



BOARD OF TRADE

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# Report on the Census of Production 1963

55 Electrical machinery



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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 - 'Industry Reports of the Census' - published by the Board of Trade.)

BOARD OF TRADE

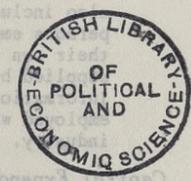
# Report on the Census of Production 1963

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. 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.

## 55 Electrical machinery

Products of the newly predominant industry were those from one or more of the following principal products: electrical machinery, electrical apparatus, electrical components, electrical instruments, electrical measuring instruments, electrical control apparatus, electrical switches, electrical relays, electrical contactors, electrical fuses, electrical circuit breakers, electrical transformers, electrical reactors, electrical capacitors, electrical inductors, electrical resistors, electrical thermistors, electrical thermocouples, electrical thermopiles, electrical thermistors, electrical thermocouples, electrical thermopiles, electrical thermistors, electrical thermocouples, electrical thermopiles.

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.

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The figures include persons engaged in merchandising 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.

Notes - continued on pages iii and iv

# 55 Electrical machinery

This Report on the Electrical Machinery Industry relates to establishments engaged wholly or mainly in manufacturing electricity generators, transformers, electric motors (including electric traction motors and transmission equipment, and associated rectifiers), switchgear, etc. Electrical equipment for motor vehicles, cycles and aircraft is excluded.

This industry corresponds to minimum list heading 361 in the Standard Industrial Classification (Consolidated edition, 1963).

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).

	1958	1963
Average number employed	130.7	130.7
Operatives (a)	99.7	99.7
Administrative, technical and clerical (b)	31.0	31.0
Wages and salaries (c)	100.0	100.0
Employers' contributions to National Insurance and private pension schemes, etc. (d)	100.0	100.0
Capital expenditure (e)		
Total	11,200	11,200
New building work	1,000	1,000
Land and existing buildings (f)	100	100
Plant and machinery (g)	10,000	10,000
Vehicles (h)	100	100

(a) For 1958, estimates for small firms and for firms not making satisfactory returns accounted for about 3 per cent. of the total figures in which they were incorporated. (For 1963 the comparable figure was 2 per cent.) A summary of the detailed returns received is given in Table 2.

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

(c) Administrative, technical and clerical employees.

(d) Including provision and gratuity paid other than from pension funds.

(e) Excluding expenditure on stock-in-trade and finished production.

(f) Acquisition of land.

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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.	666	612	
Number of establishments	"	824	785	
Gross output	£'000	387,379	445,385	
Net output	"	212,182	226,830	
Net output per head	£	1,042	1,102	
Sales and work done	goods produced and work done	£'000	352,718	410,689(b)
	merchanted goods and canteen takings	"	31,990	29,102
Purchases	materials for processing and packaging, and fuel	"	163,853	180,003
	goods for merchandising and canteen purchases	"		
Payments to other organisations	for work done on materials given out	"	6,200	7,058
	for transport	"	3,790	3,426
Stocks and work in progress				
Total stocks and work in progress	change during year	"	+ 1,316	+ 4,279
	at end of year	"	138,049	158,873
Goods on hand for sale	change during year	"	+ 2,030	+ 2,009
	at end of year	"	14,906	16,955
Work in progress	change during year	"	+ 641	+ 3,585
	at end of year	"	87,219	100,782
Materials, stores and fuel	change during year	"	- 1,355	- 1,316
	at end of year	"	35,924	41,135
Average number employed	total, including working proprietors	Th.	203.6	205.8
	operatives	"	138.7	135.4
	other employees (c)	"	64.6	69.7
Wages and salaries	of operatives	£'000	77,673	92,385
	of other employees (c)	"	46,681	62,915
Employers' contributions to National Insurance and private pension schemes, etc. (d)	"	..	10,061	
Capital expenditure (e)				
Total	"	..	11,239	
New building work	"	4,553	3,536	
Land and existing buildings (f)	"	..	328	
Plant and machinery (f)	"	10,033	7,216	
Vehicles (f)	"	648	815	

(a) For 1963, estimates for small firms and for firms not making satisfactory returns accounted for about 2 per cent. of the total figures in which they were incorporated. (For 1958 the comparable figure was 3 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 Summary of returns received from larger firms, 1958 and 1963  
Firms employing 25 or more persons: United Kingdom (a)

	Unit	1958	1963
Number of enterprises	No.	227	233
Number of establishments	"	372	392
Gross output	£'000	377,292	435,169
Net output	"	206,657	221,627
Net output per head	£	1,042	1,102
Sales and work done	£'000	343,533	401,269(b)
		merchanted goods and canteen takings	28,435
Index of specialisation (c)	Per cent.	79	81
Purchases	£'000	159,586	175,874
		materials for processing and packaging, and fuel	26,140
		goods for merchandising and canteen purchases	
Payments to other organisations	"	6,039	6,896
		for work done on materials given out	
		for transport	3,347
Stocks and work in progress			
Goods on hand for sale	"	+ 1,977	+ 1,963
		change during year	
		at end of year	14,517
Work in progress	"	+ 625	+ 3,503
		change during year	
		at end of year	84,947
Materials, stores and fuel	"	- 1,320	- 1,285
		change during year	
		at end of year	34,989
Average number employed	No.	198,263	201,052
		total, including working proprietors	
		operatives	135,241
		other employees (d)	63,011
Wages and salaries	£'000	75,710	90,508
		of operatives	
		of other employees (d)	45,501
Wages and salaries per head	£	560	682
		operatives	
		other employees (d)	722
Employers' contributions to National Insurance (e)	£'000	..	5,790
Employers' contributions to private pension schemes, etc. (f)	"	..	4,067
Capital expenditure (g)			
New building work	"	4,435	3,455
Land and existing buildings	"	..	575
		acquisitions	
		disposals	896
Plant and machinery	"	10,253	9,137
		acquisitions	
		disposals	481
Vehicles	"	928	1,190
		acquisitions	
		disposals	296

For notes to this table - see page 55/6

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	Establishments	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	Number	£'000	£'000	£	£'000	£'000
25-49	49	52	1,845	4,623	2,381	1,291	163	931
50-99	60	64	4,144	8,795	4,761	1,149	218	1,791
100-199	30	40	4,710	9,386	4,889	1,038	277	1,942
200-299	24	32	5,832	15,195	8,689	1,490	261	4,266
300-399	10	15	3,540	8,407	4,085	1,154	163	2,324
400-499	13	23	5,797	13,325	6,503	1,122	266	3,235
500-749	12	19	7,039	14,194	7,657	1,088	320	4,126
750-999	12	41	10,514	25,655	13,930	1,325	1,234	6,149
1,000-1,499	3	6	3,342	4,838	3,189	954	269	1,589
1,500-1,999	4	11	7,297	13,336	7,986	1,094	618	3,710
2,000-2,999	4	17	10,062	23,785	12,743	1,266	1,147	5,744
3,000-3,999	4	16	13,466	30,553	17,171	1,275	504	9,541
5,000-7,499	3	18	16,563	50,094	21,975	1,327	2,324	15,982
7,500 and over	5	38	106,901	212,985	105,669	988	3,216	93,898
Total	233	392	201,052	435,169	221,627	1,102	10,981	155,228

(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)
	Number	Number	£'000	£'000	£'000	£'000	£	£
25-49	1,421	369	850	369	50	13	598	1,001
50-99	3,156	936	1,782	793	117	35	565	847
100-199	3,541	1,155	2,036	1,026	133	48	575	889
200-299	4,144	1,681	2,567	1,426	147	96	620	848
300-399	2,503	1,037	1,619	828	112	61	647	798
400-499	4,268	1,522	2,294	1,237	142	59	537	813
500-749	4,855	2,179	3,113	1,921	195	112	641	881
750-999	8,083	2,429	5,082	2,046	300	142	629	842
1,000-1,499	2,237	1,103	1,292	1,089	92	76	577	988
1,500-1,999	5,458	1,839	2,979	1,608	183	71	546	875
2,000-2,999	7,152	2,910	4,718	2,247	308	113	660	772
3,000-3,999	9,221	4,245	7,014	4,168	341	436	761	982
5,000-7,499	10,300	6,260	7,396	5,478	473	413	718	875
7,500 and over	66,358	40,543	47,766	37,401	3,197	2,393	720	923
Total	132,697	68,208	90,508	61,637	5,790	4,067	682	904

(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 £291,000.

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	2	6
18 and over	71	23	94
All ages	75	25	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 4 per cent. of the employment shown for 1963 and 2 per cent. for 1958.

	1958	1963
Number of firms	427	376
Average number employed:		
Working proprietors	4,380	553
Other persons employed		3,397

(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) This is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.

(d) Administrative, technical and clerical employees.

(e) Including both flat rate and graduated contributions.

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

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

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

Kind of output	1958		1963					
	Quantity		Value	Quantity		Value	Enterprises	Entries
	Number	Th.kVA	£'000	Number	Th.kVA	£'000	Number	Number
(i) Complete machines								
(ii) Parts								
Electrical machinery (new)								
Generators								
Alternating current								
Not over 250 kVA	{ (i) { 13,320 2,703 .. .. (ii) { .. ..	185 .. .. ..	1,974 290 442 192	18,531 2,547 .. ..	491 .. .. ..	3,317 1,417 251 152	34 17	35 17
251-10,000 kVA	{ (i) { 478 .. .. (ii) { .. ..	620 .. ..	2,634 162 131	561 199 ..	467 .. ..	2,436 918 112	15 8	16 9
10,001-30,000 kVA	{ (i) { 63 .. (ii) { .. ..	778 ..	2,449 194	.. ..	.. ..	359	* *	* *
30,001-60,000 kVA	{ (i) { 52 .. (ii) { .. ..	5,178 ..	8,506 1,028	{ (i) 17 (ii) ..	585 ..	2,112 212	* *	* *
Over 60,000 kVA	{ (i) { .. .. (ii) { .. ..	.. ..	.. 1,028	{ (i) 28 (ii) ..	4,218 ..	9,055 1,288	5 5	6 7
Direct current		Th.kW			Th.kW			
Not over 200 kW	{ (i) { 6,661 4,507 .. .. (ii) { .. ..	180 .. .. ..	3,430 378 104 334	3,963 1,637 .. ..	65.5 .. .. ..	1,020 935 54 52	27 12	29 13
Over 200 kW	{ (i) { 472 27 .. (ii) { .. ..	308 .. ..	2,453 65 149	653 578 ..	529 .. ..	2,881 2,215 188	11 7	13 9
Generating sets (a)	{ (i) { 2,780 .. (ii) { .. ..			Number of sets	Number of sets			
				1,181 968 ..	26.2 .. ..	2,206 935 ..	14 *	15 *
Railway, tramway and trolley bus motors	{ (i) { 2,670 .. (ii) { .. ..	613 ..	6,109 561	5,434 ..	.. ..	8,304 480	6 6	6 6
Traction motors (other than railway, tramway and trolley bus)	{ (i) { 3,080 .. (ii) { .. ..	.. ..	671 208	2,980 8,691 ..	13.9 .. ..	258 572 66	12 7	12 7
Motors, other than traction, sold separately								
Fractional horse-power								
Complete								
Not over one-tenth h.p.	{ 1,354,874 1,692,140 ..	243 .. ..	6,245 4,145 189	{ 1,870,554 1,008,018 .. ..	162 .. ..	4,079 2,947 816	43	44
Over one-tenth but not over one-third h.p.	{ 234,219 66,962 ..	168 .. ..	2,422 402 65	{ 859,229 459,556 .. ..	302 .. ..	4,411 2,077 360	36	37
Over one-third but under 1 h.p.	{ 234,219 66,962 ..	168 .. ..	2,422 402 65	{ 184,164 59,900 .. ..	184 .. ..	2,039 828 618	33	34
Parts			1,225			1,652	27	28

Continued on next page

TABLE 5 (continued)

Kind of output (i) Complete machines (ii) Parts	1958			1963			Enter-prises	Entries
	Quantity		Value	Quantity		Value		
	Number	Th.h.p.	£'000	Number	Th.h.p.	£'000		
Electrical machinery (new) (continued)								
Motors, other than traction, sold separately (continued)								
Alternating current								
Complete								
1-10 h.p.	{ 416,015 4,604	{ 3,291 ..	{ 15,847 493 1,325	{ 220,592 168,619 ..	{ 803 .. ..	{ 4,512 4,989 1,090	{ 40	{ 44
11-50 h.p.	{ .. ..	{ .. ..	{ .. ..	{ 49,459 32,736 ..	{ 1,141 .. ..	{ 4,701 2,507 683	{ 30	{ 34
51-100 h.p.	{ 12,118 542	{ 1,401 ..	{ 6,613 515 441	{ 6,708 18,611 ..	{ 457 .. ..	{ 1,977 1,895	{ 24	{ 27
101-250 h.p.	{ .. ..	{ .. ..	{ .. ..	{ 1,899 12,297	{ 354 ..	{ 786 2,721	{ 17	{ 19
251-1,000 h.p.	{ 1,330 176 ..	{ 546 .. ..	{ 2,693 536 262	{ 490 738 ..	{ 242 .. ..	{ 1,658 1,256 582	{ 14	{ 17
Over 1,000 h.p.	{ 177 ..	{ 319 ..	{ 1,580 447	{ 116 70	{ 335 ..	{ 1,715 747	{ 10	{ 10
Parts	{ ..	{ ..	{ 994	{ ..	{ ..	{ 1,060	{ 25	{ 28
Direct current								
Complete								
1-10 h.p.	{ 19,896 4,764	{ 158 ..	{ 2,847 424 827	{ 9,100 10,329	{ 49.0 ..	{ 735 778	{ 27	{ 28
11-50 h.p.	{ .. ..	{ .. ..	{ .. ..	{ 2,701 2,090	{ 66.2 ..	{ 1,123 567	{ 15	{ 15
51-100 h.p.	{ 2,087 47	{ 215 ..	{ 2,260 57 241	{ 2,126 641	{ 119 ..	{ 907 292	{ 13	{ 13
101-250 h.p.	{ .. ..	{ .. ..	{ .. ..	{ 644 242	{ 125 ..	{ 594 380	{ 9	{ 10
251-1,000 h.p.	{ 126 10 ..	{ 56.1 .. ..	{ 675 18 55	{ 39 194	{ 18.8 ..	{ 177 935	{ * ..	{ * ..
Over 1,000 h.p.	{ ..	{ ..	{ 1,641	{ 65	{ 179	{ 2,063	{ * ..	{ * ..
Parts	{ ..	{ ..	{ 340	{ ..	{ ..	{ 523	{ 18	{ 19
Converting machinery	{ (i) { 12,980 3,943 .. .. (ii) { .. ..	{ 44.8 .. ..	{ 1,019 398 53 33	{ 1,776 .. ..	{ 8.6 .. ..	{ 812 933 78	{ 15 9	{ 17 9
Mercury arc rectifiers (glass bulb and steel tank)	{ (i) { .. .. (ii) { .. ..	{ .. ..	{ 2,980 256	{ 4,093 54	{ 354 ..	{ 1,488 503 165	{ 5 * ..	{ 7 * ..
Power rectifiers, electronic, metal and semi-conductor, excluding mercury arc, hot cathode mercury vapours and gas-filled rectifiers (b)	{ (i) { 28,761 52,652 .. .. (ii) { .. ..	{ 62.4 .. ..	{ 1,699 877 .. .. 3,737	{ 6,870 6,646 .. ..	{ 75.0 .. ..	{ 1,278 628 538 163	{ 20 6	{ 20 6

TABLE 5 (continued)

Kind of output (i) Complete machines (ii) Parts	1958			1963			Enter-prises	Entries
	Quantity		Value	Quantity		Value		
	Number	Th.kVA	£'000	Number	Th.kVA	£'000		
Electrical machinery (new) (continued)								
Transformers for lighting, heating and power including choking coils								
Not over 5 kVA	{ (i) { 175,967 404,573 .. .. (ii) { .. ..	{ 102 .. .. ..	{ 1,344 689 571 105	{ 686,220 447,266 .. ..	{ 135 .. .. ..	{ 1,386 1,275 559 655	{ 60 25	{ 64 25
Over 5-800 kVA	{ (i) { 36,329 4,941 .. .. (ii) { .. ..	{ 3,378 .. ..	{ 8,372 1,272 1,157 158	{ 27,281 13,925 .. ..	{ 6,712 .. ..	{ 11,312 4,174 105 1,067	{ 41 18	{ 47 21
Over 800-7,500 kVA	{ (i) { 1,386 154 .. .. (ii) { .. ..	{ 3,092 .. ..	{ 5,236 367 190 499	{ 2,210 362 ..	{ 3,416 .. ..	{ 4,700 1,128 77	{ 22 12	{ 25 13
Over 7,500-30,000 kVA	{ (i) { 424 .. (ii) { .. ..	{ 6,185 ..	{ 7,450 95	{ 406 182 ..	{ 6,144 ..	{ 8,047 2,926 735	{ 17 7	{ 18 9
Over 30,000 kVA	{ (i) { 192 .. (ii) { .. ..	{ 14,605 ..	{ 9,735 55	{ 120 86 ..	{ 11,177 ..	{ 9,513 6,467 920	{ 12 7	{ 13 8
Current limiting reactors	{ (i) { 217 .. (ii) { .. ..	{ 424 4	{ 269 .. 51	{ 752 190 51	{ 17 * ..	{ 18 * ..	{ 17 * ..	{ 18 * ..
Capacitors for power factor improvement	{ (i) { 1,255 .. (ii) { .. ..	{ 1,731 11	{ 2,951 .. 191	{ 2,487 323 191	{ 13 5	{ 15 5	{ 13 5	{ 15 5
Starting and controlling gear for industrial, marine, traction and other electric motors	{ (i) { .. .. (ii) { .. ..	{ 29,513 2,175	{ .. ..	{ 35,625 5,100	{ 77 44	{ 83 49	{ 77 44	{ 83 49
Switchgear and switchboards (other than telegraph and telephone)								
Not exceeding 660 volts	{ (i) { .. .. (ii) { .. ..	{ 25,991 1,569	{ .. ..	{ 31,318 2,810	{ 96 45	{ 104 50	{ 96 45	{ 104 50
Over 660 volts and not exceeding 15,000 volts or 350 mVA	{ (i) { .. .. (ii) { .. ..	{ 19,095 881	{ .. ..	{ 27,132 1,491	{ 25 15	{ 30 20	{ 25 15	{ 30 20
Over 15,000 volts or 350 mVA	{ (i) { .. .. (ii) { .. ..	{ 19,229 517	{ .. ..	{ 24,921 735	{ 11 9	{ 12 9	{ 11 9	{ 12 9
Fuses and fuse gear	{ (i) { .. .. (ii) { .. ..	{ 10,827 725	{ .. ..	{ 10,981 871	{ 46 24	{ 50 25	{ 46 24	{ 50 25
Battery chargers	{ ..	{ (c)	{ ..	{ 1,951	{ 25	{ 25	{ 25	{ 25
Electricity meters	{ ..	{ ..	{ ..	{ ..	{ ..	{ ..	{ ..	{ ..
Complete								
Prepayment type AC and DC	{ 74.7	{ 655	{ 204	{ 1,911	{ 5	{ 6	{ 5	{ 6
Single-phase credit type AC	{ 1,047	{ 3,491	{ 1,159 850	{ 3,253 850	{ 8	{ 10	{ 8	{ 10

Continued on next page

TABLE 5 (continued)

Kind of output (i) Complete machines (ii) Parts	1958		1963		Enter- prises	Entries
	Quantity	Value	Quantity	Value		
	Thousands	£'000	Thousands	£'000	Number	Number
Electrical machinery (new) (continued)						
Electricity meters (continued) ✓						
Complete (continued)						
Polyphase credit type AC	85.8	1,024	71.8	1,320	8	8
Other integrating meters AC and DC	28.3	400	14.3	580	6	6
Parts	..	486	..	521	9	13
Other electrical machinery (new)	{ (i) (ii)	6,824 1,233	.. ..	7,506 876	63 41	65 41
Electrical machinery (reconditioned)	{ (i) (ii)	851 45	.. ..	831 9	26 5	26 5
Electrical machinery, unclassified	(ii)	1,320	..	1,752	11	11
Other products	..	6,126	..	1,437	13	13
Scrap metals sold	Th.tons		Th.tons			
Iron and steel	{ 96.5 ..	699 53	83.3 ..	589 61	105	122
Copper	{ 3.7 ..	508 69	3.9	693	120	137
Brass	{ 2.5 ..	278 136	4.3	583	85	99
Other metals	..	253	..	297	72	82
Other waste products sold	..	41	..	31	20	26
Work done						
Machinery purchased and installed and other installation work		9,432		7,646	35	41
Repair and maintenance work on customers' machinery, plant, apparatus and appliances		6,119		13,481	474	494
Research and development work for customers (including Government Departments)		5,620		3,338	20	21
Other work done on commission		462		3,213	31	31
Total		301,554		362,896	..	..
Sales in other industries (see Table 6)		28,626		36,795	..	..
Principal products of this industry sold by establishments in the industry		272,928		326,101	233	279(d)

- (a) Firms were asked, wherever practicable, to show separate figures for the prime mover and generator components of generating sets.
- (b) Described in 1958 as 'Rectifiers, other than mercury arc (including metal but excluding hot cathode mercury vapour and gas-filled rectifiers)'.
- (c) Owing to the risk of disclosure of information relating to individual firms, in 1958 details of this heading were included in 'Power rectifiers'.
- (d) 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

Kind of output (i) Complete machines (ii) Parts	1958		1963		Entries	Principal industries in which produced (a)
	Quantity	Value	Quantity	Value		
Electrical machinery (new)		£'000	Number	Th.kVA	£'000	Number
Generators						
Alternating current	{ (i) (ii)	7,752 ..	1,231 ..	5,770 132	8	44, 52, 59, 61
Direct current	{ (i) (ii)	7,832 ..	.. ..	.. 290	6	44, 59, 61
Generating sets			(i)	951	802	6 44, 58, 61, 126
Motors, other than traction, sold separately				Th.h.p.		
Under 1 h.p.	{ (i) (ii)	2,487	(i)	{ 110,900 450,894	18 1,412	20 53, 54, 58, 59
Alternating current	{ (i) (ii)	610	(i)	{ 604 ..	189 619	7 42, 44, 49, 61
Direct current			(i)	..	395	* 49, 61
Power rectifiers, electronic, metal and semi-conductor, mercury arc, excluding hot cathode mercury vapour and gas-filled rectifiers (i),(ii)		1,318	..	..	888	6 57, 58
Transformers for lighting, heating and power in- cluding choking coils				Th.kVA		
Not over 5 kVA	{ (i) (ii)	4,273	(i)	{ 413,616 97,689	54 719	24 58, 59
Over 5 kVA			{ (i) (ii)	2,302 ..	2,316 258	9 44, 56, 59 * 44
Capacitors for power factor improvement (i),(ii)		1,648	..	..	2,465	* 53, 56, 57, 58
Starting and controlling gear for industrial, marine, traction and other electric motors (i) (ii)		1,950	..	..	1,727 439	25 49, 50, 59, 60
Switchgear and switch- boards (other than telegraph and telephone) (i) (ii)		2,376	..	..	2,231 1,420	34 56, 57, 59, 62
Fuses and fuse gear (i),(ii)		2,806	..	..	2,008	14 38, 56, 59, 60
Electricity meters { (i) (ii)		1,659 173	..	..	2,390	8 49, 52, 59, 60
Battery chargers		-	..	..	447	11 52, 58, 60, 107
Current limiting reactors			(i),(ii)	..	109	5 44, 52, 57, 74
Other electrical machinery { (i) (ii)		1,094 397	{ (i) (ii)	.. ..	1,189 1,292	37 40, 49, 50, 58 36 45, 52, 74, 107
Electrical machinery, reconditioned			(i)	..	150	5 52, 57, 60, 126
Repair and maintenance work		(b)	..	..	3,914	398 126
Total		28,626			36,795	..

- (a) The references given are to the list of industries at the back of this report.
- (b) Not recorded separately in 1958.

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
	Value £'000	Value £'000
Iron castings	1,077	1,492
Welding machinery		
Complete	630	197
Parts, including welding electrodes	398	98
Industrial engines		
Complete machines	10,430	13,365
Parts	877	
Industrial plant and steelwork	1,015	11,374
Other non-electrical machinery	2,653	
Other mechanical engineering, not elsewhere specified	4,025	4,052
Scientific, surgical and photographic instruments, etc.	5,027	3,358
Insulated wires and cables	253	236
Telegraph and telephone apparatus	141	1,339
Radio and other electronic apparatus		
Valves, cathode ray tubes and semi-conductors	2,150	1,570
Radio and other electronic equipment	9,587	12,294
Domestic electrical appliances	8,645	8,944
Electrical equipment for motor vehicles, cycles and aircraft	2,271	6,200
Electric lamps, batteries and other miscellaneous electrical goods	7,980	9,257
Shipbuilding and marine engineering	2,862	11,374
Locomotives and railway track equipment	4,519	
Other products (a)	4,953	
<b>Total goods sold</b>	<b>69,493</b>	<b>73,776</b>
Building and civil engineering work carried out in Great Britain, including structural work and the erection and installation of air-conditioning, heating and ventilating plant (b)		
Work done as main or direct contractors	689	320
Work done as sub-contractors	176	301
(Less) estimated value of goods made by firms and separately recorded as sold which were used in the contract work	32	-
<b>Total building and civil engineering work carried out exclusive of the value of goods made and used in the contract work</b>	<b>833</b>	<b>621</b>

TABLE 7 (continued)

	1958	1963
	Value £'000	Value £'000
Work done: repair and maintenance work on customers' machinery, plant, apparatus and appliances (c)	279	308
Services rendered to other organisations (d)	..	462
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	29,940	26,671
Canteen takings	1,217	1,764
<b>Total</b>	<b>101,762(e)</b>	<b>103,603</b>

- (a) Including 'Mechanical handling equipment and parts', and 'Non-ferrous metals'.
- (b) Described in 1958 as 'Structural work carried out in Great Britain (Electrical and other contract work on buildings, civil engineering works, etc., excluding the installation of machinery, etc.)'.
- (c) Described in 1958 as 'Other work done'.
- (d) Including amounts charged for hiring out plant, machinery and other goods, for providing transport, or for technical or other services rendered to other organisations.
- (e) 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.

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
Materials for processing	Th. tons	£'000	Th. tons	£'000
Iron				
Pig iron, including refined pig iron, and other irons for re-melting (a)	27.4	494	16.6	1,012
Castings	54.2	3,843	43.5	4,253
Steel				
Ingots, blooms, billets, slabs, and sheet and tinplate bars	1.5	86	2.8	136
			..	73
Bars and rods (including wire rods), angles, shapes and sections, girders, beams, joists and pillars rolled (not fabricated), including tube rounds and squares (b)	48.0	2,365	54.5	3,777
Plates, 3mm. thick and over	64.2	2,569	84.4	4,500
Hoop and strip (including tape of all thicknesses)			16.7	1,341
Sheets under 3mm. thick (including electrical sheets)	108	8,253	116	13,141
	..	1,557		
Tinplate, terneplate and blackplate	1.2	61	0.6	38
Forgings (except drop forgings)	7.1	1,110	11.6	3,240
	..	1,075		
Castings	7.0	1,110	18.2	2,772
	..	611		
Iron and steel not elsewhere specified except finished parts, wire and scrap				
Wrought tubes and fittings for wrought tubes (including welded, seamless, conduits, etc.)	2.6	186	17.6	985
	..	28		
Other	2.6	283	9.7	1,411
	..	52		
Steel wire and wire manufactures, including wire cables and ropes but excluding insulated wires and cables (c)	3.9	294	0.7	112
Springs, laminated and other types (d)	..	205	..	513
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap				
Aluminium and aluminium alloys	7.1	2,290	8.9	2,891
Brass and other copper alloys (including nickel silver and cupro-nickel but excluding all other nickel alloys)	9.5	3,010	13.8	4,220
Copper (excluding blister) (e)	14.0	5,353	21.8	7,998
			..	923
Lead and alloys of lead (excluding solder)	0.8	107	..	41
Zinc and alloys of zinc	1.2	188	0.7	120
			..	88
Tin	3.4	104	1.1	66
			..	20
Solder, soft	..	155	..	234
Uninsulated wire and cables of non-ferrous metals				
Copper (f)	..	894	..	1,352
Other non-ferrous metals (f)	..	284	..	647
Bitumen and bitumastic compound	..	120	..	182
Glass in all forms, including finished parts	..	477	..	727
Ferrite	..	(g)	..	28
Insulating oils	..	1,066	..	1,823

TABLE 10 (continued)

	1954		1963	
	Quantity	Cost	Quantity	Cost
Materials for processing (continued)		£'000		£'000
Mica				
Block and splittings	..	557	..	386
Built-up (Micanite)	..	489	..	441
	Th. gal.		Th. gal.	
			954	1,279
Paint and varnish (including lacquers and stains)	842	1,165	Th. cwt.	
			9.8	66
Paper and paperboard, including press-board and paper yarn, tubes, etc. (excluding packaging materials)	..	862	..	1,417
Synthetic resins and plastics materials (excluding leathercloth and reinforced plastics)				
Polyethylene and polypropylene and co-polymers; granules, moulding and extrusion compounds			16.8	220
Polyvinyl chloride (including co-polymers); resins, solutions, emulsions, dispersions, moulding and extrusion compounds			4.7	53
			..	17
Polystyrene moulding and extrusion compounds			17.0	197
Phenolics and cresylics	..	(g)		
Resins, solutions, emulsions, dispersions, moulding and extrusion compounds			53.8	511
			..	316
Industrial laminates, cast sheet, laminated or cast rod, tube and profile shapes			55.6	981
			..	1,155
Thermosetting polyesters (including epoxide resins and resin glass fibre mixtures)			13.8	192
			..	458
Porcelain and other ceramics in all forms	..	1,756	..	3,547
Rubber, including hard rubber, balata, gutta-percha and synthetic rubber in all forms, including finished parts	..	284	..	873
Timber				
Softwood and hardwood, manufactured or semi-manufactured (i.e. further prepared than sawn or planed)	..	259	..	275
	Th. sq. ft.		Th. sq. ft.	
Plywood, including blockboard, laminboard and battenboard	414	33	806	85
	..	10		
Textiles (excluding packaging materials)				
Yarn, thread, tape and cloth, not oiled or otherwise coated or impregnated with insulating materials	Th. lb.		Th. lb.	
			190	94
Of cotton	484	192	Th. sq. yds.	
	..	251	600	113
			..	138
			Th. lb.	
			309	162
			..	71
Of man-made fibres (rayon, nylon, etc.)	50.3	22	Th. sq. yds.	
	..	39	108	35
			..	5
			Th. lb.	
Of jute			10.7	1
			Th. sq. yds.	
	..	..	341	39
Of silk			..	23

Continued on next page

TABLE 10 (continued)

	1954		1963	
	Quantity	Cost	Quantity	Cost
		£'000		£'000
Materials for processing (continued)				
Electrical insulating materials not elsewhere specified	..	1,696	..	2,400
Insulating wires, cables, strips and strands (f)	..	9,427	..	11,401
Purchased components for incorporation in firms' own products				
Ball and roller bearings and parts thereof	..	856	..	1,737
Batteries and accumulators	..	752	..	363
Fractional horse-power electric motors (i.e. less than one horse-power)	..	74	..	827
Internal combustion engines	..	653	..	5,695
Loudspeakers and microphones	..	(g)	..	17
Magnets, permanent	..	453	..	347
Measuring and control instruments including ammeters, voltmeters, thermostats, etc.	..	2,686	..	6,267
Radio, radiogram and television cabinets				
Of wood	..	588	..	20
Of plastics materials	..	..	..	..
Valves, electronic (other than X-ray valves), electronic stabilising tubes and cathode ray tubes, excluding mercury pool rectifiers	Thousands		Thousands	
Transmitting and industrial	1,541	444	164	104
	..	49	..	39
Other (including cathode ray tubes)	552	790	15.1	160
	..	9	..	..
Semi-conductor devices	..	..	3,533	1,106
	..	..	..	943
Electrical machinery not included above, e.g., generators, motors (other than fractional horse-power motors), converting machinery, static rectifiers, transformers for lighting, heating and power, starting control and switchgear, etc., and parts thereof	..	5,076	..	11,476
Other purchased electrical components, including parts and accessories (pick-ups, automatic record changers, etc.) for gramophones and radiograms, not elsewhere specified	..	1,797	..	5,754
Other finished parts not elsewhere specified				
Wholly or mainly of plastics materials	..	649	..	1,633
Other, except those of rubber and glass	..	7,120	..	16,197
	Th.gal.		Th.gal.	
	..	..	407	133
Lubricating oils and greases (including cutting oils and emulsions)	570	144	Th.cwt.	
	..	77	..	41
	..	..	6.9	47
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement	..	2,491	..	3,557
All other materials for processing	..	20,487	..	23,312

TABLE 10 (continued)

	1954		1963	
	Quantity	Cost	Quantity	Cost
		£'000		£'000
Packaging materials				
Paper and board				
Boxes, cartons, packing cases, and drums and canisters (with or without metal ends) of paper, cardboard and fibreboard	..	..	..	659
Wrapping paper (including paper coated with plastics and any laminates incorporating paper but not metal), moulded pulp units, labels and other packaging materials of paper, cardboard and fibreboard (except multiwall sacks)	..	692	..	176
Timber				
Containers wholly or mainly of wood, including plywood boxes and drums, baskets and wickerwork crates	..	..	..	678
Timber (sawn or planed) for manufacture into packing cases, etc.	..	1,362	Th.cu.ft.	370
	..	..	779	..
Plywood for manufacture into packing cases	..	..	Th.sq.ft.	..
	..	..	142	9
	..	..	..	114
Sheet, film, foams, etc. wholly or mainly of polyethylene (including bags and lay flat tubing)	..	..	..	42
All other packaging materials	..	384	..	166
Fuel and electricity (h)	Th.tons		Th.tons	
Coal	277	969	270	1,368
Coke (including screenings) and manufactured fuel	31.9	201	29.3	198
	..	..	..	25
Derv fuel and motor spirit for use in road vehicles	Th.gal.		Th.gal.	
	1,652	345	2,542	520
Other liquid fuels (including creosote/pitch mixtures, etc., and liquefied petroleum gases)	8,670	398	17,194	1,737
Gas	Th.therms		Th.therms	
	10,308	586	15,326	836
	..	87	..	105
Electricity	Th.kWh		Th.kWh	
	350,312	1,749	556,230	3,067
	..	..	..	424
Total cost of materials and fuel		107,241		175,876
Goods purchased for merchanting		..		24,639
Canteen purchases		..		1,501
Total cost of purchases		..		202,016

- (a) Described as 'Pig iron except refined pig iron' in 1954.  
(b) Excluding 'Pillars rolled (not fabricated) including tube rounds and squares' in 1954.  
(c) Main heading in 1954 covered 'iron and steel'.  
(d) Main heading in 1954 covered 'steel' only.  
(e) 'Blister' was not specifically excluded in 1954.  
(f) Including 'flexibles' in 1954.  
(g) Not recorded separately in 1954.  
(h) The total quantity of electricity generated in firms' own establishments in this industry was 23,654 Th. kWh in 1954 and 58,407 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.	1,159
<b>Transport costs</b>		
Wages and salaries	£'000	904
Derv fuel and motor spirit	"	520
Payments to other organisations for transport	"	3,347
<b>Costs of operating road goods vehicles</b>		
Insurance	"	112
Vehicle licences	"	60
Depreciation	"	487
Payments to other organisations for repairs and maintenance	"	177
<b>Total</b>		<b>5,606</b>

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	1,161
Road goods vehicles	177
Plant, machinery, and other capital equipment	1,083
Insurance, licensing and depreciation of road goods vehicles (b)	659
Rates, excluding water rates	2,408
Hire of plant and machinery	373
Postage, telephone, telegrams and cables	1,695
<b>Total</b>	<b>7,556</b>

(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)	0.8	November	0.5
May	1.3	December	57.8
June	3.8		
July	3.7	1964	
August	0.0	January	2.6
September	4.6	February	0.6
October	1.7	March	22.6
		<b>Total</b>	<b>100</b>

(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.

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**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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- 64 Aircraft Manufacturing and Repairing
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### Part No. and title

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