

BOARD OF TRADE

5 42 [HA 251]

Report on the Census of Production 1963

53 Scientific, surgical and photographic instruments, etc

LONDON: HER MAJESTY'S STATIONERY OFFICE

FOUR SHILLINGS NET

BOARD OF TRADE

Report on the Census of Production 1963

53 Scientific, surgical and photographic instruments, etc

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)

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

GENERAL INFORMATION

Changes in the 1963 census

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

Industrial Classification

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

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

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

TERMS USED IN THE CENSUS REPORT

Average number employed

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

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

Working Proprietors

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

Employees

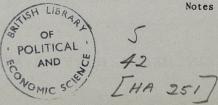
- (i) Administrative, technical and clerical employees include managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; editorial staff, staff reporters, canvassers, competition and advertising staff; travellers; and office (including works office) employees. For Great Britain, but not for Northern Ireland, they include also managing and other directors in receipt of a definite wage, salary or commission.
- (ii) Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work, stores, warehouses, shops and canteens; inspectors, viewers and similar workers; maintenance workers; and cleaners. Operatives engaged in outside work of erection, fitting, etc. are also included, but outworkers (i.e. persons employed by the firm who worked in their own homes, etc. on materials supplied by the firm) are excluded. Information about the numbers of outworkers employed was collected only for the gloves

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



53 Scientific, surgical and photographic instruments, etc

This Report on the Scientific, Surgical and Photographic Instruments, etc. Industry relates to establishments engaged wholly or mainly in manufacturing photographic equipment including cameras, projectors, photographic accessories, photographic films and plates, sensitised paper, etc.; optical instruments including binoculars, telescopes, microscopes, ophthalmoscopes and the grinding of lenses; spectacles, monocles, goggles, etc., including frames; surgical cutlery, dental instruments, splints, trusses, artificial eyes, artificial teeth and artificial limbs, and other surgical and dental appliances, including electro-medical equipment (other than X-ray apparatus); and all other types of scientific instruments and equipment, excluding electronic instruments and engineers' gauges.

This industry corresponds to minimum list heading 351 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).

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

	the day of the finance of for	Unit	1958	1963
Number of enterprises	almosegotodkautien dental war i minne	No.	1,331	1,449
Number of establishments	Salfine There are the sale described the sale of the s		1,531	1,696
Gross output		£'000	175,849	267,356
Net output	1808889 1500 1 1000 1 1000		105,260	154,105
Net output per head	1 so Tack so the	2	1,005	1,257
30 500 500	goods produced and work done	\$,000	162,638	234,232(b)
Sales and work done	merchanted goods and canteen takings	•	11,038	28,958
Purchases	materials for processing and packaging, and fuel	•	66,527	86,277
Furchases	goods for merchanting and canteen purchases	TR LINGUIS		22,446
Payments to other	for work done on materials given out	nin-og d	2,690	5,098
organisations	for transport	e are claw	1,076	902
Stocks and work in progress	20 0 mm2 10 10) rettestict	sus lo sebe
Total stocks and work in	f change during year	019 • 101 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+ 1,877	+ 5,639
progress	at end of year		49,167	83,076
	change during year	•	+ 1,024	+ 785
Goods on hand for sale	at end of year		8,987	15,801
w 1	f change during year	•	+ 1,149	+ 3,381
Work in progress	at end of year	23 2 * 10 A	21,334	36,563
Wanniala ana and fuel	f change during year	ůe.	- 296	+ 1,473
Materials, stores and fuel	at end of year	ere e . grez s	18,846	30,713
	total, including working proprietors	Th.	104.8	122.6
Average number employed	operatives	any tent	72.6	81.6
	other employees (c)	0.500	31.9	39.3
S. Sept. 1 S. Sept. 1 Lies E	of operatives	£,000	37,263	52,372
Wages and salaries	of other employees (c)	•	22,700	36,773
Employers' contributions to Na pension schemes, etc. (d)	tional Insurance and private	1 0000	Teng York	5,646
Capital expenditure (e)				100 100
Total		•	100000000000000000000000000000000000000	10,347
New building work		•	3,142	3,142
Land and existing buildings	(f)	•		- 153
Plant and machinery (f)		•	4,275	6,738
Vehicles (f)		•	480	620

⁽a) For 1963, estimates for small firms and for firms not making satisfactory returns accounted for about 9 per cent. of the total figures in which they were incorporated. (For 1958 the comparable figure was also 9 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)

12.8301	The first of the second		Sub-d	ivisions of	the industr	у (b)
		Unit	Photographic and ci matographic apparat and appliances 11			
			1958	1963	1958	1963
Number of ent	erprises (c)	No.	16	19	10	10
Number of est	ablishments	200 200	19	22	28	22
Gross output		£'000	6,206	11,018	35,877	52,999
let output		99699 7	3,640	4,678	18,301	26,330
let output pe	r head	£	1,085	1,410	1,480	1,566
Sales and wor	k goods produced and work done	£,000	5,806	8,572(d)	32,739	48,233(d
lone	merchanted goods and canteen takings		428	1,833	2,989	4,734
sales of char	acteristic products (e)		5,010	8,267	29,541	42,282
ndex of spec	ialisation (f)	Per cent.	86	96	90	88
	materials for processing and		1	4 500	h	22,866
urchases	packaging, and fuel goods for merchanting and canteen	£,000	2,277	4,589	17,022	22,800
	purchases		J	1,292	J _{6,711}	3,740
ayments o other	for work done on materials given out		268	224	76	518
rganisations			60	50	149	100
	rk in progress		+ 87	+ 318	+ 221	- 285
Goods on han for sale	at end of year	70.00	711	1,168	1,604	2,831
	change during year		- 115	+ 296	- 72	+ 317
Work in progress	at end of year	н	753	1,319	1,911	3,918
Materials,	change during year		+ 40	- 184	- 329	+ 556
stores and			434	1,024	4,533	6,822
157 57	total, including working proprietors	No.	3,356	3,317	12,362	16,811
verage number		н	2,386	2,426	7,702	10,218
employed	other employees (g)		970	890	4,660	6,589
727 3	of operatives	£'000	1,076	1,474	4,860	8,052
ages and	of other employees (g)	н	812	839	3,447	6,413
ages and	operatives	2	451	608	631	788
alaries er head	other employees (g)		838	943	740	973
	ntributions to National Insurance (h)	£,000		89	gnlastas bi	466
	ntributions to private pension schemes,		40.	46	valanas bo	552
apital expen	diture (j)	ua enconsectorios		dinor de participa		
New buildin	g work		23	286	1,405	623
Land and	\[acquisitions \]		unit lacer s	} + 21 {	100 6	178
existing buildings	disposals		1400 100 100	1	-5 19 CA	75
Plant and	f acquisitions	5 21 6 4 3 20	132	129	1,863	2,010
machinery	disposals		1	3	10	21
	(acquisitions	TORES IS	18	18	122	240
Vehicles	disposals	0 100, 210	5	10	40	87

Sub-divisions of the industry (b) Surgical, dental and Other scientific Total Optical instruments veterinary instruments and appliances Spectacles, etc. instruments and equipment 1958 1963 1958 1963 1958 1958 1963 1963 1958 1963 24 27 78 70 86 84 175 171 384 367 43 36 117 118 106 110 246 253 552 568 7,377 15,079 13,770 16,859 13,675 19,542 83,629 128,228 160,534 243.725 8,470 5,090 10,531 7,948 8,549 12,638 77,837 52,563 96,092 140,485 913 1,123 823 912 825 1,112 967 1,263 1,005 1,257 6,810 13,978(d) 13,585(d) 11,541 12,906 18,032(d) 78,672 111, 130(d) 148,473 213,529(d) 414 899 2,185 3,232 653 1,390 3,408 14,311 10,077 26,398 5,664 10,922 11,140 11,785 66,858 12,949 15,438 95,217 (e) (e) 83 78 97 95 91 86 85 91 3,628 5,567 5,598 36,403 78,651 2,140 5,727 4,862 28,705 60,733 721 2,820 1,133 10,756 20,462 140 226 37 41 147 209 1,788 2,455 3,428 4,648 37 46 59 27 145 75 533 524 982 823 + 126 + 38 + 216 - 11 + 51 + 65 411 411 935 715 721 1,580 1,086 1,347 557 930 14,404 3,526 6,548 8,205 + 27 - 14 + 6 + 53 + 65 + 56 + 1,138 2,376 1,049 3,082 1,467 4,593 358 516 1,117 2,010 13,871 19,476 33,331 20,975 + 27 + 73 + 30 + 67 + 111 40 721 - 270 1,343 461 1,569 1,251 1,264 1,513 1,876 9,014 15,443 17,205 27,998 5,574 9,375 9,657 10,368 54,330 9,287 11,365 61,649 95,647 111,804 4,053 6,375 8,144 7,784 8,119 8,800 36,030 39,675 66,434 75,278 1,456 1,521 2,989 1,508 2,248 2,516 18,293 21,820 29,200 36,260 2,008 3,866 3,532 4,142 3,845 5,220 18,785 25,573 34,106 48,327 1,230 3,019 1,167 1,246 1,543 2,158 12,577 20,258 20,777 33,932 495 606 434 532 474 593 521 513 642 809 1,010 774 855 686 858 688 928 712 936 273 246 297 1,722 3,092 194 100 178 1,048 2,117 .. 163 82 41 12 55 222 1,166 1,655 2.869 2.865 6 48 325 607 60 20 562 747 .. 123 453 132 223 228 347 1,513 3,306 3,991 6,469 26 23 52 9 244 87 326 17 29 76 89 74 139 403 465 711 980 37 36 38 74 147 200 273 415

For notes to this table - see page 53/7

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)	Enter- prises	Estab- lish- ments	Average number employed (a)	Gross output	Net output	Net output per head	Capital expendi- ture (b)	Total value of stocks and work in progress at end of year
	Number	Number	Number	£,000	£,000	£	£'000	\$'000
25-49	113	126	4,144	8,243	4,638	1,119	168	1,314
50-99	94	107	6,729	13,432	7,602	1,130	418	3,085
100-199	64	87	9,100	17,286	10,657	1,171	381	4,390
200-299	35	55	8,391	17,261	10,837	1,292	713	4,956
300-399	14	23	4,934	8,094	5,190	1,052	270	2,807
400-499	3	3	1,443	2,771	1,607	1,113	64	749
500-749	11	30	6,964	16,968	8,686	1,247	387	4,210
750-999	7	24	6,222	12,214	6,866	1,103	574	4,271
1,000-1,499	12	47	14,447	29,200	15,412	1,067	836	10,460
1,500-1,999	3	11	4,934	8,435	5,752	1,166	326	3,342
2,000-2,499	3	6	6,499	13,481	8,790	1,353	558	4,522
2,500-2,999	3	18	7,827	17,869	9,207	1,176	1,146	6,784
3,000 and over	5	31	30,170	78,471	45,240	1,499	3,592	24,845
Total	367	568	111,804	243,725	140,485	1,257	9,433	75,734

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

Firms employing 25 or more persons: United Kingdom

Average number	Empl	oyees	Wages and	salaries	Emplo contril	yers'	Wages an	d salaries head
employed by the enterprise in the industry (2)	Oper- atives	Others (c)	Oper- atives	Others (c)	National Insurance (d)	Private pension schemes, etc. (e)	Oper- atives	Others (c)
408,111 1 12	Number	Number	£'000	\$,000	\$,000	£'000	3 2 3	378.92
25-49	3,180	875	1,846	771	113	30	581	881
50-99	5,028	1,644	2,809	1,513	183	95	559	920
100-199	6,804	2,267	3,990	1,992	244	119	586	879
200-299	6,186	2,190	3,787	2,047	231	110	612	935
300-399	3,563	1,369	2,167	1,126	137	64	608	822
400-499	1,105	338	955	367	60	29	864	1,087
500-749	4,883	2,079	2,957	1,849	201	132	606	889
750-999	3,961	2,190	2,731	1,879	169	89	689	858
1,000-1,499	10,422	4,024	6,314	3,448	385	224	606	857
1,500-1,999	3,220	1,714	1,857	1,586	142	52	577	925
2,000-2,499	4,216	2,283	2,622	2,066	194	147	622	905
2,500-2,999	4,879	2,948	3,377	2,660	238	216	692	902
,000 and over	17,831	12,339	12,917	12,629	794	811	724	1,024
Total	75,278	36,260	48,327	33,932	3,092	2,117	642	936

- (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 £208,000.

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

Ages	Males	Females	All employees
2622	Per cent.	Per cent.	Per cent.
Under 18	4	3	7
18 and over	62	31	93
All ages	66	34	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. For 1958 the comparable figure was also 3 per cent.

	1930	1903
Number of firms	962	1,107
Average number employed:		
Working proprietors	0.500	1,563
Other persons employed }	8,538 {	7,930

- (b) The method of classifying returns to sub-divisions of the industry is explained in the notes; the characteristic products of each sub-division are identified in Table 5.
- (c) 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.
- (d) 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).
- (e) Characteristic products relate only to sub-divisions of the industry.
- (f) 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.
- (g) Administrative, technical and clerical employees.
- (h) Including both flat rate and graduated contributions.
- (i) Including pensions and gratuities paid other than from pension funds.
- (j) 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

Industry	and the second s	19	58	Greverore spe	1963	COCCOSCO DE	materia.
sub- division (a)	TOTAL SIN STREET	Quantity	Value	Quantity	Value	Enter- prises	Entries
		1070 00	£'000		2,000	Number	Number
30	Ophthalmic instruments and appliances and parts thereof (excluding ophthal- mic prescription and repair work)			A		2.08	
	Sunglasses and parts of spectacles, pince-nez, eyeglasses and monocles	3,482	7,802	1,180		3.0	ē o
gathus	Spectacle frames and mounts and parts thereof	1000000 000 010 30.000	2,978	3	3,686	45	48
	Sunglasses with unworked lenses		299			2,50	
	Finished lenses, optically worked, mounted or unmounted, sold separately	Thousands 28,415	3,053 {	Thousands 27,259	3,136 459	23	29
	Ophthalmic instruments (excluding surgical instruments)		356		339	11	11
	Other ophthalmic appliances and parts thereof	j		1.00.	253	9	9
	Total ophthalmic instruments and appliances and parts thereof		6,686	658	7,873	••	
20	Other optical instruments and appliances and parts thereof	es, but est	ete commente Louge s' des	11 / BULL 1450.1			
	Finished lenses and other optical elements, optically worked, mounted or unmounted, sold separately					10 20 20 20 E	NOTES OF
	Photographic and cinematographic		1,136		1,006	13	13
	Other (excluding ophthalmic)	***	392		907	22	24
	Microscopes, including parts, except lenses and other optical elements	Children is .	840(b)	410-10	1,961	17	17
	Telescopes, binoculars and mon- oculars, including parts, except lenses and other optical elements	ginera Arisi ••	574(c)	2.000	450	12	13
	Optical land surveying instruments and equipment		728		1,116	5	6
	Optical nautical, aeronautical and gunnery control instruments	l yrraidel e gadding	1,322	84	1,082	15	16
100	Engineers' gauges, optical (d)	10 000 050	474	33	22	5	5
stinger)	Other optical instruments and appliances including industrial and surgical instruments (but excluding photographic and cinematographic	of seriods on balads of balads satalyda	(\$) 150 285	100 200 200 200	4.664	34	35
	instruments) and parts thereof	. (heratrica	1,980	••	4,004	34	33
14 (E. A.)	Total other optical instru- ments and appliances and parts thereof	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7,448	215	11,208	23	
40	Dental instruments, appliances and equipment	MAGNOTONIA MAGNOTONIA	3,002	7.33			
	Artificial teeth, crowns and facings	54,718	760 {	36,570	581 99	10	10
32/35	Dental instruments (including burrs); other dental surgery and laboratory equipment; and all other dental goods (e)	patonioni ngminskant nk statenso	2,306		2,842	21	23

TABLE 5 (continued)

dustry	2001	198	8		1963		ly y south
sub- vision (a)	Value (starting value grides	Quantity	Value	Quantity	Value	Enter- prises	Entries
and and	sadawa doora doora		£'000		£,000	Number	Number
40	Medical, surgical, veterinary and dissecting instruments, appliances and equipment (other than optical, ophthalmic and dressings)		nkiis (bunni 2) enni	s ventamani on hapunoi mit tam er		Photosy sppasu Otka	
	Medical, surgical, veterinary and dissecting instruments (excluding		AND STORES	de has sure	trapa sida escasi to	(1964) (1964)	
ā.	optical instruments)	Th.doz.	1,659	Th.doz.	3,962	44	50
	Surgical hosiery {	134	1,001	} 166	1,613	17	18
	Artificial limbs	••	772	111	1,220	5	6
	Hearing aids with valve or transistor amplification	Thousands 97.2	1,250 143	Thousands 28.0	882 120	} 10	10
	Other appliances, including trusses and artificial eyes, but excluding surgical boots	146	2,040(f)		1,737	24	26
	Sterilising equipment including autoclaves		906	ast	1,265	23	23
	Aseptic hospital furniture		769		694	23	23
	Electro-medical equipment (excluding electronic medical and surgical measuring and testing instruments and X-ray apparatus)		1,155(g)	ese enco	590	24	26
	Other equipment including anaesth- etic and resuscitation apparatus (excluding oxygen breathing apparatus)		658	i bilidangan	2,346	18	21
	Total dental, medical, surgical, veterinary and dissecting instruments, appliances and equipment		13,721	ala Xun un	17,950	G. J. Hope I. Laureau I. P. Laureau	
	Photographic and cinematographic apparatus and appliances		useaus hn clas	tani galia gamenen (1) ker rozan	nem ledit Sun gmits sul kinema		
11	Cameras, complete		6,383		1.7 Sa. 99 Fil.	April 1	
	Cine-cameras	*Describer	718		684	6	6
	Still cameras	100.0			lasts		
	Precision	0.7	99 330	39.7	449	8	8
	Other		997	ge. beload	951		
11	Projectors, complete		ATE LESS	a service serv	F SUBSE	1 48	
	Cinematograph projectors (excluding sound reproducing apparatus sold separately)		Tellman S	Control of the contro	egą golbai eg golbai	(com)	
	Standard (35 mm. gauge)	0.6	202				
	Sub-standard			}	1,169	5	6
	16 mm. gauge	8.75	1,009	1	ded water		
	Other	10.9	245	16.3	262 173	5	5
	Still projectors	87.2	846	87.2	938	8	8

TABLE 5 (continued)

Industry		19	58		1963			
sub- division (a)	saking seint strang enter	Quantity	Value	Quantity	Value	Enter- prises	Entries	
	286806 (0.01% -0001%)		€,000	SABEKTY	£,000	Number	Number	
	Photographic and cinematographic apparatus and appliances (continued)			iggs .eres (o end) se		SOLDSK WARE	88	
11	Other photographic and cinema- tographic apparatus and accessories (except lenses and photographic			in vetering		1687 dgb		
100	chemicals)			(8)0	mercal la	Name !	-	
	Cinematographic		6,868(h)		1,187	13	15	
	Other than cinematographic					1 3000	18	
	Developing, printing and enlarging apparatus		1,015		2,191	13	14	
	Other	* 13. · ·	1,438		4,778	21	23	
12	Photographic paper and cloth			nolarati		1000		
	Paper sensitised with silver salts		R 04-22-33	Th.sq.ft.		98(10)		
	Document-copying paper		949	119,092	1,862 611	} 5	5	
	Other paper sensitised with silver salts			186,089	4,124	•		
	Other sensitised paper (including dye-line) and sensitised cloth	}	21,221(i)<	1,049,275	7,112 793	} 11	11	
12	Sensitised photographic plates and films other than photographic paper and cloth		anons e	eaux anijas (agis	24,225	5	5	
	Total photographic equipment		35,937	na notrali	51,509	11.		
50	Scientific, industrial, etc. instru- ments and apparatus not elsewhere specified		292 568	olbón "látn valatinniy		aggs 22	34	
	Aeronautical electrical instruments		5,888	ime see.	13,944	20	23	
	Electrical measuring instruments (excluding supply meters and instruments for motor vehicles and aircraft)		6,721	rgosamento reconsti	9,920	50	56	
	Thermometers	Thousands	728	Thousands				
	Clinical	2,901	303 <	2,503	276 32	} •		
	Other liquid in glass	1,945	540	2,567	833	9	10	
	Other kinds including vapour pressure and mercury in steel		1,019		1,531	19	19	
	Laboratory instruments and apparatus (excluding precision balances)		1,499		5,140	35	39	
	Barometers, hygrometers and similar instruments (excluding thermometers) and barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc.	3.0	452	see is contact	856	15	15	
	Precision balances for use in assay, laboratory and similar work	8.2	484 68	} 15.8	669	9	10	
	Thermostats (including automatic control apparatus for refrigerating and heating)	8,318	5,228	11,477	7,338 1,477	30	33	

TABLE 5 (continued)

Industry	ESCI STAN USE A	19	58	155167	1963		a stable
sub- division (a)	soultd seighten children edition	Quantity	Value	Quantity	Value	Enter- prises	Entries
Number	x 200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2'000		\$,000	Number	Number
50	Scientific, industrial, etc. instru- ments and apparatus not elsewhere specified (continued)			(Sia		Troit I	
	Industrial process measuring and control instruments (excluding electronic) (j)	are (Saprem	t Lasticiaes	in landarus		Table 1	04
	Pyrometers and temperature gauges, recorders and controls, other than thermostats	•	3,818	-370	2,180	20	20
	Other process measuring and control instruments; indicating, regulating, recording and controlling (excluding vapour pressure and mercury in steel thermometers, computers and water supply meters)	y mad diza- uning and Li, orbithal	20,227	a database da sa	31,977	62	68
	Water supply meters	Thousands		Thousands		or stockers.	a proposition in
	Complete	148	1,039 588	279	2,106	10	11
	Parts		(k)		48	1	
	Mathematical and precision drawing instruments and machines and parts thereof		687	dasine ospi	2,035	18	18
	Surveying instruments and apparatus (other than optical and electronic)		956	all vilases	486	7	7
	Gunnery control apparatus (other than optical)	ore re-siz	1,879		1,116	11	11
	Nautical instruments not elsewhere specified (other than optical instruments)		in wi	Theoremsi H vis	indicated and	alieta alieta n racold	10
	Echo sounders	1.0	788	1.5	1,401 1,766	} 5	5
	Other	coop.lat a	3,547	. polestly	3,879	20	21
	Aeronautical instruments not else- where specified (other than optical and electrical instruments)	a strain	4,389	o Rice ties Leaduinel	3,015	19	23
	Oxygen breathing apparatus	(escept	1,907		1,256	10	10
	Engineers' measuring instruments and machines (other than electrical measuring instruments, optical instruments and engineers' gauges)	Tal trans	(1)	{ 17.0 ··	1,911	} 46	49
	Scientific instruments and apparatus and parts thereof, not elsewhere specified		6,547		3,526	63	65
	Total other scientific, industrial, etc. instruments and apparatus	APPENDING	69,128		100,696		
	Other products		4,775	1 To	1,558	45	48
	Waste products	1 14 5 REC.	707		911	88	98
	Work done					1 33.4	
	Research and development work done for customers including Government Departments	2(1)×0,3339	4,225		5,072	48	53

Industry	1201	11	958		1963		
sub- division (a)	The state of the s	Quantity	Value	Quantity	Value	Enter- prises	Entries
Yorkson, I	7965627 000°2 000°2		\$,000		£,000	Number	Number
	Work done (continued)		*223/82/2	Sin Inter	fric, infa	Scien	08
30	Ophthalmic prescription and repair work		4,780(m)	. (039)	5,832	59	70
40	Repair work on surgical instruments		102	TORESE ETOS	145	20	21
	Other work done on commission, sub- contract work, etc.		2,698		5,765	51	54
	Total		150,188(n)	aloumos i	208,520		
	Sales in other industries (see Table 6)		14,940	enlineese a	18,353	0	
	Principal products of this industry sold by establishments in the industry		135,247(n)	tungs v gnl nit keest nit valar vul	190,167	367	437(o)

- (a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are the total sales by larger firms, not merely sales by establishments classified to the sub-division.
- (b) Excluding parts of microscopes for 1958.
- (c) Including parts of microscopes for 1958.
- (d) Described as 'Engineers' gauges and measuring instruments, optical' for 1958.
- (e) Burrs were not specifically included for 1958.
- (f) Including surgical boots for 1958.
- (g) Including electronic medical and surgical measuring and testing instruments for 1958.
- (h) Including cinematograph film, blank (raw film or stock) for 1958.
- (i) Excluding cinematograph film, blank (raw film or stock) for 1958.
- (j) Including electronic instruments for 1958.
- (k) Not recorded separately.
- (1) Sales of micrometers, dial indicators and other engineers' measuring instruments and machines amounted to £571,000 in 1958 and were included in the report on the Engineers' Small Tools and Gauges Industry, Part 44.
- (m) Including spectacles, pince-nez, eyeglasses and monocles, complete with lenses, sold other than on prescription.
- (n) Revised figure. Repair work for customers, other than ophthalmic repair work and repair work on surgical instruments, included in this table in the 1958 report on this industry, is now shown in
- (o) 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

alas vales intries is which	1958		1963		
1900 \$ 1000 seedons 1000.	Value	Value	Entries	Principal industries in which produced(a)	
Sic prepare	£,000	£,000	Number	e suit lesses les	
Ophthalmic instruments and appliances and parts thereof	250	157	0 1 0 H 0 1 0 V	98,124	
Other optical instruments and appliances and parts thereof	540	214	12	49,51,52,112	
Dental instruments, appliances and equipment	31	s of car t	of special similar b		
Medical, surgical, veterinary and dis- secting instruments, appliances and equipment (other than optical, ophthal- mic and dressings)	224		Arus inc	Third work To a page to a	
Medical, surgical, veterinary and dissecting instruments	134	364	9	28,49,69,74	
Surgical hosiery; artificial limbs; hearing aids with valve or transistor amplification; and other appliances, including trusses and artificial eyes, but excluding surgical boots	628	720	12	E7 E9 94 100	
leonis telepuseits	-078		र्वक इति	57,58,84,109	
Aseptic hospital furniture	439	329	15	74	
Sterilising equipment including autoclaves	a de la constante de la consta	389	11	49,60,74,126	
Other equipment including anaesthetic and resuscitation apparatus and electro-medical equipment but excluding electronic medical and surgical measuring and testing instruments and X-ray apparatus and oxygen breathing apparatus	} 1,170 {	1,522	15	50,58,59,65	
0 02.00.30 18 808.8 818.3	Dalkin	ada atodas	10 200 3	081411 81750	
Photographic and cinematographic apparatus and appliances			/30	of got	
Projectors, complete; cinematographic apparatus and accessories (except lenses and photographic chemicals)	165(ь)	170		52,58	
Other photographic apparatus and accessories, other than cinematographic	660	0000000	BURN ES	ribulgeracto)	
Sensitised photographic plates and films other than photographic paper and cloth	of 10002 %	507	8	54,59,60,114	
Scientific, industrial, etc. instruments and apparatus not elsewhere specified					
Aeronautical electrical instruments	-	h			
Electrical measuring instruments (excluding supply meters and instruments for motor vehicles and aircraft)	1,876	4,780	22	55,58,60,64	
Thermometers	120(c)	230		52,104	
Laboratory instruments and apparatus (excluding precision balances)	41	225		49,58,104	

TABLE 6 (continued)

Value Value Entries Principal industries in which produced(a) Scientific, industrial, etc. instruments and apparatus not elsewhere specified (continued) Barometers, hygrometers and similar instruments (excluding thermometers) and barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc., and precision balances for use in assay, laboratory and similar work Thermostats (including automatic control apparatus for refrigerating and heating) Industrial process measuring and control instruments (excluding electronic) Water supply meters 165 87 * 49 Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical) and electrical measuring instruments Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified Total 14,940 18,953		1958	1963		
Scientific, industrial, etc. instruments and apparatus not elsewhere specified (continued) Barometers, hygrometers and similar instruments (excluding thermometers) and barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc., and precision balances for use in assay, laboratory and similar work Thermostats (including automatic control apparatus for refrigerating and heating) Industrial process measuring and control instruments (excluding electronic) Water supply meters Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified (d) 1,573 37 42,43,49,62	01 023	Value	Value	Entries	industries
and apparatus not elsewhere specified (continued) Barometers, hygrometers and similar instruments (excluding thermometers) and barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc., and precision balances for use in assay, laboratory and similar work Thermostats (including automatic control apparatus for refrigerating and heating) Industrial process measuring and control instruments (excluding electronic) Water supply meters Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified		£,000	£,000	Number	
instruments (excluding thermometers) and barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc., and precision balances for use in assay, laboratory and similar work Thermostats (including automatic control apparatus for refrigerating and heating) Industrial process measuring and control instruments (excluding electronic) Water supply meters Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified	and apparatus not elsewhere specified		the 15 mile tree	183657	at asathasaat
control apparatus for refrigerating and heating) Industrial process measuring and control instruments (excluding electronic) Water supply meters Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Cunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 3,396 3,220 1,406 15 49,50,58,60 49 49 49,74,124 (d) 1,573 37 42,43,49,62 37 42,43,49,62	instruments (excluding thermometers) and barographs, hygrographs, thermographs, sunshine recorders, rain gauges, anemometers, etc., and precision balances for use in assay,	163	1,136	13	40,55,58,59
control instruments (excluding electronic) Water supply meters Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 3,396 1,406 15 49,50,58,60 49,74,124 1,368 1,061 5 49,74,124 1,368 1,061 5 49,52,60 49,52,60 2,275 3,396 31 55,56,58,60	control apparatus for refrigerating and heating)	1,695	as visti	otes las etc. stass o unit las outtage	secting insta equipment tot equipment tot section and areas
Mathematical and precision drawing instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 3,396 31 49,74,124 49,74,124 (d) 1,573 37 42,43,49,62 37 42,43,49,62	control instruments (excluding	3,220	1,406	15	49,50,58,60
instruments and machines and parts thereof Oxygen breathing apparatus and aeronautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 3,396 49,74,124 49,74,124 49,74,124 49,74,124 49,52,60 49,52,60 50,56,58,60	Water supply meters	165	87		49
nautical instruments, not elsewhere specified (other than optical and electrical instruments) Engineers' measuring instruments and machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 3,396 1,061 5 49,52,60 (d) 1,573 37 42,43,49,62 3,396 31 55,56,58,60	instruments and machines and	200 200 200 200	86	Lav Aria . u bas .a Ses •utb	49,74,124
machines (other than electrical measuring instruments) Gunnery control apparatus and nautical instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 37 42,43,49,62 42,43,49,62	nautical instruments, not elsewhere specified (other than optical and	1,368	1,061	5	49,52,60
instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and parts thereof, not elsewhere specified 2,275 3,396 31 55,56,58,60	machines (other than electrical	(d)	1,573	37	42,43,49,62
Total 14.940 18,353	instruments, not elsewhere specified (other than optical), and other scientific instruments and apparatus and	2,275	3,396	31	55,56,58,60
	Total	14,940	18,353	menin ba	Photographic

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

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

	1958	1963
	Value	Value
Property of the Control of the Contr	£,000	£,000
Photographic developers and other compounded preparations for photo-	9.3)
graphic purposes	(a)	1,933
Miscellaneous chemical products and pharmaceutical preparations	535	J
Engineers' small tools and gauges	646	377
Office machinery; printers' accessories; pumps and valves; scales and weighing machinery; portable power tools and other machinery and appliances, complete and parts	556	983
Industrial plant and steel work, pressure gauges and other and unclassified mechanical engineering products	855(b)	1,095
Electrical machinery, complete and parts	519	796
Insulated wire and cables; telegraph and telephone equipment and signalling apparatus) Let	2,248
Radar and electronic navigation aid equipment; X-ray apparatus and electronic measuring and testing instruments	3,992	2,712
Electronic data processing and industrial process control equipment		915
Sound reproducing and recording apparatus and other electronic equipment including resistors, transformers and other components	J [1,301
Nucleonic instruments	334	242
Domestic electric appliances and other electrical goods	389	2,026
Motor vehicle, cycle and aircraft parts and accessories; guided weapons and missiles and launchers; and invalid chairs	12.00.000	1,406
Metal furniture and other miscellaneous metal goods	82	81
Industrial helmets and leather footwear	-	207
Sanitary ware, scientific glassware and other manufactures of glass	197(c)	359
Printing and writing papers; industrial and special paper and board	(a)	290
Rubber and plastic goods	205(d)	1,034
Other products	285	638
Repair work for customers, other than ophthalmic repair work and repair work on surgical instruments (e)	4,630(f)	4,276
Services rendered to other organisations (g)		442
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	9,487	25,427
Canteen takings	590	972
Total	23,302(h)	49.780

⁽a) Included with 'Other products' for 1958.

⁽b) Described as 'Cameras and projectors, complete; cinematographic apparatus and accessories, including cinematograph film, blank (raw film or stock)' for 1958.

⁽c) Excluding clinical thermometers for 1958.

⁽d) Sales of engineers' measuring instruments and machines were included in the 1958 report on the Engineers' Small Tools and Gauges Industry, Part 44.

⁽b) Including ordnance and small arms for 1958.

⁽c) Described as 'Scientific glassware' for 1958.

⁽d) Excluding rubber goods for 1958.

⁽e) Repair work for customers was included in the principal products table in the 1958 report on this industry.

⁽f) Including other work done for 1958.

⁽g) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered to other organisations.

⁽h) Revised figure. Excluding amounts charged for services rendered to other organisations.

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

TROU WITTENED TROU WELLDOOM FOR COMMENTER OF THE PROPERTY OF T		1954		1963	
73 081 081 081	Quantity	Cost	Quantity	Cost	
terials for processing	Th. tons	£,000	Th. tons	£,000	
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)	2.4	180 100	9.9	987 451	
Iron and steel not elsewhere specified except finished { parts, wire and scrap (b)	15.2	784 459	11.7	726 333	
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap (b)	bas in 191	estable pos	DA LA L'AMPANI		
Aluminium and aluminium alloys	1.3	544 838	} 4.1	2,028	
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys)	4.4	1,585 455	6.4	2,238	
Silver and manufactures of silver (c)	betana te	an in the	11 150.5 2	2,184	
Heavy chemicals (acids, alkalis, alcohols, other in- organic (including silver nitrate) and organic chemicals, compressed gases, etc.)	}]	2,219 {	dim slor coss to al	4,063	
Synthetic resins and plastics materials (excluding film base, leathercloth and reinforced plastics)	Th.cwt.	and them	Th.cwt.		
Phenolics and cresylics: resins, solutions, emulsions, dispersions, moulding and extrusion compounds			12.2	29 26	
Melamine and urea formaldehyde (aminoplastics)	\ \begin{cases} 16.0 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	450 304 }	{ 0.3	1	
Thermosetting polyesters (including epoxide resins and resin glass fibre mixtures)	1000000		8.7	11 2	
Rubber in all forms		280	80 1 90 13.0	34	
Woven piece goods (other than narrow fabrics) wholly or mainly of cotton	Th.sq.yds. 1,130	187 57	630	10	
Optical glass (including glass for spectacle lenses) { in unworked form	Th.cwt. 27.0	328 146	Th.cwt. 31.2	39	
Semi-finished blanks for lenses (including bifocal and multi-focal blanks)	Mar III nada	609	toxale see	98	
Finished lenses optically worked	Thousands	CONTRACTOR CONTRACTOR	Thousands		
Ophthalmic (uncut or edged)	3,913	362 212	3,594	4'	
Other (including photographic and cinematographic)		167		5	
Spectacle frames and mounts and parts thereof (d)		1,108	••	1,5	
Photographic paper (not sensitised) including baryta coated		1,797	••63	3,5	
Photographic and cinematographic film base (not sensitised)	ival, kw. s.i	6,309		5,6	
Cases for holding instruments, appliances, etc.	active in the	233		3	
Components, parts and accessories and semi-manufactured goods, not elesewhere specified	5.9	senows to	2207 25707		
Electrical	001604 FS	gak es 18	il si besi		
Motors	2.3	19(e) 44(e)	147	1,3	
Valves (electronic) and semi-conductor devices		127(e)	1,816	9 9	
Other 4581 Alabatic Annual Control	100.10	692(e)		7,7	
Wholly or partly of plastics materials (other than electrical)	125544	634(f)		1,3	
Other The Control of	2017138434	3,857	OSED 15101	10,6	

TABLE 10 (continued)

	195	4	196	3
	Quantity	Cost	Quantity	Cost
Materials for processing (continued)	Th.gal.	£,000	Th.gal. 180	£'000 47
Lubricating oils and greases (including cutting oils and emulsions)	30 .8	10 (e) 3 (e)	Th.cwt. 0.2	2 56
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement	s bellines	846	sun lanza	1,517
All other materials for processing	s of airte	13,437		19,349
Packaging materials	1.0		pares, str.	
Paper and board	916		is but out	
Boxes, cartons, packing cases, and drums and canisters (with or without metal ends) of paper, cardboard and fibreboard	tbulant) a parbulana i the	1,271	tento box	1,610
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)	wer (c) a, skookela casel and c	(g)	a) stoom be	811
Timber	of a transmi		Th.cu.ft.	
Timber (sawn or planed) for manufacture into packing cases, etc.	resig hear	olors; bu	{ 147	22 26
	di morrenta	000(1)	Th.sq.ft.	3
Plywood for manufacture into packing cases	}	366(h)<	$\left \left\{ \begin{array}{c} 45.2 \\ \dots \end{array} \right. \right $	2
Other wood products for packaging including wood wool (except plywood boxes and drums, baskets, wickerwork crates, and other containers wholly or mainly of wood)	2116/130) systemy	10 301.1930	44
All other packaging materials		905		914
Fuel and electricity (i)	Th.tons		Th.tons	190000
Coal	48.9	220 {	9.6	73 11
Coke (including screenings) and manufactured fuel	14.6	86 19	6.6	62 12
Derv fuel and motor spirit for use in road vehicles	Th.gal. 722	149 43	Th.gal. 1,150	237 49
Other liquid fuels (including creosote/pitch mixtures, etc., and liquefied petroleum gases)	3,664	154 29	15,069	602 74
Gas	Th.therms 4,335	272 87	Th.therms 3,205	269 169
Electricity	Th.kWh 79,611	530 158	Th.kWh 128,104	932 547
Total cost of materials and fuel	60000	43,672	Same .	78,651
Goods purchased for merchanting			1,000	19,638
Canteen purchases	08.6 1 SEG . 3		1026 Local 202	824
Total cost of purchases	tes estes	10 6 0 000 Date	street atme	99,113

- (a) Described in 1954 as 'Angles, shapes, sections, bars and rods (except sheet and timplate bars)'.
- (b) 'Wire and scrap' were not specifically excluded in 1954.
- (c) 'Manufactures of silver' were not included in 1954.

 (d) Described in 1954 as 'Frames and mountings and parts thereof for spectacles, goggles, pince-nez, eyeglasses and monocles'.
- (e) So far as recorded separately.
- (f) Electrical components, etc. were not specifically excluded in 1954.
- (g) Not recorded separately in 1954.
- (h) Including containers made of timber in 1954.
- (i) The total quantity of electricity generated in firms' own establishments in this industry in 1963 was 45,153 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

	Unit	1963
Average number employed mainly on transport	No.	736
Transport costs	9	Terrer I
Wages and salaries	₹,000	639
Derv fuel and motor spirit	ou a second	287
Payments to other organisations for transport		823
Costs of operating road goods vehicles		
Insurance		56
Vehicle licences	E SHEET SEE	39
Depreciation	•	264
Payments to other organisations for repairs		107
Total		2,216

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	445
Road goods vehicles	107
Plant, machinery, and other capital equipment	603
Insurance, licensing and depreciation of road goods vehicles (b)	360
Rates, excluding water rates	1,550
Hire of plant and machinery	295
Postage, telephone, telegrams and cables	1,600
Total	4,961

⁽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:

Year ended	Percentage of total number employed	Year ended	Percentage of total number employed
1963	Per cent.	1963 (contd.)	Per cent.
April (a)	7.4	November	12.5
May	0.5	December	28.7
june	5.6	1964	dent yezherege
July	1.8	1904	econtects)
August	9.6	January	3.1
September	9.2	February	0.9
October	5.8	March	14.8
		Total	100

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

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

This table is not applicable to this industry.

Capital Expenditure (continued)

(ii) Land and existing buildings.

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

(iii) Plant, machinery and vehicles.

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

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

Characteristic Products

The characteristic products of a sub-division are those in terms of which the sub-division is defined. They are products commonly associated in production and are usually similar in nature or manner of production. In most cases the characteristic products of each subdivision 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.

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 vear.

Larger Firms

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

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 packaging 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 merchanting or factoring and canteen supplies are included. Materials supplied by customers for processing

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.

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

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 merchanting 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

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

- .. 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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