
		£'000	Th.gal.	£'000
Materials for processing (continued)				
Lubricating oils and greases	..	(d)	{ 562 Th.cwt. 5.4	{ 131 30
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement	..	3,944	..	6,096
All other materials for processing	..	13,193	..	12,957
Packaging materials			Th.cu.ft.	
Timber (sawn or planed) for manufacture into packing cases, etc.	{ ..	{ (d)	{ 83.2 ..	{ 44 52
Jute and hessian piece goods, sacks and bags	{ ..	{ ..	{ ..	{ 130
All other packaging materials	..	657	..	300
Fuel and electricity (f)	Th.tons		Th.tons	
Coal	448	1,560	207	1,137
Coke (including screenings) and manufactured fuel	3,825	21,885	2,293	21,987
	Th.gal.		Th.gal.	
Derv fuel and motor spirit for use in road vehicles	1,906	380	3,005	438
Other liquid fuels (including creosote/pitch mixtures, etc., and liquefied petroleum gases)	10,765	478	{ 25,483 ..	{ 1,189 255
Gas	Th.therms		Th.therms	
Blast furnace gas	{ ..	{ ..	{ 1,442	{ 33
Coke oven gas	{ 28,741 ..	{ 684 174	{ 12,231	{ 525
Other (including town gas)	{ ..	{ ..	{ 20,161 ..	{ 1,137 172
Electricity	Th.kWh		Th.kWh	
	357,095	1,759	1,020,745	5,126
Total cost of materials and fuel		104,516		131,589
Goods purchased for merchanting		..		10,832
Canteen purchases		..		505
Total cost of purchases		..		142,925

(a) Includes hoop and strip (including tape) of all thicknesses in 1954.

(b) 'Wire' was not specifically excluded in 1954.

(c) Described only as 'Limestone' in 1954.

(d) Not recorded separately for 1954.

(e) 'Aluminium alloys' were not specifically included in 1954.

(f) The total quantity of electricity generated in firms' own establishments in this industry was 365,422 Th.kWh in 1954 and 103,488 Th.kWh in 1963.

TABLE 11 Transport costs and employment of larger firms, 1963

Firms employing 25 or more persons: United Kingdom

	Unit	1963
Average number employed mainly on transport	No.	917
Transport costs		
Wages and salaries	£'000	716
Derv fuel and motor spirit	"	438
Payments to other organisations for transport	"	6,934
Costs of operating road goods vehicles		
Insurance	"	60
Vehicle licences	"	53
Depreciation	"	335
Payments to other organisations for repairs and maintenance	"	160
Total	"	8,695

TABLE 12 Payments for certain services, etc. by larger firms, 1963 (a)

Firms employing 25 or more persons: United Kingdom

	Amounts payable
Repairs and maintenance to	£'000
Buildings	510
Road goods vehicles	160
Plant, machinery, and other capital equipment	1,834
Insurance, licensing and depreciation of road goods vehicles (b)	447
Rates, excluding water rates	2,038
Hire of plant and machinery	169
Postage, telephone, telegrams and cables	549
Total	5,708

(a) No deduction is made for these payments to arrive at the figures of net output given in this report.

(b) For details see Table 11.

TABLE 13 Percentage analysis of twelve-month periods covered by returns from larger firms, 1963

Firms employing 25 or more persons: United Kingdom

Year ended	Percentage of total number employed	Year ended	Percentage of total number employed
1963	Per cent.	1963 (contd.)	Per cent.
April (a)	7.0	November	0.3
May	0.3	December	38.5
June	7.3	1964	
July	7.3	January	0.7
August	3.0	February	0.4
September	20.0	March	14.9
October	0.3	Total	100

(a) Including returns made for twelve-month periods ended 1st to 5th April, 1964.

TABLE 14 Sales of all parts of machinery and plant by larger firms, including sales by establishments classified to other industries, 1958 and 1963

This table is not applicable to this industry.

Capital Expenditure (continued)

(ii) Land and existing buildings.

The items shown are the capital cost of freeholds purchased and the capital cost or premium payable for leaseholds acquired (excluding the value of any assets acquired in taking over an existing business), and the amounts receivable for any freeholds or leaseholds disposed of. The value is that charged to capital account during the year of return.

(iii) Plant, machinery and vehicles.

The items shown are the value of plant and machinery and of vehicles acquired, both new and second-hand, and the amount received for items disposed of during the year. The value of plant and machinery acquired includes plant, etc. which firms produced for their own use in connection with the business covered by the return. The value of plant, etc. acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. No deduction is made for depreciation, amortisation or obsolescence. The proceeds of items disposed of during the year exclude amounts written off for items scrapped.

Capital expenditure during the year in respect of manufacturing establishments where production had not started before the end of the year is excluded in this report for both 1958 and 1963.

Characteristic Products

The characteristic products of a sub-division are those in terms of which the sub-division is defined. They are products commonly associated in production and are usually similar in nature or manner of production. In most cases the characteristic products of each sub-division are indicated in Table 5 of the industry reports. For those industries for which an analysis by sub-divisions has been made, Table 2 shows the total sales of such characteristic products for each sub-division. The totals include, besides the products which define the sub-division, other items of output assumed to be closely related to them, e.g. waste products and work done.

Enterprise

The term enterprise is used in this report to mean one or more firms under common ownership or control. An enterprise normally consists either of a single firm, or of a parent company together with its subsidiary companies.

Entries

The number of entries shown in Tables 5, 6 and 8 against a particular output or production heading is the number of returns on which figures were recorded for that item.

Establishment

The census was based on the establishment, comprising in most cases the whole of the premises under the same ownership or management at a particular address (e.g. a factory or mine); but firms were asked to exclude from all sections of their returns particulars relating to any department not engaged in production for which they kept a separate set of accounts. Where separate accounts were not kept, they were asked to include merchanting or factoring, canteens operated by them and other

ancillary activities such as bottling, packing and the manufacture of containers for packing their own products, whether or not these activities are carried on at the same address as the works. Building and engineering maintenance departments and selling and transport departments were treated similarly.

Gross Output

The gross output of an industry is the aggregate value of goods made and other work done during the year by the establishments classified to the industry. It is derived by subtracting from the value of sales and work done, the value of stocks of goods on hand for sale and work in progress at the beginning of the year and adding the value at the end of the year.

Larger Firms

These are firms in which twenty-five or more persons were employed on the average during the year.

Net Output

The net output of an industry represents the value added to materials by the process of production. It includes the gross margin on any merchanted or factored goods sold; it constitutes the fund from which wages, salaries, insurance, pensions, hire of plant and machinery, payments for repairs and maintenance, costs of operating road vehicles, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits. There is no appreciable duplication in net output. Net output has been obtained by deducting from the gross output the cost of purchases adjusted for stock changes, payments for work given out to other firms, and payments for transport.

Normally any customs or excise duty on materials purchased is included in the cost of materials. Similarly, finished goods sold have been valued as they were sold, duty paid or duty free. The amounts of duty, subsidies, allowances and levies receivable or payable, where of substantial importance in the industry, were required to be stated separately, and these items were taken into account when calculating net output.

Net output per person employed

The figures for net output per person employed are derived by dividing the net output by the average number of persons employed (full-time and part-time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

Principal Products

The principal products of an industry are those in terms of which the industry is defined. They are products commonly associated in production, and are usually similar in nature or manner of production.

Production

This means the total quantity of a product made during the year, whether sold in the year, added to stock, transferred to another department of the same firm, or used in the manufacture of other products within the business covered by the return. It includes goods produced from materials supplied by other firms.

Purchases

Purchases include the cost of materials and components bought for use in production; of fuel and electricity for all purposes; of packing materials, including the full cost of returnable cases and containers when first purchased; of workshop materials, office materials and materials for repairs to firms' own buildings, plant and vehicles when carried out by their own workpeople included in the return; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also included. In general purchases of goods for merchandising or factoring and canteen supplies are included. Materials supplied by customers for processing are excluded.

The values shown include any duty paid (less rebate, etc.) but exclude trade discounts allowed. The cost of transport is included only if included in the cost of materials as invoiced; amounts paid to transport organisations, including firms' own separate transport organisations, for delivery of materials and fuel are, therefore, excluded. Materials purchased overseas are included at their c.i.f. cost plus any duty payable if the cost of transport from the docks was not included in the invoiced price, but at their full delivered cost if invoiced 'carriage paid home'. Materials and fuel transferred from another department of the firm not covered by the same return are included at the estimated selling value recorded by the other department.

Sales

Sales are in respect of goods made by the business covered by the return, goods made for it by outworkers or by other firms from materials given out to them (sometimes described as goods made on commission) and waste products. Any machinery or other capital items produced for use in the business covered by the return are included, the value being that adopted in the firm's capital asset account. Goods sold without being subjected to any manufacturing process (merchanted or factored) and canteen takings are included as in 1958.

The value shown for sales is the net selling value, defined as the amount charged to customers whether on an ex-works or delivered basis, net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packing materials is included. Goods charged on a delivered basis to customers overseas are included at the f.o.b. value. For work done on commission or for the trade the value shown is the net amount charged.

Where goods produced in one department were transferred to another department of the same firm not covered by the return, these transfers were treated as sales by the producing department and valued as far as possible as if they had been sold to an independent purchaser. Goods transferred to wholesale or retail selling organisations for which separate accounts were kept were valued on the same basis. Estimations of a similar kind were also sometimes necessary in valuing transfers between different firms belonging to the same enterprise. To the extent that the sales of finished products of one establishment may constitute the materials purchased by another, total figures of the value of sales (and of materials and fuel purchased) include an element of duplication.

Services rendered

This represents the amounts charged for hiring out plant, machinery and other goods, providing transport, or for any technical or other

services rendered to other organisations. It includes amounts credited for similar services rendered to other departments of the same firm not covered by the return.

Small Firms

These are firms in which fewer than twenty-five persons were employed on the average during the year.

Stocks and Work in Progress

Values are given of stocks of goods on hand for sale, and of materials and fuel, at the beginning and end of the year of return, including any stocks of goods held for merchandising or factoring. The values include duty in the case of dutiable goods held out of bond. The value of work in progress at the two dates is also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received.

Transport Payments

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payments to other firms, and to any separate transport organisation of the same firm, not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, i.e. railways, road haulage, canals, coast-wise shipping, air, etc. Payments made for sea freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded.

Wages and Salaries

These are the amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded; in Northern Ireland this exclusion extends also to payments to directors of limited companies. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to National Insurance and pension schemes is excluded.

Work given out

The figures shown represent the total amount paid for work done by other firms on materials supplied to them, and also by firms' own establishments for which separate returns were made. They do not include payments to individual outworkers or payments for business and other services.

Symbols used

The following symbols are used throughout the report:

- .. Not available
- Nil or negligible (less than half the final digit shown)
- * Figures cannot be shown owing to the risk of disclosing information about individual enterprises.

Rounding of Figures

The figures in the tables have, where necessary, been rounded to the nearest final digit. There may, therefore, be apparent slight discrepancies between the sums of the constituent items and the totals shown.

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