



BOARD OF TRADE

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[HA 2517]

Report on the Census of Production 1963

64 Aircraft manufacturing and repairing

LONDON: HER MAJESTY'S STATIONERY OFFICE

Price 3s. 6d. net

64 Aircraft manufacturing and repairing

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.)

Changes in the 1963 census:

The main changes in the scope of certain industry reports compared with 1958 are explained in the changes explained in the industry reports concerned to the tables.

Industrial Classification (IC) is used in the second edition of the Standard Industrial Classification (SIC) for 1963. The industry reports are classified in accordance with the IC. The industry reports are classified in accordance with the IC. The industry reports are classified in accordance with the IC.

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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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TERMS USED IN THE CENSUS REPORT

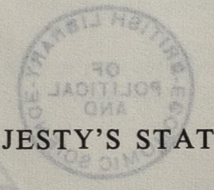
Average number employed

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, 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.

(1) New building work

This represents the cost incurred during the year of new building and other new construction 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 the extension or reconstruction of old buildings, the value of work of a capital nature carried out by firm's own staff, and the cost of any newly constructed buildings purchased. The figures show include any legal charges, stamp duties, agents' commissions, etc.

Notes - continued on pages iii and iv



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 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 construction 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.

64 Aircraft manufacturing and repairing

This Report on the Aircraft Manufacturing and Repairing Industry relates to establishments engaged wholly or mainly in manufacturing and assembling airframes or complete aircraft, gliders and guided missiles, aero-engines and power plant, and parts and accessories therefor other than electrical and electronic equipment. Repair work, modifications and conversions are also included.

This industry corresponds to minimum list heading 383 in the Standard Industrial Classification (Consolidated edition, 1963).

There were no small establishments in this industry in Northern Ireland in 1958 or 1963.

METHOD OF CLASSIFICATION

The classification of returns to this industry followed the standard procedure. In classifying returns to the sub-divisions of the industry shown in Table 2, a return was classified to a specific sub-division only if 50 per cent. or more of its total output consisted of characteristic products of the specific sub-division; otherwise it was classified to the 'Other'.

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.	222	185
Number of establishments	"	384	307
Gross output	£'000	582,880	602,101
Net output	"	284,793	322,170
Net output per head	£	1,036	1,275
Sales and work done	£'000	555,591	546,138(b)
	"	12,483	23,623
Purchases	"	222,125	185,712
	"	72,114	62,647
Payments to other organisations	"	1,372	808
Stocks and work in progress			
Total stocks and work in progress	"	+ 12,330	+ 27,010
	"	391,291	458,072
Goods on hand for sale	"	+ 6,118	+ 1,862
	"	16,961	23,887
Work in progress	"	+ 8,688	+ 30,479
	"	334,528	390,239
Materials, stores and fuel	"	- 2,476	- 5,331
	"	39,802	43,947
	Th.	274.9	252.7
Average number employed	"	174.2	145.1
	"	100.6	107.4
Wages and salaries	£'000	114,992	116,361
	"	74,722	99,336
Employers' contributions to National Insurance and private pension schemes, etc. (d)	"	..	13,674
Capital expenditure (e)			
Total	"	..	11,442
New building work	"	3,076	3,911
Land and existing buildings (f)	"	..	- 1,721
Plant and machinery (f)	"	9,379	8,610
Vehicles (f)	"	379	642

(a) For 1963, estimates for small firms and for firms not making satisfactory returns accounted for less than one per cent. of the total figures in which they were incorporated. (For 1958 the comparable figure was also less than one 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)		
		Complete aircraft or airframes, guided weapons and missiles (c)		
		01, 04	1958	1963
Number of enterprises (d)	No.	13	10	
Number of establishments	"	51	42	
Gross output	£'000	244,910	281,062	
Net output	"	100,409	129,333	
Net output per head	£	1,035	1,202	
Sales and work done	£'000	goods produced and work done	232,639	241,522(e)
		merchanted goods and canteen takings	7,321	11,657
Sales of characteristic products	"	197,668	154,603	
Index of specialisation (g)	Per cent.	85	64	
Purchases	£'000	materials for processing and packaging, and fuel	99,677	96,295
		goods for merchandising and canteen purchases	"	11,051
Payments to other organisations	"	for work done on materials given out	44,612	45,079
		for transport	267	267
Stocks and work in progress	"			
Goods on hand for sale	"	change during year	+ 1,466	+ 258
		at end of year	4,908	4,690
Work in progress	"	change during year	+ 3,484	+27,624
		at end of year	210,323	261,086
Materials, stores and fuel	"	change during year	+ 54	+ 962
		at end of year	19,345	21,304
Average number employed	No.	total, including working proprietors	96,993	107,603
		operatives	58,711	55,010
		other employees (h)	38,282	52,586
Wages and salaries	£'000	of operatives	39,230	44,333
		of other employees (h)	28,126	48,311
Wages and salaries per head	£	operatives	668	806
		other employees (h)	735	919
Employers' contributions to National Insurance (i)	£'000	..	2,932	
Employers' contributions to private pension schemes, etc. (j)	"	..	2,688	
Capital expenditure (k)	"			
New building work	"	1,434	713	
Land and existing buildings	"	acquisitions	..	9
		disposals	..	191
Plant and machinery	"	acquisitions	3,372	3,987
		disposals	91	207
Vehicles	"	acquisitions	173	312
		disposals	103	34

For notes to this table - see page 64/7

Sub-divisions of the industry (b)							
Aero-engines and parts		Aircraft parts and accessories including propellers and undercarriages		Other		Total	
02	03	02	03	02	03	02	03
1958	1963	1958	1963	1958	1963	1958	1963
20	14	71	55	64	44	147	111
56	44	100	72	102	71	309	229
180,507	164,240	96,075	90,787	59,039	63,219	580,532	599,309
91,458	94,352	55,324	58,582	36,454	38,410	283,646	320,676
1,059	1,378	1,054	1,382	961	1,160	1,036	1,275
174,051	157,720(e)	92,842	91,130(e)	53,821	53,233(e)	553,353	543,605(e)
1,876	5,667	2,142	2,703	1,094	3,487	12,433	23,513
167,997	145,957	75,413	81,024	(f)	(f)	(f)	(f)
97	93	81	89	..	..	96	97
72,539	48,827	30,311	21,789	18,703	17,939	221,231	184,851
9,105	2,454	2,705	2,705	2,705	2,705	2,705	25,314
14,153	7,694	9,615	6,760	3,444	2,824	71,823	62,357
630	304	236	125	234	108	1,366	804
+ 3,128	+ 287	+ 1,501	+ 1,211	- 3	+ 97	+ 6,093	+ 1,853
8,617	13,976	2,951	4,827	417	283	16,893	23,776
+ 1,452	+ 570	- 410	- 4,257	+ 4,127	+ 6,401	+ 8,653	+30,337
67,167	78,568	29,429	21,653	26,262	27,122	333,180	388,429
- 1,728	- 3,959	- 588	- 1,076	- 205	- 1,233	- 2,466	- 5,306
11,030	8,438	5,091	10,405	4,176	3,595	39,642	43,743
86,352	68,453	52,485	42,371	37,915	33,102	273,745	251,529
56,481	40,782	34,251	27,110	24,059	21,624	173,502	144,526
29,867	27,671	18,234	15,242	13,851	11,460	100,234	106,959
37,582	34,044	22,357	21,536	15,373	15,954	114,542	115,867
21,731	25,757	14,173	14,180	10,400	10,666	74,430	98,915
665	834	653	794	639	737	660	802
728	930	777	930	751	930	743	925
..	1,970	..	1,241	..	932	..	7,075
..	2,156	..	1,037	..	660	..	6,541
756	1,524	413	606	460	1,050	3,063	3,893
..	74	..	215	..	7	..	304
..	1,431	..	370	..	26	..	2,017
3,863	3,638	2,162	1,677	642	1,423	10,039	10,726
152	465	144	1,423	310	60	697	2,155
169	142	193	153	93	219	628	827
58	36	52	72	38	47	250	189

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	21	23	858	1,346	1,019	1,188	59	150
50-99	13	16	989	1,650	1,077	1,089	31	518
100-199	22	30	3,241	4,973	3,469	1,070	180	970
200-299	7	9	1,768	4,036	2,820	1,595	203	336
300-499	16	23	6,019	13,233	8,435	1,401	315	5,007
500-999	9	17	6,464	17,649	8,191	1,267	- 1,219	6,172
1,000-1,499	8	11	9,632	21,388	12,906	1,340	530	6,527
2,000-3,999	4	13	12,489	26,824	16,411	1,314	899	9,554
4,000-7,499	4	16	21,186	36,707	19,075	900	741	39,142
7,500-9,999	3	16	25,322	59,856	39,440	1,558	263	43,244
10,000 and over	4	55	163,561	411,648	207,833	1,271	9,387	344,328
Total	111	229	251,529	599,309	320,676	1,275	11,389	455,947

(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	675	167	514	175	29	5	762	1,049
50-99	753	232	540	201	31	10	717	865
100-199	2,510	722	1,808	677	95	52	720	937
200-299	1,205	557	1,134	533	61	8	941	957
300-499	3,847	2,171	2,662	2,129	188	108	692	981
500-999	3,435	3,029	2,902	3,144	236	243	845	1,038
1,000-1,499	6,088	3,544	4,756	3,242	275	174	781	915
2,000-3,999	8,396	4,093	6,732	3,764	365	339	802	920
4,000-7,499	14,049	7,133	10,643	6,385	579	409	758	895
7,500-9,999	14,760	10,562	11,291	9,855	729	869	765	933
10,000 and over	88,808	74,749	72,885	68,810	4,488	4,326	821	921
Total	144,526	106,959	115,867	98,915	7,075	6,541	802	925

(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 £333,000.

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	3	1	4
18 and over	83	13	96
All ages	86	14	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 3 per cent. of the employment shown for 1963 and 4 per cent. for 1958.

	1958	1963
Number of firms	74	75
Average number employed:		
Working proprietors	1,049	101
Other persons employed		883

(b) The method of classifying returns to sub-divisions of the industry is explained in the introduction to this report; the characteristic products of each specific sub-division are identified in Table 5.

(c) This sub-division was described in 1958 as 'Complete aircraft or airframes'.

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

(g) For sub-divisions of the industry, this is the ratio of sales of characteristic products to total sales of goods produced and work done. 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.

(h) Administrative, technical and clerical employees.

(i) Including both flat rate and graduated contributions.

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

(k) 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

Industry sub-division (a)	1958		1963			
	Quantity	Value	Quantity	Value	Enter-prises	Entries
01,04 Aircraft, new, complete	Number	£'000	Number	£'000	Number	Number
Combat	178	29,024	35	6,348	*	*
Other (including military non-combat)	299	77,422	110	23,108	6	9
01,04 Aircraft reconditioned, complete for resale						
Combat	31	802	8	249	*	*
..	..	112				
Other (including military non-combat)	53	219	16	1,005	*	*
..	..	245				
01,04 Airframes (b)						
Combat	330	47,055	150	35,858	6	9
Other (including military non-combat)	69	5,995	159	9,830	6	6
02 Aero-engines						
New						
Piston						
Complete	382	2,438	361	281	*	*
Parts (excluding electrical parts)	..	5,764	..	4,344	9	9
Gas turbine						
Complete	2,333	65,628	1,339	42,507	*	*
Parts (excluding electrical parts)	..	43,574	..	45,122	13	17
Rockets, ram jets and pulse jets, complete and parts	..	1,972	..	57(c)	*	*
Reconditioned, complete for resale						
Piston	..	945	220	341	*	*
Gas turbine and jet propulsion	..	805	..	341	*	*
03 Propellers						
Complete	1,483	3,976	643	1,917	*	*
Parts	..	1,921	..	1,634	5	5
03 Undercarriages with or without wheels	No. of sets		Units			
03 Aircraft parts and accessories, not elsewhere specified, other than electrical equipment (d)	1,924	3,714	615	3,797	5	5
Unclassified parts and accessories	..	87,779	..	98,046	98	115
Parachutes			Number			
Complete	..	780	30,399	959	5	6
Parts and accessories	..	..	..	1,104	9	9
Other products, including gliders and sailplanes complete and parts	..	5,118	..	3,205	30	43
Waste products	Th. tons		Th. tons			
Scrap iron and steel	24.5	336	18.7	172	48	67
..	..	90	..	97		
Scrap aluminium and aluminium alloys	4.9	537	8.4	638	47	67
..	..	293	..	..
Other waste products	..	371	..	209	39	54

TABLE 5 (continued)

Industry sub-division (a)	1958		1963		Enter-prises	Entries
	Quantity	Value	Quantity	Value		
		£'000		£'000	Number	Number
01,04 Work done						
Development and experimental work on aircraft including prototype aircraft, etc. for which payment was receivable		58,738		103,549	28	39
Development and production work on guided weapons		25,716		47,929	35	43
Repair work, modifications, conversions, etc.		46,310		66,775	50	75
Other work done, on commission, sub-contract work, etc.		26,796		30,641	46	60
Total		544,474		540,550	..	..
Sales in other industries (see Table 6)		10,560		14,800	..	..
Principal products of this industry sold by establishments in the industry		533,914		525,750	111	143(e)

- (a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are total sales by larger firms not merely sales by establishments classified to the sub-division.
- (b) Including complete aircraft fitted with engines, instruments and other materials supplied by and remaining the property of H.M. Government; the value of such engines, instruments, etc. is excluded.
- (c) Parts only.
- (d) Described in 1958 as aircraft parts, not elsewhere specified, other than sparking plugs and other ignition equipment.
- (e) This figure represents the total number of returns made by larger firms in the 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	
	Value	Value	Entries	Principal industries in which produced (a)
	£'000	£'000	Number	
Aircraft, new and reconditioned complete and airframes	..	146	..	49, 62, 74
Aero-engines, complete and parts	4,604(b)	2,391	12	61, 62, 63, 74
Aircraft and parachutes, parts and accessories	5,957(c)	343	6	52, 73, 74, 107
Unclassified aircraft accessories and parts, including parts of aero-engines other than magnetos	..	9,542	73	44, 50, 51, 55
Development and production work on guided weapons	..	2,377	8	51, 53, 58, 61
Total	10,560	14,800	..	

- (a) The references given are to the list of industries at the back of this report.
- (b) Parts only.
- (c) Including parachutes complete.

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	Value
	£'000	£'000
Motor vehicles, parts and accessories (a)	9,190	842
Plant and machinery and parts	5,760	5,104
Tools including machine tools and parts	1,464	3,792
Other metal goods	1,875	817
Radio and electronic equipment	1,149	1,631
Other goods		3,335
Services rendered to other organisations (b)	..	2,334
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	10,648	21,320
Canteen takings	1,785	2,193
Total	31,872(c)	41,368

(a) In 1958 described as motor vehicles and parts and accessories.

(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.

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				
Steel				
Bars and rods (including wire rods), angles, shapes and sections, girders, beams, joists and pillars rolled (not fabricated), including tube rounds and squares (a)	37.1	2,730	26.8	2,652
			..	791
Castings	9.6	2,634	5.3	1,734
			..	389
Forgings (except drop forgings)	9.4	3,012	9.5	3,056
	..	2,134	..	3,605
Plates, 3 mm. thick and over (b)	30.9	1,554	3.4	316
	..	210	..	98
Sheets under 3 mm. thick (including electrical sheets)	..	1,267	7.1	775
			..	558
Iron and steel not elsewhere specified except finished parts, wire and scrap (c)				
Wrought tubes and fittings for wrought tubes (including welded, seamless, conduits, etc.)	1.0	316	..	518
	..	77	..	..
Other	7.7	1,693	23.5	3,080
			..	2,489
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap (c)				
Aluminium and aluminium alloys	21.9	10,017	16.4	11,741
	..	2,530	..	..
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys)	2.1	782	0.7	310
	..	1,260	..	81
Copper (excluding blister) (d)	0.6	238	0.4	159
	..	31	..	..
Magnesium and magnesium alloys	..	1,119	..	1,223
Insulated wires and cables bought as such	..	(e)	..	1,494
Bolts, rivets, nuts and washers, screws, nails, tacks, etc.	..	2,281	..	4,186
Timber	Th.stds.		Th.stds.	
Softwood, sawn or planed, but not further prepared or manufactured	1.3	239	0.9	164
	..	51	..	..
Hardwood, sawn or planed, but not further prepared or manufactured	205	149	36.1	73
	..	17	..	19
Plywood, including blockboard, laminboard and battenboard	2,552	368	1,960	209
			..	135
Paint and varnish (including lacquers and stains)	Th.gal.		Th.gal.	
	522	742	502	782
	Th.cwt.		Th.cwt.	
	..	90	1.6	24

Continued on next page

TABLE 10 (continued)

	1954		1963	
	Quantity	Cost	Quantity	Cost
Materials for processing (continued)	Th.sq.yds.	£'000	Th.sq.yds.	£'000
Woven piece goods (other than narrow fabrics) wholly or mainly of (f)				
Cotton	215	65	430	112
Synthetic fibres (nylon, etc.)	813	274	..	33
Other (linen, etc.)			149	1,131	241
Synthetic resins and plastics materials (excluding leathercloth and reinforced plastics)			..	80
Plasticised and un plasticised sheet, film, rod, foil, tube, profile shapes and foam of polyvinyl chloride (including copolymers)			376	103
Thermosetting polyesters (including epoxide resins and resin glass fibre mixtures)	..	462	..	35
Acrylic sheet			Th.cwt.	
Rubber manufactures including tyres and tubes	..	1,298	9.5	280
Flux covered electrodes for electric arc welding (including continuous electrodes)	..	(e)	5.5	157
Gases, compressed	..		..	98
Secondhand aircraft purchased for reconditioning	..	(g)	..	2,215
Aircraft components and accessories for incorporation in new or repaired products				
Aero-engines	Number			
New	529	3,238	..	13,828
Secondhand, purchased for use, or for reconditioning and resale	..	1,127	..	674
Propellers and undercarriages	..	4,299	..	3,815
Parts of aero-engines not elsewhere specified (other than electrical parts)	..	17,156	..	18,049
Ball and roller bearings and parts thereof	..	1,517	..	2,600
Electric motors, dynamos, magnetos, batteries and accumulators	..	1,316	..	2,862
Control and navigation instruments and parts, except electronic	..	2,736	..	7,260
Radio, radar and other electronic equipment	..	1,570	..	15,502
Pumps, air and gas compressors, and valves for liquids and gases	..	1,679	..	5,185
Plastic goods moulded and fabricated not elsewhere specified	..	182	..	787
Other aircraft components and accessories not elsewhere specified	..	16,343	..	29,011
Parts of motor vehicles (including parts of chassis, bodies and engines, etc.)	..	..	..	70
Lubricating oils and greases (including cutting oils and emulsions)	..	..	Th.gal. 615	238
			Th.cwt. 3.8	25
			..	319

TABLE 10 (continued)

	1954		1963	
	Quantity	Cost	Quantity	Cost
Materials for processing (continued)		£'000		£'000
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement	..	15,321	..	5,907
All other materials for processing	..	22,782	..	19,777
Packaging materials				
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 and boxes, cartons, packing cases, drums and canisters)	..	1,142	..	287
Timber (sawn or planed) for manufacture into packing cases, etc.			Th.cu.ft. 261	209
Sheet, film, foams, etc. wholly or mainly of polyethylene (including bags and lay flat tubing)			..	181
All other packaging materials			..	52
Fuel and electricity (h)	Th.tons		Th.tons	
Coal	259	1,103	195	1,210
Coke (including screenings) and manufactured fuel	47.2	270	..	158
Aviation fuels for testing purposes	..	89	31	274
Derv fuel and motor spirit for use in road vehicles	Th.gal. 2,706	525	Th.gal. 42,916	3,519
Other liquid fuels (including creosote/pitch mixtures, etc., and liquefied petroleum gases)	46,545	3,317	..	664
Gas	..	1,802	..	372
Electricity	Th.therms 10,853	606	Th.therms 9,136	704
	..	160	..	144
	Th.kWh. 439,255	2,296	Th.kWh. 604,254	3,676
	..	475	..	1,019
Total cost of materials and fuel		138,840		184,851
Goods purchased for merchanting		..		23,173
Canteen purchases		..		2,141
Total cost of purchases		..		210,165

- (a) Excluding 'Pillars rolled (not fabricated), including tube rounds and squares' in 1954.
 (b) 1954 description included 'Hoop and strip (including tape) of all thicknesses'.
 (c) 'Wire' was not specifically excluded in 1954.
 (d) 'Blister' was not specifically excluded in 1954.
 (e) Not recorded separately in 1954.
 (f) 'Narrow fabrics' were not specifically excluded in 1954.
 (g) Included in secondhand aero-engines, purchased for use or re-conditioning and re-sale, in 1954.
 (h) The total quantity of electricity generated in firms' own establishments in this industry in 1963 was 0.6 Th.kWh. Owing to the risk of disclosure of information relating to individual firms the quantity for 1954 cannot be given.

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. 1,720
Transport costs	
Wages and salaries	£'000 1,262
Derv fuel and motor spirit	" 372
Payments to other organisations for transport	" 804
Costs of operating road goods vehicles	
Insurance	" 60
Vehicle licences	" 56
Depreciation	" 513
Payments to other organisations for repairs and maintenance	" 116
Total	" 3,183

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	2,191
Road goods vehicles	116
Plant, machinery, and other capital equipment	3,400
Insurance, licensing and depreciation of road goods vehicles (b)	629
Rates, excluding water rates	2,860
Hire of plant and machinery	2,546
Postage, telephone, telegrams and cables	2,050
Total	13,792

(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)	0.9	November	0.0
May	0.2	December	64.4
June	0.6	1964	
July	4.0	January	0.7
August	3.2	February	0.2
September	6.1	March	19.4
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.

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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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