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BOARD OF TRADE

FINAL REPORT
on the
CENSUS OF PRODUCTION
FOR 1948

Volume 4

Trade K

ELECTRICAL ENGINEERING (GENERAL)

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

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In interpreting the data in the following tables, it is essential to bear in mind not only the qualifications mentioned in this report but also the general explanations and qualifications contained in the separate booklet published in this series by H.M. Stationery Office entitled "Final Reports of the Census of Production for 1948: Introductory Notes", price 2s Od. NET

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* Not applicable to this trade

ELECTRICAL ENGINEERING (GENERAL) TRADE

THIS REPORT on the Electrical Engineering (General) Trade relates to establishments engaged wholly or mainly in the manufacture of electricity generating plant, transformers, dynamos, electric motors, switchgear, electrical equipment for motor vehicles, cycles and aircraft, and other electrical goods. Separate reports are made on the following trades:- Electric Wires and Cables, Radio and Telecommunications, Batteries and Accumulators, and Electric Lighting Accessories and Fittings.

This trade corresponds to minimum list headings 70 and 79 (excluding electric lighting accessories and fittings) in the Standard Industrial Classification, with the addition of mica goods from heading 29(3).

Establishments in this trade in Northern Ireland are excluded in 1948. Owing to the risk of disclosure of information relating to individual firms separate particulars of the very small output in Northern Ireland were not published for 1935.

ENGINEERING, SHIPBUILDING AND ELECTRICAL GOODS
ELECTRICAL ENGINEERING (GENERAL) TRADE

Summary
Larger establishments

TABLE 1

	1948 (a)	1946 (b)	1937 (b)	1935 (b)
Gross output (production)	£'000 229,791	£'000 155,514	£'000 75,520	£'000 55,846
Cost of materials and fuel used	99,173	60,838	33,229	23,216
Payment for work done on materials given out	2,385	1,664	218	143
Net output	128,233	93,012	42,073	32,487
Wages and salaries of persons employed	79,495	63,731	..	..
Average number of persons employed (c)	No. 258,561 (d)	No. 244,910	No. 177,321	No. 148,957
Net output per person employed (c)	£ 496	£ 380	£ 237	£ 218
Stocks at end of year	£'000	£'000	£'000	£'000
Finished products and work in progress	60,094	42,142	14,428 (e)	7,521 (e)
Materials and fuel	33,117	18,548	..	..
Number of establishments	No. 892	No. ..	No. ..	No. 522

- (a) Great Britain only.
(b) United Kingdom.
(c) Excluding outworkers.
(d) For an estimate of the total number of persons employed in this trade see Table 3.
(e) Work in progress only.

The values of gross output and of materials and fuel used are derived in the following way:-

	1948	1946	1937	1935
Output of firms in this trade	£'000	£'000	£'000	£'000
Total value of sales (1948 and 1946) or production (1937 and 1935)				
Principal products (see Table 8)	177,684	148,997	57,093	42,705
Other output (see Table 10)	44,705		14,721	11,562
Adjustment for changes in stocks and work in progress	+ 8,897 (a)	+ 6,517	+ 3,706 (b)	+ 1,579 (b)
Less payment for transport by other firms	231,287 1,495	155,514	75,520	55,846
Gross output (production)	229,791	155,514	75,520	55,846
Materials and fuel used by firms in this trade				
Purchases (see Table 13)	103,460	64,223	33,229	23,216
Adjustment for changes in stocks	- 4,286 (a)	- 3,385		
Materials and fuel used	99,173	60,838	33,229	23,216

- (a) See Table 14.
(b) Work in progress only.

Summary, 1948

Small firms in Great Britain

TABLE 2

Number of returns	972
Average number of persons employed (a)	
Males	4,566
Females	1,033
Total	5,599

(a) Including working proprietors.

Estimated average employment, 1948

All firms in Great Britain

TABLE 3

As returned by firms	
Employing on average more than ten persons (a)	258,561
Employing on average ten persons or less (b)	5,599
	264,160
Estimated average employment in firms not making satisfactory returns	1,225
Estimated average employment in all firms	265,385

- (a) See Tables 1 and 15.
(b) See Table 2.

Analysis by size, 1948

Larger establishments in Great Britain

TABLE 4

Average number employed	Establishments	Gross output	Net output	Persons employed	Remuneration			Net output per person employed
					Wages	Salaries	Total	
	No.	£'000	£'000	No.	£'000	£'000	£'000	£
11-24	219	3,471	1,761	3,947	752	292	1,044	446
25-49	203	6,595	3,483	7,022	1,399	499	1,898	496
50-99	165	10,937	6,157	11,954	2,359	1,008	3,367	515
100-199	96	12,321	6,845	13,277	2,716	1,208	3,924	516
200-299	51	11,656	6,145	12,500	2,782	949	3,731	492
300-399	27	8,024	4,682	9,394	1,721	789	2,510	498
400-499	24	9,938	6,002	10,623	2,279	918	3,197	565
500-749	28	15,202	8,347	16,992	3,433	1,566	5,000	491
750-999	22	17,149	8,743	18,755	3,964	1,449	5,413	466
1,000-1,499	26	26,448	15,681	32,386	6,222	3,396	9,618	484
1,500 and over	31	108,052	60,389	121,711	27,718	12,074	39,792	496
Total	892	229,791	128,233	258,561	55,344	24,150	79,495	496

Analysis by standard region, 1948

Larger establishments in Great Britain

TABLE 5

Region	Establishments	Gross output	Net output		Persons employed	Remuneration		
			Value	Percentage of total		Wages	Salaries	Total
	No.	£'000	£'000		No.	£'000	£'000	£'000
England								
Northern	31	12,387	6,811	5.3	14,650	3,527	1,244	4,772
East and West Ridings of Yorkshire	71	15,703	8,434	6.6	16,101	3,253	1,229	4,482
North Midland	39	10,424	5,207	4.1	9,842	1,913	1,075	2,988
Eastern	46	10,840	6,021	4.7	12,555	2,533	1,148	3,681
London and South Eastern	323	57,273	33,551	26.2	58,567	12,649	6,144	18,793
Southern	30	4,944	3,053	2.4	4,939	1,065	522	1,588
South Western	35	3,223	1,737	1.4	3,514	699	316	1,015
Midland	134	65,615	35,007	27.3	73,721	15,909	6,448	22,357
North Western	103	39,736	23,695	18.5	52,951	11,600	5,089	16,689
Total England	612	220,145	123,517	96.3	246,840	53,149	23,216	76,365
Wales	31	2,927	1,414	1.1	4,534	822	334	1,156
Scotland	49	6,720	3,301	2.6	7,187	1,373	601	1,974
Great Britain	892	229,791	128,233	100.0	258,561	55,344	24,150	79,495

Analysis according to specialisation within the trade, 1948
Larger establishments in Great Britain

TABLE 6

	Establish- ments	Gross output	Sales of charac- teristic products	Net output	Persons employed	Remuneration			Net output per person employed
						Wages	Salaries	Total	
	No.	£'000	£'000	£'000	No.	£'000	£'000	£'000	£
Specialist producers of									
Electrical machinery	248	110,251	80,457	61,999	126,365	26,966	12,892	39,858	491
Electric equipment for motor vehicles, cycles and aircraft	43	23,863	13,905	11,529	25,573	5,601	1,769	7,369	451
Electric cooking and heating apparatus	70	10,669	8,415	5,075	11,593	2,309	778	3,087	438
Establishments specialising in contract work	21	2,036	1,127	979	1,923	470	141	611	509
Remainder of the trade	510	82,972		46,651	93,107	19,998	8,571	28,569	523
Total	892	229,791		128,233	258,561	55,344	24,150	79,495	496

Total make of intermediate products
Larger establishments

TABLE 7

	Returned in this trade (a)		
	1948		
	Quantity	Entries	
	No.	Th. h. p.	No.
Fractional horse-power motors (i.e., under 1 h.p.)			
Not exceeding one-third h.p.			
Alternating current	1,059,821	215.3	60
Direct current and universal (A.C. or D.C.)	{ 488,009 72,139 }	{ 24.7 .. }	49
Over one-third but under 1 h.p.			
Alternating current	266,465	152.1	50
Direct current and universal (A.C. or D.C.)	21,136	12.8	33
Capacitors		Thous.	
For power factor improvement		610	9
Other than for power factor improvement		56,052	14

(a) No figures of quantities made were recorded in other trades.

Sales (or production) of the principal products of the trade,
including sales (or production) of these products by
establishments classified to other trades

Note - For particulars of capacity of electrical machinery sold (or produced) see Table 8 (Part II)

TABLE 8 (Part I)

Kind of output (1) Complete machines (11) Replacement parts	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
Electrical machinery	No.	£'000	No.	No.	£'000	No.	£'000
Generators							
Alternating current							
Not exceeding 50 kVA.	{ (1) 3,025 (11) .. }	{ 287 64 12 }	{ 26 16 }				
51-300 kVA.	{ (1) 2,881 (11) .. }	{ 1,416 21 }	{ 19 13 }				
301-1,000 kVA.	{ (1) 380 (11) .. }	{ 720 36 }	{ 12 10 }				
1,001-5,000 kVA.	{ (1) 84 (11) .. }	{ 399 23 }	{ 8 8 }	{ (1) 3,491 (11) .. }	{ 1,219(c) 93 }	{ 1,726 .. }	{ 916(c) 114 }
5,001-10,000 kVA.	{ (1) 28 (11) .. }	{ 371 18 }	{ 5 5 }				
10,001-30,000 kVA.	{ (1) 31 (11) .. }	{ 1,246 54 }	{ 5 .. }				
Over 30,000 kVA.	{ (1) 18 (11) .. }	{ 1,112 69 }	{ }				
Direct current							
Not exceeding 50 kW.	{ (1) 12,657 (11) .. }	{ 875 420 91 }	{ 39 31 }				
51-300 kW.	{ (1) 663 (11) .. }	{ 583 41 }	{ 22 19 }				
301-1,000 kW.	{ (1) 144 (11) .. }	{ 303 50 19 }	{ 11 10 }	{ (1) 16,379 (11) .. }	{ 1,120 76 }	{ 11,234 .. }	{ 683 45 }
1,001-5,000 kW.	{ (1) 33 (11) .. }	{ 186 5 }	{ 8 6 }				
Over 5,000 kW. (1) and (11)	-	-	-				
Unclassified	{ (1) 49 (11) .. }	{ 56 67 }	{ }				
Petrol - diesel - electric generating sets, and steam driven electric generating sets (d) (1) and (11)	..	962	..				
Motors							
Railway, tramway and trolley bus	{ (1) 2,208 (11) .. }	{ 1,554 416 }	{ 6 7 }	{ 3,634 .. }	{ 834(e) 46 }	{ 2,647 .. }	{ 541(e) 48 }

TABLE 8 (Part 1) (contd.)

Kind of output (1) Complete machines (11) Replacement parts	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	No.	£'000	No.	No.	£'000	No.	£'000
Electrical machinery (contd.)							
Motors (contd.)							
Other traction	{ (1) 2,747 { (11) ..	{ 279 { 56 { 6	{ 9 { ..	{ ..	{ (f)	{ ..	{ (f)
Fractional horse-power motors (i.e., under 1 horse-power), sold separately							
Not exceeding one-third h.p.							
Alternating current	{ (1) 766,050 { (11) ..	{ 3,837 { 121	{ 59 { 31	{ (1) 336,109 { (11) ..	{ 661 { 43		
Direct current and universal (A.C. or D.C.)	{ (1) 384,354 { (11) ..	{ 1,000 { 32	{ 47 { 20			{ (1) 282,009 { (11) ..	{ 703 { 25
Over one-third but under 1 h.p.							
Alternating current	{ (1) 291,868 { (11) ..	{ 2,166 { 82	{ 55 { 32	{ (1) 59,818 { (11) ..	{ 308 { 16		
Direct current and universal (A.C. or D.C.)	{ (1) 21,192 { (11) ..	{ 284 { 15	{ 34 { 20				
Other motors of 1 h.p. and over							
Alternating current (g)							
1-50 h.p.	{ (1) 498,605 { (11) ..	{ 12,344 { 478	{ 66 { 44	{ (1) 233,373 { (11) ..	{ 3,573 { 148	{ 157,680 { ..	{ 2,714 { 104
51-250 h.p.	{ (1) 7,525 { (11) ..	{ 1,995 { 91	{ 25 { 21				
251-1,000 h.p.	{ (1) 640 { (11) ..	{ 747 { 34	{ 14 { 13	{ 966 { ..	{ 338 { 17	{ 708 { ..	{ 311 { 16
1,001 h.p. and over	{ (1) 87 { (11) ..	{ 412 { 24	{ 12 { 10	{ 80 { ..	{ 173 { 6	{ 64 { ..	{ 130 { 4
Direct current (g)							
1-50 h.p.	{ (1) 33,503 { (11) ..	{ 2,534 { 232	{ 49 { 34	{ (1) 41,251 { (11) ..	{ 1,604 { 90	{ 35,188 { ..	{ 1,175 { 80
51-250 h.p.	{ (1) 1,183 { (11) ..	{ 625 { 50	{ 19 { 16				
251-5,000 h.p.	(1) 92	371	..	{ 163	{ 368	{ 104	{ 179
5,001 h.p. and over	(1) -	-	-				
251 h.p. and over	(11) ..	71	..				
Motors, other than traction, A.C. and D.C., unclassified	{ (1) .. { (11) ..	{ 501 { 35	{ 13 { 9				

TABLE 8 (Part 1) (contd.)

Kind of output (1) Complete machines (11) Replacement parts	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	No.	£'000	No.	No.	£'000	No.	£'000
Electrical machinery (contd.)							
Rotary converters and other converting machinery	{ (1) 8,221 { (11) ..	{ 367 { 21 { 60	{ 20 { 11	{ 4,691 { ..	{ 234(d) { 9	{ 8,124 { ..	{ 182(d) { 5
Rectifiers, static							
Mercury vapour							
Glass bulb	{ (1) 1,389 { (11) ..	{ 565 { 146 { 99	{ 8 { 6	{ (1) 7,755 { (11) ..	{ 395 { 37	{ 2,731 { ..	{ 277 { 20
Steel tank	(1) 150	138	5				
Metal	{ (1) 25,744 { (11) ..	{ 502 { 724	{ 16				
Other	{ (1) 6,855 { (11) ..	{ 90 { 32	{ ..	{ ..	{ (f)	{ ..	{ (f)
Steel tank (mercury vapour), metal and other	(11) ..	39	..				
Power transformers							
Not exceeding 800 kVA.	{ (1) 121,860 { (11) ..	{ 5,786 { 171	{ 56 { 25				
801-5,000 kVA.	{ (1) 1,238 { (11) ..	{ 2,286 { 51	{ 22 { 19	{ (1) 118,400 { (11) ..	{ 3,663 { 142	{ 82,686 { ..	{ 2,517 { 42
5,001-30,000 kVA.	{ (1) 216 { (11) ..	{ 1,931 { 38	{ 16 { 9				
Over 30,000 kVA.	{ (1) 24 { (11) ..	{ 435 { 14	{ 13				
Current limiting reactors	{ (1) 197 { (11) ..	{ 121 { 2	{ 13	{ ..	{ (f)	{ ..	{ (f)
Starting and controlling gear for electric motors							
Marine	{ (1) 1,499 { (11) ..	{ 682 { 324 { 50	{ 25 { 15	{ (1) 16,973 { (11) ..	{ 3,770 { 169	{ 13,848 { ..	{ 2,151 { 116
Traction and other	{ (1) 30,585 { (11) ..	{ 9,742 { 991 { 801	{ 78 { 50				

TABLE 8 (Part 1) (contd.)

Kind of output (1) Complete machines (11) Replacement parts	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
Electrical machinery (contd.)	Tons	£'000	No.	Tons	£'000	Tons	£'000
Switchgear and switchboards, (other than telegraph and telephone)							
Not exceeding 660 volts or 500 amps. { (1) } 15,689 5,146 } 124							
{ (11) } .. 384 } 58							
Over 660 volts or 500 amps. and not exceeding 15,000 volts or 350 mVA. { (1) } 24,320 9,059 40				{ (1) 58,633 8,471 54,044			5,761
{ (11) } .. 149 26				{ (11) } .. 160 ..			98
Over 15,000 volts or 350 mVA. { (1) } 10,934 4,275 14							
{ (11) } .. 129 12							
Magnetos, ignition, other than for motor vehicles { (1) } Thous. 7 Tons 46 416							
{ (11) } 25 .. 173 } 5				.. 324 .. 20			
{ (11) } .. 59 } ..				.. 39 .. 41(d)			
{ (11) } .. 165 } ..							
Fuses and fuse gear							
Not exceeding 660 volts or 500 amps. { (1) } Tons 12,613 3,902 61							
{ (11) } .. 1,921 27							
Over 660 volts or 500 amps. { (1) } 1,579 191 13				.. (f) .. (f)			
{ (11) } .. 35 9							
{ (11) } .. 68							
Capacitors for power factor improvement { (1) } Thous. 875 1,095 17							
{ (11) } .. 4							
Reconditioned electrical machinery (d)				.. 151 .. 110			
Other electrical machinery { (1) } .. 810 17 .. 276 .. 282				.. 82 .. 80			
{ (11) } .. 137 16							
Total electrical machinery		98,191	..		28,675		19,506
Electrical equipment for motor vehicles and cycles							
Ignition apparatus, other than sparking plugs (h)							
Coils							
Complete	1,169	504	13	.. 136 .. (f)			
Parts	..	103	5				
Magnetos							
Complete	107	781	11	59 162 } 61 267			
Parts	..	114	7	.. 13			
Other	..	23	..	.. 366 .. 461			

TABLE 8 (Part 1) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
Electrical equipment for motor vehicles and cycles (contd.)	Thous.	£'000	No.	Thous.	£'000	Thous.	£'000
Lamps, sold separately							
For motor cars { 379 120 } 7 { 717 285 } 495 204							
{ .. 13 } .. 34							
For motor cycles and tricars	56	7	5	36	17	..	(f)
For cycles { 4,453 301 } 14 804 99 .. (f)							
{ .. 106 }							
Electric audible warning signals for motor vehicles (horns, etc.)	..	732	7	..	295	..	209
Electrical indicating instruments, complete							
Speedometers	6	20	5				
Other descriptions	51	34	..	84	46		
Electric lighting and starting sets for motor vehicles (including lamps not sold separately, but not accumulators)	..	9,400	9			..	3,929(d)
Traffic indicators for motor vehicles (including parts) (d)	..	464	10				
Cycle dynamo lighting sets complete with lamps (d)	Th. sets 1,102	1,043	11	..	4,686(d)		
Other electrical equipment for motor vehicles, except accumulators and sparking plugs (d)	..	4,312	27				
Total electrical equip- ment for motor vehicles and cycles		18,079	..		6,139		5,070
Miscellaneous electrical goods and apparatus	Million			Million		Million	
Electric carbons, other than carbon electrodes for welding (1)	{ 474.3 2,445 } 20 { 1,018.6 1,327 } 782.1 885			{ .. 1,008 } .. 193		{ .. 156	

TABLE 8 (Part I) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
		£'000	No.		£'000		£'000
Miscellaneous electrical goods and apparatus (contd.)							
Electric lamps and parts thereof, except motor and cycle lamps							
Arc lamps and electric searchlights				No.			
Complete	..	344	12	1,647	190	..	138
Parts, except carbons	..	5	7	..	41	..	7
	Thous.			Thous.			
Flashlight cases, complete (exclusive of bulbs and batteries therefore) other than for use on cycles	6,156	514	14	6,239	241	..	195(j)
Parts of flashlight cases	..	33	7	..	(f)	..	
Other lamps with or without bulbs							
Complete	2,477	1,822	59	288	255	..	158
Parts, except bulbs	..	378	21	..	61	..	(f)
Electric cooking apparatus and appliances							
Domestic cookers, complete							
Under 3 kW.	99	434	21	152	1,177	..	
3 kW. and over	213	4,119	19	..	369	..	
Industrial cookers, complete	5	240	5	..		..	1,454
Parts and accessories of cookers	..	39	..	..		..
Kettles	499	838	34	..	518	..	
Toasters	87	155	20	..		..
Other cooking appliances and parts	..	30	49	..		..
	..	1,288					

TABLE 8 (Part I) (contd.)

	1948 (a) Sales				1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value	
	Thous.	Th.kw.	£'000	No.	Thous.	£'000	£'000	
Miscellaneous electrical goods and apparatus (contd.)								
Electric heating apparatus, not elsewhere specified								
Complete (k)								
Domestic								
Portable electric fires	228	379	490	56	868	717		
	32	..	53	..	199	..		
	..	..	117	..	..	..
Tubular heaters	40	21	63	18	..	..	1,509
	..	21	51	..	..	..
	..	..	55	..	..	..
Water heaters, including immersion heaters	220	406	924	43	..	1,198		
	46	..	425	..	..	..
	..	..	46	..	..	..
Other domestic heating apparatus	94	127	170	44	..	..
	192	..	65	..	..	..
	..	..	180	..	..	..
Commercial	3	8	67	23	..	84	71	
	4	..	32	..	..	..
	..	..	170	..	..	..
Industrial	80	124	322	34	..	170	153	
	33	..	147	..	..	..
	..	..	115	..	..	..
Parts and accessories	..	..	1,515	72	..	(f)	(f)
Electric fans		Tons						
Desk and ceiling	81	1,042	511	14	116	376	272	
	37	..	134	..	..	..
Other	78	1,760	537	23	..	..
	43	..	295	..	..	..
	..	..	405	..	..	..
Electric irons	1,247	..	1,331	70	..	141(d)	56(d)	
	..	..	275	..	..	..

TABLE 8 (Part 1) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production		
	Quantity		Value	Quantity	Value	Quantity	Value	
	Thous.	Tons	£'000	No.	Thous.	£'000	Thous.	£'000
Miscellaneous electrical goods and apparatus (contd.)								
Portable mechanical appliances, electrically operated								
Vacuum cleaners								
Complete	{ 625 93	6,584 ..	5,859 682	} 21	512	3,946	409	3,286
Parts	..	..	1,225	25	..	73(d)	..	147
Other								
Complete								
Hair clippers and dry shavers	130	..	356	8				
Other appliances including food or drink mixers, dish washers and fruit juice extractors	{ 54 60 ..	853	337 601 63	} 28	..	(f)	..	(f)
Parts	..	..	62	16				
Joint boxes	..		2,254	43	..	848	..	631
Cable jointing materials and accessories, except tape, cloth and other insulating materials	..		892	35	..	170	..	123
Fittings for overhead transmission lines	..		821	13	..	457	..	317
Capacitors, other than for power factor improvement								
Complete, fixed and variable (including drives and couplings)	Thous.							
	55,003		2,862	23				
Parts	..		14	..	..	944(l)	..	852(l)

TABLE 8 (Part 1) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000	Thous.	£'000
Miscellaneous electrical goods and apparatus (contd.)							
Transformers							
Instrument							
Potential	14	159	25	{ 74	213	59	138
Current	126	347	34	} ..	3	..	2
Other (excluding power transformers) (m)	{ 284 ..	{ 602 566	} 58	..	(f)	..	(f)
Electricity meters							
House service meters							
Complete							
Prepayment type	102	599	14	433	1,380	422	1,286
Other	1,549	4,557	21	1,129	1,440	967	1,213
Parts	..	353	25	..	190	..	127
Other integrating meters							
Complete							
Switchboard meters	14	204	8	..	64	..	68
Other meters	65	233	10	..	117	..	72
Parts	..	56	7	..	13	..	19
Commercial electrical measuring instruments							
Complete							
Indicating, other than for motor vehicles							
Not exceeding 3½ inch scale length	562	1,106	29	{ 309	744	..	551
Over 3½ inch scale length	170	1,170	29	} ..	..	..	(n) (o)
Recording	2.5	160	7	2.5	91	..	80(o)
Other descriptions	{ 34.2 ..	{ 230 172	} 20	89.4	160	..	194(o)
Parts, excluding valves	..	218	16	..	47	..	(f)

TABLE 8 (Part 1) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000		£'000
Miscellaneous electrical goods and apparatus (contd.)							
Scientific instruments, electrical							
Pyrometers	8.4	208	18	2.2	87		
	..	176					
Other, not elsewhere specified	275.1	130	71	13.5	185	..	549
	..	1,374			..	341	
Electro-medical apparatus, other than vacuum tubes and X-ray apparatus	16.1	391	30	..	154	..	130
	..	630					
X-ray apparatus							
X-ray tubes and X-ray rectifying valves	..	176	..	..	6	..	5 (p)
Other X-ray apparatus, including parts	..	1,357	26	..	172	..	153
Coils, ignition, complete, other than for motor vehicles	6	18	8	-	-	-	-
	..	6					
Magnets, permanent	12,959	1,006	17	..	525	..	486
	..	399					
Electrical totalisator apparatus	..	328	9	..	234	..	267
Permanent hair-waving apparatus	..	292	17	..	238	..	258
Aircraft electrical equipment, parts and accessories, not elsewhere specified	..	774	5	-	-	-	-
Time switches	Tons 103	385	24	Tons 159	238	Tons	
	..	313			..	2,627	
Other electrical goods and apparatus	..	9,329	..	..	3,167		
Electrical insulating materials, sold separately (other than complete insulators)							
Of mica	140	350	22	750	365	619	348
	..	592			..		
Of built-up mica ("Micanite")	550	655	20	..	..
	..	106					
Sleeving, other than rubber sleeving	Mill. lin. ft. 92.0	332	12	Mill. lin. ft. 36.8	66		
Other electrical insulating materials (q)	Tons			Tons		1,458	240
	..	1,330	21	..	327	..	167
					72		

TABLE 8 (Part 1) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Tons	£'000	No.		£'000		£'000
Electrical insulating materials, sold separately (other than complete insulators) (contd.)							
Unclassified electrical insulating materials	65	62	7	..	168	-	-
	..	18					
Mica stampings and punchings, sold as such, other than for electrical insulating purposes	Thous.						
Stove and furnace plates and windows	1,913	30	16				
	..	6					
Other	2,000	46	7	..	(f)	..	(f)
	..	36					
Ground mica, so far as recorded separately; and waste products, other than scrap metals	..	146	79				
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		71,651	..		24,626		19,383
Contract and other work carried out (r)							
Contract work done as main contractors							
Installation and erection of generating plant and appliances		6,943	40				374
Other electrical contract work (s)		1,133	70				553
Electrical contract work done as sub-contractors					1,688	(t)	
Work on buildings		101	13				
Other contract work		143	16				294
Unclassified		702	10				
Repair and maintenance work for customers		6,334	262		1,657		2,194
Research and development work (d)		1,545	9		-		-

TABLE 8 (Part I) (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
Contract and other work carried out (r) (contd.)		£'000	No.		£'000		£'000
Other work done, including work done for the trade		1,840	127		127		194
Total contract and other work		18,742	..				
Less estimated value of goods made by firms and separately recorded as sold, which were used in this work		6,119	..		3,472		3,609
Total contract and other work exclusive of the value of goods made by firms and used in the work		12,624	..		3,472		3,609
Total principal products of this trade		200,545	..		62,912		47,568
Less sales (or production) in other trades (see Table 9)		22,860	..		5,819		4,863
Total principal products of this trade sold or made by establishments in the trade		177,684	744		57,093		42,705

(a) Great Britain only.

(b) United Kingdom.

(c) Recorded as:-

	1937		1935	
	No.	£'000	No.	£'000
Under 2,000 kW.	3,401	408	1,651	280
2,000 kW. and under 11,000 kW.	49	154	50	265
11,000 kW. and over	41	657	25	391

(d) So far as recorded separately.

(e) Described as "Railway and tramway" motors.

(f) Not recorded separately.

(g) Motors of 250 and 1,000 h.p. were included in the next higher category in 1937 and 1935.

(h) For sparking plugs, see the Motor Vehicles and Cycles (Manufacturing) Trade (Volume 3, Trade I).

(i) For welding electrodes see the Machine Tools Trade (Volume 4, Trade C).

(j) Described as "Electric torches, safety lamps and parts thereof".

(k) Not described as complete in 1937 and 1935.

(l) Described as "Condensers, electric, and parts thereof".

(m) Excluding any transformers recorded as parts of radio apparatus, for which see the Radio and Telecommunications Trade (Volume 4, Trade M).

(n) Including some indicating instruments for motor vehicles.

(o) Including parts.

(p) Described as X-ray tubes and vacuum tubes.

(q) Except of ceramics, for which see the China and Earthenware Trade (Volume 1, Trade G), cloth and tape and rubber sleeving, for which see the Rubber Trade (Volume 11, Trade A), and of synthetic resins, for which see the Plastic Goods and Fancy Articles Trade (Volume 11, Trade I).

(r) The values shown for the various classes of work done are, for 1948, inclusive of all goods or materials used, but for 1937 and 1935 goods made by the firms and used by them in the work are excluded. The goods made and so used are, however, included as output against the appropriate headings in Tables 8 and 10 for each of the three years.

(s) Excluding work on telegraph and telephone lines and works and on the installation of radio and telecommunication apparatus and appliances, for which see the Radio and Telecommunications Trade (Volume 4, Trade M), and on electric power and lighting lines and works, for which see the Electric Wires and Cables Trade (Volume 4, Trade L).

(t) Electrical contract work of all kinds, except that returned by firms in the Electric Wires and Cables Trade, and the Radio and Telecommunications Trade.

Capacity of electrical machinery

TABLE 8 (Part II)

	1948			1937			1935		
	Total recorded	Machinery of which capacity was shown		Total recorded	Machinery of which capacity was shown		Total recorded	Machinery of which capacity was shown	
		No.	No.		Th. KVA.	No.		No.	Th. KW.	No.	No.	Th. KW.
Generators									
Alternating current									
Not exceeding 50 kVA.	3,025	2,751	48.5						
51-300 kVA.	2,881	2,742	298.9						
301-1,000 kVA.	380	342	158.9						
1,001-5,000 kVA.	84	84	181.0	3,401 (a)	3,042	199.0	1,651 (a)	1,337	194.7
5,001-10,000 kVA.	28	28	211.2	49 (b)	49	185.1	50 (b)	50	234.6
10,001-30,000 kVA.	31	31	690.6	41 (c)	41	1,000.1	25 (c)	25	582.5
Over 30,000 kVA.	18	18	798.3						
Direct current									
Not exceeding 50 kW.	12,657	11,919	88.2						
51-300 kW.	663	570	69.2						
301-1,000 kW.	144	144	65.1	16,379	16,379	358.8	11,234	10,847	243.0
1,001-5,000 kW.	33	32	56.6						
Over 5,000 kW.	-	-	-						
			Th. h.p.			Th. h.p.			Th. h.p.
Motors									
Railway, tramway and trolley bus	2,208	2,208	302.2	3,634 (d)	3,634	357.1	2,647 (d)	2,647	182.6
Other traction	2,747	2,574	19.1	(e)	..	..	(e)	..	..
Fractional horse-power motors (i.e., under 1 horse-power), sold separately									
Not exceeding one-third h.p.									
Alternating current	766,050	740,178	162.7	336,109	286,782	42.5			
Direct current and universal	384,354	333,287	20.5						
Over one-third but under 1 h.p.							282,009	258,164	54.5
Alternating current	291,868	281,398	150.1	59,818	59,076	34.0			
Direct current and universal	21,192	20,734	12.8						

TABLE 8 (Part II) (contd.)

	1948			1937			1935		
	Total recorded	Machinery of which capacity was shown		Total recorded	Machinery of which capacity was shown		Total recorded	Machinery of which capacity was shown	
	No.	No.	Th. h.p.	No.	No.	Th. h.p.	No.	No.	Th. h.p.
Motors (contd.)									
Other motors of 1 h.p. and over									
Alternating current									
1-50 h.p.	498,605	464,464	2,561.0	233,373	231,056	1,836.1	157,680	155,330	1,485.9
51-250 h.p.	7,525	7,437	709.1						
251-1,000 h.p.	640	640	297.9						
1,001 h.p. and over	87	87	169.3	80	80	165.1	64	64	124.2
Direct current									
1-50 h.p.	33,503	28,689	208.5	41,251	41,230	365.2	35,188	34,193	335.6
51-250 h.p.	1,183	934	100.0						
251-5,000 h.p.	92	90	90.3						
5,001 h.p. and over	-	-	-	163	163	122.7	104	104	92.6
			Th. kW.			Th. kW.			Th. kW.
Rotary converters and other converting machinery	8,221	5,672	86.0	4,691	3,314(f)	35.7(f)	8,124(f)	7,956(f)	65.4(f)
Rectifiers, static									
Mercury vapour									
Glass bulb	1,389	1,389	60.8	7,755	7,755	146.4	2,731	2,584	94.9
Steel tank	150	150	55.6						
Metal	25,744	18,717	16.5						
Other	6,855	784	1.2	(e)	..	..	(e)	..	..
			Th. kVA.			Th. kVA.			Th. kVA.
Power transformers									
Not exceeding 800 kVA.	121,860	90,427	3,442.0	118,400	118,033	6,772.0	82,686	80,315	5,008.5
801-5,000 kVA.	1,238	1,230	2,051.7						
5,001-30,000 kVA.	216	210	2,463.8						
Over 30,000 kVA.	24	24	1,126.2						

- (a) Under 2,000 kW.
 (b) 2,000 kW. and under 11,000 kW.
 (c) 11,000 kW. and over.
 (d) Described as "Railway and tramway" motors.
 (e) Not recorded separately.
 (f) Rotary converters only.

Sales (or production) of principal products of the trade by establishments classified to other trades

Larger establishments

TABLE 9

Kind of output (i) Complete machines (ii) Replacement parts	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	No.	£'000	No.	No.	£'000	No.	£'000
Electrical machinery							
Generators							
Alternating current							
Not exceeding 1,000 kVA.	{ (i) 454 (ii) -	143	..	{ (i) 182 (ii) ..	14	2	-
Over 1,000 kVA. (i) and (ii)	-	-	-	-	3	..	3
Direct current							
Not exceeding 1,000 kW.	{ (i) 323 (ii) ..	145	5	{ (i) 765 (ii) ..	84	651	59
Over 1,000 kW. (i) and (ii)	-	-	-	-	13	..	9
Unclassified	{ (i) 49 (ii) ..	56	..	{ (i) - (ii) ..	-	-	-
Petrol-diesel-electric generating sets, and steam driven electric generating sets (i) and (ii)	..	542	8	-	-	-	-
Motors							
Railway, tramway, trolley bus and other traction (i) and (ii)	..	59	..	34	4	25	2
Fractional horsepower, alternating and direct current and universal (A.C. or D.C.)	{ (i) 45,092 (ii) ..	236	7	37,542	63	16,253	26
Other motors of 1 h.p. and over							
Alternating current	{ (i) 3,302 (ii) ..	189	8	2,486	46	1,830	35
Direct current							
1-50 h.p.	{ (i) 1,235 (ii) ..	104	..	{ (i) 1,782 (ii) ..	91	1,574	80
51-250 h.p.	(i) 78	40	..	8	8	..	12
251-5,000 h.p.	(i) 7	12	6	-	-	-	-
5,001 h.p. and over	(i) -	-	-	-	-	-	-
51-5,000 h.p.	(ii) ..	5	..	-	-	-	-
Motors, other than traction, A.C. and D.C., unclassified	{ (i) .. (ii) ..	425	10	-	-	-	-
		21	8	-	-	-	-

TABLE 9 (contd.)

Kind of output (1) Complete machines (11) Replacement parts	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	No.	£'000	No.	No.	£'000	No.	£'000
Electrical machinery (contd.)							
Rotary converters and other converting machinery	{ (1) 21 .. 1 (11) -	{ 7 1 -	{ .. - -	21	-	-	-
Rectifiers, static (c)	{ (1) 4,600 .. (11) -	{ 122 724 -	{ .. - -	-	-	375	2
Power transformers							
Not exceeding 800 kVA.	(1) 4,148	173	6	1,090	95	998	63
601-30,000 kVA.	(1) 41	102	..				
Over 30,000 kVA.	(11) -	-	-				
Not exceeding 30,000 kVA	(11) ..	8	..	..	58	..	3
Starting and controlling gears for electric motors	{ (1) (11) -	{ 264 - -	{ 6 - -	Tons 382	104	Tons 318	62
Switchgear and switchboards (other than telegraph and telephone)	{ (1) 1,562 .. (11) ..	{ 617 450 22	{ 16 9 -	2,492	372	2,499	183
Magnetos, ignition, other than for motor vehicles	-	-	-	-	-	..	3
Fuses and fuse gear	{ (1) 151 .. (11) ..	{ 28 909 32	{ 9 6 -	-	-	-	-
Capacitors for power factor improvement	{ (1) (11) ..	{ 693 2 -	{ 5 .. -	-	-	-	-
Reconditioned electrical machinery	(1) ..	33	..	-	-	-	-
Other electrical machinery	{ (1) (11) ..	{ 44 8 -	{ -	..	31	..	23
Total electrical machinery		6,358	..		1,015		576
Electrical equipment for motor vehicles and cycles							
Ignition apparatus, other than sparking plugs, including parts	..	121	13	..	25	..	38
Lamps, sold separately							
For motor cars	{ 379 ..	{ 120 13	{ 7	{ 42 ..	{ 14 34	{ 40	{ 19
For motor-cycles and tri-cars	56	7	5	-	-	-	-
For cycles	{ 3,065 ..	{ 179 2	{ 6	-	-	-	-

TABLE 9 (contd.)

	1948(a) Sales			1937(b) Production		1935(b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Thous.	£'000	No.		£'000		£'000
Electrical equipment for motor vehicles and cycles (contd.)							
Electric audible warning signals for motor vehicles (horns, etc.)	..	1	..	..	34	..	16
Electrical indicating instruments, complete							
Speedometers	2	6	..				
Electric lighting and starting sets for motor vehicles (including lamps not sold separately, but not accumulators) and traffic indicators for motor vehicles (including parts	..	189	..	..	100	..	86
Cycle dynamo lighting sets complete with lamps	258	292	5				
Other electrical equipment for motor vehicles, except accumulators and sparking plugs	..	194	16				
Total electrical equipment for motor vehicles and cycles		1,125	..		207		159
Miscellaneous electrical goods and apparatus	Million						
Electric carbons, other than carbon electrodes for welding	7.2	103	..	..	8	..	8
Electric lamps and parts therefor, except motor and cycle lamps							
Arc lamps and electric searchlights, complete and parts therefor, except carbons	..	184	7	..	24	..	52

TABLE 9 (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Thous.	£'000	No.		£'000		£'000
Miscellaneous electrical goods and apparatus (contd.)							
Electric lamps and parts therefor, except motor and cycle lamps (contd.)							
Flashlight cases, complete (exclusive of bulbs and batteries therefor), other than for use on cycles	4,289	351	6				
Parts of flashlight cases	..	1	..				
Other lamps, with or without bulbs				..	450	..	307
Complete	266	482	34				
Parts, except bulbs	..	178	12				
Electric cooking apparatus and appliances							
Domestic and industrial cookers, and parts and accessories	..	295	8	Thous.			
Kettles	49	80	11				
Toasters	12	44	5	6	2	..	125
Other cooking appliances and parts	..	33	10	..	83		
Electrical heating apparatus, not elsewhere specified	Thous.	Th. kW.					
Complete							
Domestic							
Portable electric fires	21	21	17	20	28	32	
	15	..	20	..	37		
	..	..	48				
Tubular heaters	..	..	38	..		171	
Water heaters, including immersion heaters	1	3	14	5	..	127	
	..	..	9				
Other domestic heating apparatus	3	..	22	10			
	..	..	54				
Commercial	..	..	102	6	..	3	2
Industrial	2	1	4	..	..	6	24
	..	..	22				

TABLE 9 (contd.)

	1948 (a) Sales				1937 (b) Production		1935 (b) Production	
	Quantity		Value	Entries	Quantity	Value	Quantity	Value
	Thous.	Th. kW.	£'000	No.	Thous.	£'000	Thous.	£'000
Miscellaneous electrical goods and apparatus (contd.)								
Electrical heating apparatus, not elsewhere specified (contd.)								
Parts and accessories	..	..	208	11	-	-	-
Electric fans								
Desk and ceiling	-	-	-	-	..	1	..	
Other	10	..	17	6	..	1	..	
	..	..	89				2
Electric irons	152	..	170	36	..	43	..	
	..	..	165				17
Portable mechanical appliances, electrically operated								
Complete		Tons						
Vacuum cleaners	59	803	648	8	56	433	58	
	31	..	165				703	
Hair clippers, dry shavers and other appliances including food and drink mixers, dish washers and fruit juice extractors	..		155	12	-	-	-	
Parts	..		93	16	-	-	..	
Joint boxes	..		2,025	32	..	625	..	
Cable jointing materials and accessories except tape, cloth and other insulating materials	..		685	23	..	170	..	
Fittings for overhead transmission lines	..		424	7	..	188	..	
Capacitors, other than for power factor improvement, fixed and variable (including drives and couplings), and parts	..		283	10	..	379	..	

TABLE 9 (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000	Thous.	£'000
Miscellaneous electrical goods and apparatus (contd.)							
Transformers							
Instrument (potential and current)	69	11	..	21	5	3	-
Other (excluding power transformers)	35	20	15	-	-	-	-
Electricity meters							
House service meters							
Complete							
Prepayment type	44	160	..	39	121	40	120
Other	84	214	..	66	97	36	67
Parts	..	60	7	..	23	..	1
Other integrating meters, complete	2	12	..	..	4	..	2
Commercial electrical measuring instruments							
Complete							
Indicating, other than for motor vehicles	9	20	..	31	100	..	23
Recording, and other descriptions	0.6	31	5	0.6	20	..	33
Parts, excluding valves	..	4	..	..	10	-	-
Scientific instruments, electrical							
Pyrometers	2.3	67	10	0.1	2	..	97
Other, not elsewhere specified	4.8	16	40	..	135	..	..
Electro-medical apparatus, other than vacuum tubes and X-ray apparatus	0.4	39	14	..	45	..	49

TABLE 9 (contd.)

	1948 (a) Sales			1937 (b) Production		1935 (b) Production	
	Quantity	Value	Entries	Quantity	Value	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000	Thous.	£'000
Miscellaneous electrical goods and apparatus (contd.)							
X-ray apparatus, including X-ray tubes and X-ray rectifying valves, and parts	..	290	17	..	50	..	33
Magnets, permanent	6,520	482	11	..	347	..	319
Permanent hair-waving apparatus	..	50	7	..	8	..	10
Aircraft electrical equipment, parts and accessories, not elsewhere specified	..	105	..	-	-	-	-
Time switches	..	136	15	-	-	-	-
Other electrical goods and apparatus, including electrical totalisator apparatus	..	2,842	135	..	544	..	445
Electrical insulating materials, sold separately (other than complete insulators)							
Of mica	..	2	..	-	-	10	17
Other electrical insulating materials, including sleeving, other than rubber sleeving	..	483	11	..	89	..	29
Unclassified electrical insulating materials	65	62	7	..	19	-	-
Mica stampings and punchings, sold as such, (other than for electrical insulating purposes or stove and furnace plates and windows)	..	6	..	-	-	-	-
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		13,982	..		4,231		3,764

TABLE 9 (contd.)

	1948(a) Sales		1937(b) Production		1935(b) Production	
	Quantity	Value	Quantity	Value	Quantity	Value
		£'000	No.	£'000	£'000	£'000
Contract and other work carried out (d) (e)						
Contract work done as main contractors						
Installation and erection of generating plant and appliances		390	16	272	97	2
Other electrical contract work		64	16			
Electrical contract work done as sub-contractors		702	10			
Repair and maintenance work for customers		70	5			
Research and development work		1	..			
Other work done, including work done for the trade		747	57	94		55
Total contract and other work		1,974	..			
Less estimated value of goods made by firms and separately recorded as sold, which were used in this work		580	..	366		364
Total contract and other work exclusive of the value of goods made by firms and used in the work		1,394	..	366		364
Total		22,860	..	5,819		4,863

(a) Great Britain only.

(b) United Kingdom.

(c) The figures for 1937 and 1935 refer only to rectifiers, static, mercury vapour.

(d) Parts of vacuum cleaners only.

(e) The values shown for the various classes of work done are, for 1948, inclusive of all goods or materials used, but for 1937 and 1935 goods made by the firms and used by them in the work are excluded. The goods made and so used are included as output for each of the three years.

Sales (or production) in the trade of other than principal products
Larger establishments

TABLE 10

	1948(a) Sales	1937(b) Production	1935(b) Production
	£'000	£'000	£'000
Electric light bulbs	2,629	1,360	971
Telegraph and telephone apparatus	412	1,149	1,085
Other radio, telecommunication and electronic apparatus and parts	4,491	937	1,687
Batteries and accumulators	2,978	248	297
Electric wires and cables	170	1,224	807
Electric lighting accessories and fittings and electric bell apparatus	3,897	901	1,054
Electric clocks and parts	259	87	60
Portable power tools	222	68	52
Steam turbines	4,166	1,784	1,271
Condensers	871	273	235
Refrigerating machinery	1,379	202	207
Electric lifts, cranes, hoists, etc.	841	300	203
Welding machinery, electrical	780	73	51
Welding electrodes	362	79	37
Washing machines and parts	1,027	-	-
Other machinery and plant	6,670	856	314
Motor vehicles, motor-cycles, and parts and accessories	4,114	1,499	1,132
Scientific instruments	982	432	50
Electrical conduit tubes and fittings	79	208	154
Insulating materials			
Of moulded compositions	656	131	157
Cloth and tape	521	184	141
Iron and steel castings	857	94	115
Other manufactures of iron and steel	214	132	60
Manufactures of non-ferrous metals	1,099	1,020	207
Other tools and implements	247	78	-
Scrap metal sold			
Iron and steel	228	194	80
Copper	234	112	52
Brass	232	246	84
Other	602		
Naval, military and air force stores, etc.	338	-	-
Other goods	2,829	850	999
Work done (c)	319(c)		
Total	44,705	14,721	11,562

(a) Great Britain only. (b) United Kingdom. (c) Amount charged.

Analysis of sales, 1948

Larger establishments in Great Britain

TABLE 11

	Sales	Percentage of total sales
Sales (or transfers) to other organisations under the same control	£'000	
Productive works	4,551	2.2
Export sales organisations (including branches abroad)	5,379	2.6
Other wholesale or selling organisations	11,367	5.5
Retail shops, etc.	437	0.2
Total sales (or transfers) to other organisations under the same control	21,734	10.6
Sales to independent buyers		
Exports invoiced directly overseas	26,323	12.8
Exports invoiced to Crown Agents and purchasing houses in this country of individual firms and governments abroad	10,132	4.9
His Majesty's Government and Local Authorities (other than productive establishments)	23,300	11.3
Manufacturers, repairers, builders, mines, public utilities, and transport and other productive undertakings	81,189	39.5
Wholesalers, merchants and other agents for resale	30,206 (a)	14.7
Retailers, including multiple shops, caterers and N.A.A.F.I., for resale	9,466	4.6
Other businesses (including farmers) and institutions of all kinds	2,468	1.2
Members of the public, including employees	483	0.2
Total sales to independent buyers	183,567	89.4
Total	205,302 (b)	100.0

(a) Of this total £21,875,000 was recorded as divided between £2,379,000 for export and £13,496,000 for other sales.

(b) This total represents the total shown in Table 23 (£222,389,000) less the total value of the contract and other work carried out (£17,087,000).

Production, exports and imports of certain principal products (a)

TABLE 12

	Production (b) (c)	Exports (d)	Retained imports (e)
	£'000	£'000	£'000
Electrical machinery			
Generators			
Complete (including generating sets) 1948	8,067 (f)	5,740	500
Parts 1948	455 (f)	1,989	103
Total generators and parts 1948	8,521 (f)	7,730	603
1937	2,508	1,135	80
Motors			
Railway, tramway and trolleybus			
Complete { 1948 1,554		156	-
1937 834		134	6
Parts 1937 46			
Fractional horse-power motors (i.e., under 1 horse-power), sold or consigned separately			
Complete			
Not exceeding one-third h.p. 1948	4,838	1,049	59
Over one-third but under 1 h.p. 1948	2,450	648	54
Total fractional horse-power motors,			
Complete { 1948 7,287		1,696	114
1937 969		131	198
Parts 1937 59			
Other motors of 1 h.p. and over			
1 - 250 h.p.			
Complete { 1948 17,832		4,686	126
1937 5,177		1,040	153
Parts 1937 238			
Exceeding 250 h.p.			
Complete { 1948 1,530		602	10
1937 879		196	2
Parts 1937 43			
Parts of motors of all types 1948	1,687	647	95
Total motors and parts { 1948 30,391 (g)		7,787	344
1937 8,245		1,501	359

TABLE 12 (contd.)

		Production (b) (c)	Exports (d)	Retained imports (e)
		£'000	£'000	£'000
Electrical machinery (contd.)				
Rotary converters and other converting machinery, and parts	{ 1948 1937	448 243	102 96	- 12
Power transformers, and parts	{ 1948 1937	10,712 3,805	3,906(h) 723	32(h) 50
Starting and controlling gear for electric motors, and parts	{ 1948 1937	12,590 3,939	1,728 454	12 23
Switchgear and switchboards (other than telegraph and telephone)	{ 1948 1937	22,195 8,631	6,789 1,584(1)	47 82(1)
Magnetos, ignition, and parts				
For motor vehicles and cycles	{ 1948 1937	895 175	121 10	8 69
Other	{ 1948 1937	813 363	68 18	25 2
Electrical equipment for motor vehicles and cycles				
Cycle dynamo lighting sets complete with lamps	1948	Th.sets 1,102	Th.sets 474	Th.sets 24
Miscellaneous electrical goods and apparatus				
Electric lamps and lighting appliances and parts thereof				
Arc lamps and electric search-lights, complete	{ 1948 1937	£'000 344 231	£'000 60 27	£'000 5 20
Electric cooking and heating apparatus and appliances				
Cooking apparatus and appliances and parts (j)	1948	8,523	1,772	15
Heating apparatus				
Complete (k)	1948	3,473	866	36
Parts and accessories (l)	1948	1,515	412	45
Total electric cooking and heating apparatus and appliances	{ 1948 1937	13,511 4,432	3,050 341	96 171

TABLE 12 (contd.)

		Production (b) (c)	Exports (d)	Retained imports (e)
		Thous.	Thous.	Thous.
Miscellaneous electrical goods and apparatus (contd.)				
Electric desk and ceiling fans	1948	118	96	..
Electric irons	1948	£'000 1,806	£'000 393	..
Portable mechanical appliances, electrically operated				
Vacuum cleaners				
Complete	{ 1948 1937	718 512	191 55	3 27
Parts	1948	£'000 1,225	£'000 149	£'000 12
Other sorts				
Complete		Thous.	Thous.	Thous.
Hair clippers and dry shavers	1948	130	43	-
Other appliances including food or drink mixers, dish washers, and fruit juice extractors	1948	£'000 1,001	£'000 596	£'000 13
Parts	1948	62	21	73
Electricity meters; and commercial electrical measuring instruments				
House service meters				
Complete		Thous.	Thous.	Thous.
Prepayment type	{ 1948 1937	102 433	4 4	- 19
Other	{ 1948 1937	1,549 1,129	751 163	- 4
Parts	{ 1948 1937	£'000 353 190	£'000 55 14	£'000 63 118
Other integrating meters; and commercial measuring instruments (other than indicating instruments for motor vehicles), and parts thereof				
	{ 1948 1937	3,550 1,236	1,038 174	35 70
Electro-medical apparatus, other than X-ray tubes, X-ray valves and vacuum tubes				
X-ray apparatus and parts	1948	1,357	584	200
Other	1948	1,021	346	86
Total electro-medical apparatus, other than X-ray tubes, etc.	{ 1948 1937	2,378 326	931 36	286 123

TABLE 12 (contd.)

		Production (b) (c)	Exports (d)	Retained imports (e)
		£'000	£'000	£'000
Miscellaneous electrical goods and apparatus (contd.)				
Magnets, permanent	{ 1948	1,405	184	1
	{ 1937	525	65	1
		Mill.lin.ft.	Mill.lin.ft.	Mill.lin.ft.
Electrical insulating materials				
Insulating sleeving, other than rubber sleeving (m)	{ 1948	92.0	60.5	10.6
	{ 1937	36.8	1.4	20.1

- (a) Figures of sales (or production) refer only to larger establishments in Great Britain (1948) or the United Kingdom (1937). All recorded exports from and imports into the United Kingdom are given in the table. The figures, therefore, are not strictly comparable.
- (b) Sales in 1948 and production for sale in 1937.
- (c) Including sales (or production) by establishments classified to other trades.
- (d) Valued f.o.b.
- (e) Valued c.i.f.
- (f) Excluding electric generating sets.
- (g) Including £501,000 recorded as unclassified motors, other than traction.
- (h) Described as "Transformers for lighting, heating and power, including coils".
- (i) Described as "Switchgear".
- (j) The overseas trade figures relate to cooking apparatus and heating elements therefore.
- (k) The overseas trade figures relate to heating apparatus and heating elements therefore.
- (l) The overseas trade figures relate to parts and accessories for cooking and heating apparatus, other than heating elements.
- (m) The overseas trade figures include rubber sleeving.

Purchased materials and fuel

Larger establishments

TABLE 13

	1948(a)		1937(b)		1935(b)	
	Materials and fuel purchased		Usage of purchased materials and fuel			
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Materials	Th. tons	£'000	Th. tons	£'000	Th. tons	£'000
Iron and steel						
Angles, shapes and sections, of iron and non-alloy steel	14.0	370	23.7	367 (c)	..	(d)
	..	65				
Bars and rods						
Alloy steel	4.2	363	38.5	709	..	(d)
Iron and non-alloy steel	33.9	960				
	..	158				
Sheets and strip, of alloy steel	20.0	981				
Plates and sheets, of iron and non-alloy steel	108.9	3,600	127.8	2,430 (e)	92.7	1,483 (f)
Wire of iron and non-alloy steel	2.1	113	4.2	95 (c)	4.3	76 (g)
	..	27				
Iron castings, in the rough	55.1	3,679	73.2	2,111 (h)	55.0	1,350 (h)
Steel castings and forgings, in the rough						
Alloy steel	3.0	316	9.7	504 (i)	10.7	338 (j)
Non-alloy steel	13.4	1,286				
Machined castings, iron and steel (including alloy steel)	1.6	139	..	(d)	..	(d)
	..	85				
Hoop and strip (including tape), of iron and non-alloy steel	6.3	255				
Other descriptions, except finished parts						
Alloy steel	5.1	424	..	65 (k)	..	(d)
	..	54				
Iron and non-alloy steel	21.1	793				
	..	193				
Unclassified						
Alloy steel	..	790				
Iron and non-alloy steel	..	2,107				

TABLE 13 (contd.)

	1948 (a)		1937 (b)		1935 (b)	
	Materials and fuel purchased		Usage of purchased materials and fuel			
	Quantity	Cost	Quantity	Cost	Quantity	Cost
	Th. cwts.	£'000	Th. cwts.	£'000	Th. cwts.	£'000
Materials (contd.)						
Aluminium and aluminium alloys						
Plates, sheets, strip and circles	51.8	322				
	..	33				
Extruded tubes, bars, sections and wire	24.8	183				
	..	21				
Castings and forgings, rough dressed	192.8	1,714	..	(d)	..	(d)
Foil	5.8	113				
Other descriptions, except finished parts	26.7	158				
	..	43				
Unclassified	..	359				
Brass (including all alloys of copper other than nickel alloys)						
Plates, sheet and strip	125.7	999	127.2	460		
Castings	79.8	939	67.3	320	183.0	622 (1)
Other descriptions, except finished parts	134.5	1,124	127.8	499		
	..	160				
Unclassified	..	1,479	..	(d)	..	(d)
Copper						
Plates, sheets and strip	242.3	2,239	325.0	1,593		
Ingots, bars, billets, cathodes and anodes	17.4	142				
Wire, cables and flexibles uninsulated	34.4	369				
	..	40				
Wire rods	11.1	130	293.1	1,426	527.4	1,937 (1)
Other descriptions, except finished parts	163.9	1,531				
Unclassified	..	692	-	-		
Lead and alloys of lead (m)						
Pig, ingots, blocks, bars, slabs and cakes	6.3	39	160.9	205 (1)		
Sheet	1.5	8	17.1	27		
	..	9				
Solder	11.6	117	..	(d)	271.7	209 (1)

TABLE 13 (contd.)

	1948 (a)		1937 (b)		1935 (b)	
	Materials and fuel purchased		Usage of purchased materials and fuel			
	Quantity	Cost	Quantity	Cost	Quantity	Cost
	Th. cwts.	£'000	Th. cwts.	£'000	Th. cwts.	£'000
Materials (contd.)						
Lead and alloys of lead (m) (contd.)						
Other descriptions	7.9	56	..	(d)		
	..	26				
Unclassified	..	23	-	-		
Tin in all forms, except finished parts	6.4	139	..	(d)	..	(d)
Zinc and alloys of zinc	34.7	238				
	..	41				
Fractional horse-power motors						
Not exceeding one-third h.p.						
Alternating current	H.p.	Thous.				
	4,859	22.8	111			
Direct current and universal	1,664	14.6	37	13,873	113.0	110
	..	19.1	35			
Over one-third but under 1 h.p.						
Alternating current	1,456	2.8	24			
	..	0.3	5	474	0.7	4
Direct current and universal	221	0.4	5			
	..	0.8	7			
Unclassified	..	..	30	-	-	-
Porcelain	42.2	460	142.5	511	94.8	332
	..	1,029			..	89
Paper, excluding packing and wrapping	82.2	647	55.6	184	43.9	138
	..	226				
Rubber						
Tubing	1.3	14	12.1	87	13.6	55
	..	18				
Other descriptions	14.1	211				
	..	126				
Synthetic resins						
Lump and powder, including moulding powder	75.2	603	42.0	175	36.8	138
All other forms	22.7	170	14.4	193	8.2	97
	..	293				

TABLE 13 (contd.)

	1948 (a)		1937 (b)		1935 (b)	
	Materials and fuel purchased		Usage of purchased materials and fuel			
	Quantity	Cost	Quantity	Cost	Quantity	Cost
	Thous.	£'000		£'000		£'000
Materials (contd.)						
Valves, electronic, other than X-ray valves						
Complete						
Transmitting and industrial						
Not exceeding 50 watts anode dissipation	79.6	34				
Over 50 watts anode dissipation	3.1	16				
..	..	17				
Other electronic valves, including rectifying valves and stabilising tubes	40.1	23				
..	..	18				
Unclassified	..	30	..	34	..	133
Parts	..	6				
Cathode ray tubes, complete	2.3	9				
..	..	2				
Radio and television parts and accessories, not elsewhere specified	..	166				
Packing materials	..	2,690	..	542	..	(d)
Glass	Th.cwts.					
Rod and tube	13.2	130				
Blown	..	36				
Other descriptions	8.9	118				
..	..	285				
Unclassified	..	59				
Mica						
Block	6.4	488				
Splittings	13.7	423	..	(d)	..	(d)
..	..	204				
Built-up ("Micanite")	3.8	265				
..	..	118				
Unclassified	..	296				
Shellac, except shellac varnish	2.3	38				
..	97.8	539				
Th.galls.	348.4	321				
..	..	337				
Paint, enamel and varnish						

TABLE 13 (contd.)

	1948 (a)		1937 (b)		1935 (b)	
	Materials and fuel purchased		Usage of purchased materials and fuel			
	Quantity	Cost	Quantity	Cost	Quantity	Cost
	Th.cwts.	£'000		£'000		£'000
Materials (contd.)						
Ceramics, other than porcelain	26.8	218				
..	..	273				
Bitumen and bitumastic compound	32.1	50				
..	..	33				
Cotton yarn and thread	1,230	456				
..	..	203				
Silk yarn, thread and cloth	59.5	59				
..	..	93				
Rayon, nylon, etc. yarn, thread and cloth	27.6	12				
..	..	27				
Insulated wires	..	6,907				
Accumulators, complete	63.9	128				
Batteries, complete	..	63				
Magnets, permanent	3,444	294				
..	..	53				
Nickel compounds for plating	2.6	21	..	19,351	..	15,446 (0)
..	..	5				
Chromium compounds for plating	0.9	8				
..	..	2				
Timber (excluding timber used for making into cases, etc., or for repairing returnable cases)	Th.cu.ft.					
Hardwood	58.6	44				
..	..	24				
Softwood	1.7	119				
Plywood and veneers	526.5	51				
..	..	90				
Unclassified	..	9				
Purchased components, not elsewhere specified	..	29,320				
Replacement parts for firms' machinery, other than machined castings	..	1,053				
Consumable tools bought as replacement	..	1,671				
All other materials	..	16,587				
Unclassified materials	..	403				

TABLE 13 (contd.)

	1948 (a)		1937 (b)		1935 (b)	
	Materials and fuel purchased		Usage of purchased materials and fuel			
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Fuel and electricity	Th. tons	£'000	Th. tons	£'000	Th. tons	£'000
Coal	284.1	768	239.7	251	198.5	177
Coke	60.6	259	44.6	78	50.3	73
Electricity purchased (p)	Th. B. T. U. (kW.hrs.)		Th. B. T. U. (kW.hrs.)		Th. B. T. U. (kW.hrs.)	
From public supply	452,577	1,746	279,258	608	182,823	475
From other sources	1,122	5				
Electricity obtained from other works under the same ownership	803	4				
Motor spirit (petrol) and deriv. fuel	Th. galls.		Th. galls.		Th. galls.	
Used for road vehicles	1,300	125	..	(d)	..	(d)
Used for other power purposes	488	27				
Other oil fuel (including creosote/pitch mixtures)	10,825	517	3,152	59 (q)	2,142	48 (q)
Gas purchased	Th. therms		..	231	..	(d)
From public supply	16,168 Th. cu. ft. 277,115	546 34				
From other sources	168 Th. cu. ft. 2,224	7 1				
All other purchased fuel	..	27				
Materials and fuel unclassified	..	160	-	-	-	-
Total		103,460		33,229		23,216

- (a) Great Britain only.
 (b) United Kingdom.
 (c) Including alloy steel.
 (d) Not recorded separately.
 (e) Described as "Iron and steel plates and sheets".
 (f) Steel plates and sheets.
 (g) Steel wire and tape.
 (h) Described as "Iron and steel castings".
 (i) Described as "Iron and steel forgings".
 (j) Described as "Steel forgings".
 (k) So far as recorded separately.
 (l) Described as "in all forms".
 (m) Lead only in 1937 and 1935.
 (n) Pig lead.
 (o) Including fuel not specified separately.
 (p) The total quantity of electricity consumed in 1948 was 477,383,000 B.T. units, including 22,880,000 generated in the same works.
 (q) Described as "Heavy fuel oil".

Stocks of finished products and work in progress and stocks of materials and fuel, 1948

Larger establishments in Great Britain

TABLE 14

	At beginning of year		At end of year	
	Quantity	Value	Quantity	Value
		£'000		£'000
Finished products	..	8,615	..	11,897
Work in progress		42,582		48,197
Total finished products and work in progress		51,196		60,094
Materials and fuel	Th. tons		Th. tons	
Alloy steel in all forms, except finished parts	15.7 ..	934 238	18.3 ..	1,178 279
Iron and non-alloy steel in all forms, except finished parts	65.4 ..	2,437 548	65.0 ..	2,572 635
	Th. cwts.		Th. cwts.	
Brass in all forms, except finished parts	150.7 ..	1,035 170	146.7 ..	1,186 206
Copper in all forms, except finished parts	207.0 ..	1,971 454	228.4 ..	2,387 463
Lead and alloys of lead in all forms	5.4 ..	34 15	4.4 ..	29 13
Other descriptions of materials and fuel	..	18,014	..	20,343
Unclassified	..	2,980	..	3,825
Total materials and fuel		28,830		33,117

ENGINEERING, SHIPBUILDING AND ELECTRICAL GOODS

Employment and remuneration (a)

Larger establishments

TABLE 15

	Average number of operatives			Administrative, technical and clerical employees (b)			Total		
	1948 (c)	1937 (d)	1935 (d)	1948 (c)	1937 (d)	1935 (d)	1948 (c)	1937 (d)	1935 (d)
Males									
Under 18	8,853	19,274	16,679	1,062	2,394	1,380	9,915	21,638	18,059
All ages	134,777	98,544	86,665	39,249	28,965	22,399	174,026	127,509	109,064
Females									
Under 18	3,550	9,170	8,824	3,019	3,547	1,931	6,569	12,717	10,755
All ages	62,347	37,489	30,956	22,110	12,323	8,937	84,457	49,812	39,893
Total									
Under 18	12,403	28,444	25,503	4,081	5,941	3,311	16,484	34,385	28,814
All ages	197,124 (e)	136,033	117,621	61,359 (f)	41,288	31,336	258,483 (f) (g) (h)	177,321	148,957
Total remuneration	£'000 55,344	..	..	£'000 24,150	..	..	£'000 19,495	..	..

(a) Excluded employees. The following numbers were employed at establishments in this trade but are not included in the table or in any other report (e.g., employees in a separate selling or transport organisation for which separate accounts are kept):-

Canteen workers	144 males	2,405 females
Other workers	331 males	275 females

(b) Number at September 25, 1948, October 16, 1937, and October 12, 1935.

(c) Great Britain only.

(d) United Kingdom.

(e) Including 3,280 operatives employed in outside work of erection, fitting, etc.

(f) There were, in addition, 78 working proprietors (75 males and 3 females) in 1948. Working proprietors are included in the 1937 and 1935 figures.

(g) The employers' share of contributions to all National Insurance Schemes payable during the year in respect of these workers amounted to £2,000,000.

(h) The following persons (included in this total) were employed on special work by establishments employing 100 or more persons:-

	Operatives	Administrative, technical and clerical employees
Transport of goods outside the premises	841	
Maintenance and repair of firms' buildings, but not plant	1,367	
Research work not directly connected with current production however charged	869	2,034

In addition to the employees in the above table the firms in this trade employed 21 male and 536 female outworkers in 1948, the amount paid to them being £48,000. Similar information is not available for 1937 and 1935.

ELECTRICAL ENGINEERING (GENERAL)

Wages and salaries paid, 1948 (a)

Larger establishments in Great Britain

TABLE 16

	Amount paid by all establishments	Establishments making returns for the calendar year					
		Amount paid	Percentage of annual remuneration paid in				
			First quarter	Second quarter	Third quarter	Fourth quarter	Year
Wages and salaries of Operatives	£'000 55,344	£'000 30,823	24.6	25.0	23.7	26.7	100.0
Administrative, technical and clerical employees	24,150	14,634	25.4	24.2	24.0	26.3	100.0
Total	79,495	45,457	24.9	24.7	23.8	26.6	100.0

(a) Including bonus and commission payments.

TABLE 17 - Payments for work done on materials given out, 1948

Larger establishments in Great Britain

The total amount paid for work done on materials given out was £2,385,000.

Payments for certain services, 1948

Larger establishments in Great Britain

TABLE 18

	Amount paid
	£'000
Repair and maintenance	
Of buildings	762
Of plant, machinery and vehicles	1,187
Unclassified	522
Hire of plant, machinery and vehicles	186
Advertising and market research	
Advertising in newspapers, magazines and periodicals	309
Other advertising services (poster display, despatch of circulars, etc.) and market research	204
Unclassified	637
Payments made for research work	
To research associations	36
To universities, institutions, academic bodies and similar agencies	6
To other commercial concerns	69
Postage, telephone, telegrams and cables	739
Commercial insurance premiums	606
Rates (excluding water rates) payable in the year	304

Plant, machinery and vehicles acquired and disposed of, 1948

Larger establishments in Great Britain

TABLE 19

	Acquisitions		Disposals
	New	Second-hand	
	£'000	£'000	£'000
Plant and machinery	5,187	484	216
Vehicles	333	107	77
Total	5,500	591	293

Capital expenditure on building work and changes in occupation of buildings and land, 1948

Larger establishments in Great Britain

TABLE 20

	£'000	£'000
1. Capital expenditure on building work (a)		2,088
2. Existing buildings and land (b)		
(1) Capital cost of freeholds bought	134	
Estimated capital value of		
(11) Rented property newly occupied in the year (c)	850	
(111) Leasehold buildings and land newly occupied in the year	419	
Total of heading 2		1,403
Total of headings 1 and 2		3,491
3. Existing buildings and land relinquished (d)		
(1) Selling value of freeholds sold	178	
(11) Estimated value of other properties relinquished	203	
Total of heading 3		381
4. Headings 1 and 2 less heading 3		3,110

- (a) Excluding site value which, where appropriate, is included in heading 2 (1).
 (b) The figures do not reflect changes in ownership of previously occupied land and buildings.
 (c) Property which is occupied under an agreement for the payment of rent without the purchase of a lease or the payment of a premium.
 (d) Including property destroyed or abandoned.

Summary
Larger establishments

TABLE 21

	England	Wales	Scotland	Great Britain
	£'000	£'000	£'000	£'000
Gross output (production)	220,145	2,927	6,720	229,791
Cost of materials and fuel used	94,291	1,504	3,378	99,173
Payment for work done on materials given out	2,337	8	41	2,385
Net output	123,517	1,414	3,301	128,233
Wages and salaries of persons employed	76,365	1,158	1,974	79,495
	No.	No.	No.	No.
Average number of persons employed (a)	246,840	4,534	7,187	258,561
	£	£	£	£
Net output per person employed (a)	£500	£312	£459	£496
Stocks at end of year	£'000	£'000	£'000	£'000
Finished products and work in progress	57,906	624	1,563	60,094
Materials and fuel	30,844	840	1,432	33,117
	No.	No.	No.	No.
Number of establishments	812	31	49	892

(a) Excluding outworkers.

The values of gross output and of materials and fuel used are derived in the following way:-

	England	Wales	Scotland	Great Britain
	£'000	£'000	£'000	£'000
Output of firms in this trade				
Total value of sales (see Table 23)	213,268	2,698	6,424	222,389
Adjustment for changes in stocks and work in progress	+ 8,325	+ 244	+ 328	+ 8,897
Less payment for transport by other firms	1,447	15	32	1,495
Gross output (production)	220,146	2,927	6,720	229,791
Materials and fuel used by firms in this trade				
Purchases (see Table 24)	98,398	1,550	3,512	103,460
Adjustment for changes in stocks	- 4,107	- 45	- 134	- 4,286
Materials and fuel used	94,291	1,504	3,378	99,173

Summary
Small firms

TABLE 22

	England	Wales	Scotland	Great Britain
Number of returns	888	20	66	972
Average number of persons employed (a)				
Males	4,112	91	363	4,566
Females	980	13	40	1,033
Total	5,092	104	403	5,599

(a) Including working proprietors.

Sales in the trade
Larger establishments

TABLE 23

Kind of output (1) Complete machines (11) Replacement parts	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
	No.	£'000	No.	£'000	No.	£'000
Principal products						
Electrical machinery						
Generators						
Alternating current						
Not exceeding 1,000 kVA.	{ (1) .. (11) ..	(a) .. (a) ..	.. (a) .. (a)	.. (a) .. (a)	5,832	2,280 .. 64 .. 68 ..
1,001-5,000 kVA.	{ (1) .. (11) ..	(a) .. (a) ..	.. (a) .. (a)	.. (a) .. (a)	84	399 .. 23 ..
5,001-10,000 kVA.	{ (1) 28 (11) ..	371 .. 18 ..	- .. - ..	-- .. -- ..	28	371 .. 18 ..
10,001-30,000 kVA.	{ (1) 31 (11) ..	1,246 .. 54 ..	- .. - ..	- .. - ..	31	1,246 .. 54 ..
Over 30,000 kVA.	{ (1) 18 (11) ..	1,112 .. 69 ..	- .. - ..	- .. - ..	18	1,112 .. 69 ..
Direct current						
Not exceeding 1,000 kW.	{ (1) .. (11) ..	(a) .. (a) ..	.. (a) .. (a)	.. (a) .. (a)	13,141	1,596 .. 441 .. 146 ..
1,001-5,000 kW.	{ (1) .. (11) ..	(a) .. (a) ..	.. (a) .. (a)	.. (a) .. (a)	.. .. .. ..	186 .. 5 ..
Petrol-diesel-electric generating sets and steam driven electric generating sets (b) (1) and (11)	..	(a)	..	(a)	..	420
Motors						
Railway, tramway, trolley bus and other traction (1) and (11)	..	2,252	-	-	..	2,252
Fractional horsepower, alternating and direct current and universal (A.C. or D.C.)	{ (1) .. (11) ..	(a) .. (a) ..	.. (a) .. (a)	.. (a) .. (a)	1,418,372	7,051 .. 249 ..

TABLE 23 (contd.)

Kind of output (1) Complete machines (11) Replacement parts	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
	No.	£'000		£'000	No.	£'000
Principal products (contd.)						
Electrical machinery (contd.)						
Motors (contd.)						
Other motors of 1 h.p. and over						
Alternating current	{ (1) .. (11) ..	{ (a) .. (a) ..	{	{ (a) .. (a) ..	503,555 ..	15,309 616
Direct current						
1-50 h.p.	{ (1) .. (11) ..	{ (a) .. (a) ..	{	{ (a) .. (a) ..	32,268 ..	2,430 201
51-250 h.p.	(1) ..	(a) ..	..	(a) ..	1,105	584
251-5,000 h.p.	(1) ..	(a) ..	..	(a) ..	85	359
51-5,000 h.p.	(11) ..	(a) ..	..	(a) ..	..	116
Motors, other than traction, A.C. and D.C., unclassified	{ (1) .. (11) ..	{ 76 15	{ - -	{ - -	.. ..	76 15
Rotary converters and other converting machinery	{ (1) .. (11) ..	{ (a) .. (a) ..	{	{ (a) .. (a) ..	8,200	360 21 60
Rectifiers, static	{ (1) .. (11) ..	{ (a) .. (a) ..	{	{ (a) .. (a) ..	29,538	1,173 178 137
Power transformers						
Not exceeding 800 kVA.						
801-30,000 kVA.	(1) ..	(a) ..	..	(a) ..	117,712	5,613
Not exceeding 30,000 kVA.						
Over 30,000 kVA.	{ (1) .. (11) ..	{ (a) .. (a) ..	{	{ (a) .. (a) ..	24 ..	435 114
Current limiting reactors	{ (1) 197 (11) ..	{ 121 2	{ - -	{ - -	197 ..	121 2
Starting and controlling gear for electric motors	{ (1) 31,407 (11) ..	{ 10,116 1,013 827	{ Tons 677	{ 308 38 24	32,084	10,424 1,051 851
Switchgear and switchboards (other than telegraph and telephone)	{ (1) 48,594 (11) ..	{ 17,632 2,562 621	{ 767	{ 232 40 19	49,361	17,864 2,603 640
Magnetos, ignition, other than for motor vehicles	{ (1) 7 (11) ..	{ 46 .. 59 165	{ .. - -	{ - - -	Thous. 7 25	46 .. 59 165
Fuses and fuse gear	{ (1) .. (11) ..	{ (a) .. (a) ..	{	{ (a) .. (a) ..	Tons 14,041	4,065 1,047 326

TABLE 23 (contd.)

Kind of output (1) Complete machines (11) Replacement parts	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
	Thous.	£'000		£'000	Thous.	£'000
Principal products (contd.)						
Electrical machinery (contd.)						
Capacitors for power factor improvement	{ (1) 488 (11) ..	{ 402 2	{ - -	{ - -	488 ..	402 2
Reconditioned electrical machinery (b)	(1) ..	617	-	-	..	617
Other electrical machinery	{ (1) .. (11) ..	{ 766 129	{ - -	{ - -	.. ..	766 129
Total electrical machinery		88,778		3,056		91,833
Electrical equipment for motor vehicles and cycles						
Ignition apparatus, other than sparking plugs, including parts	..	1,404	-	-	..	1,404
Lamps for cycles, sold separately	{ 1,388 ..	{ 122 104	{ - -	{ - -	{ 1,388 ..	{ 122 104
Electric audible warning signals for motor vehicles (horns, etc.)	..	731	-	-	..	731
Electrical indicating instruments, complete						
Speedometers	4	14	-	-	4	14
Other descriptions	51	34	-	-	51	34
Electric lighting and starting sets for motor vehicles (including lamps not sold separately, but not accumulators) and traffic indicators for motor vehicles (including parts)	Th.sets ..	9,674	-	-	Th.sets ..	9,674
Cycle dynamo lighting sets complete with lamps (b)	844	752	-	-	844	752
Other electrical equipment for motor vehicles, except accumulators and sparking plugs (b)	..	4,118	-	-	..	4,118
Total electrical equipment for motor vehicles and cycles		16,953		-		16,953
Miscellaneous electrical goods and apparatus						
Electric carbons, other than carbon electrodes for welding	..	(a)	..	(a)	Million 467.1 ..	2,342 1,008

TABLE 23 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Value £'000	Quantity	Value £'000	Quantity	Value £'000
Principal products (contd.)						
Miscellaneous electrical goods and apparatus (contd.)						
Electric lamps and parts thereof, except motor and cycle lamps						
Arc lamps and electric searchlights, complete, and parts therefor except carbons	.. Thous.	165	-	-	.. Thous.	165
Flashlight cases, complete (exclusive of bulbs and batteries therefor), other than for use on cycles	1,868	163	-	-	1,868	163
Parts of flashlight cases	..	32	-	-	..	32
Other lamps, with or without bulbs, complete	2,210 ..	1,340 184	-	-	2,210 ..	1,340 184
Parts, except bulbs	..	160	-	-	..	160
Electric cooking apparatus and appliances						
Domestic and industrial cookers, and parts and accessories	..	(a)	..	(a)	..	5,918
Kettles	449	757	-	-	449	757
Toasters	75 ..	111 30	-	-	75 ..	111 30
Other cooking appliances and parts	..	(a)	..	(a)	..	1,255
Electrical heating apparatus, not elsewhere specified					Thous. Th. kW.	
Complete						
Domestic						
Portable electric fires	..	(a)	..	(a)	207 17 ..	358 33 68
Tubular heaters	..	(a)	..	(a)	40	21 51 17
Water heaters, including immersion heaters	..	(a)	..	(a)	218 46 ..	403 425 37
Other domestic heating apparatus	..	(a)	..	(a)	94 189 ..	127 43 105
Commercial	..	(a)	..	(a)	3 4 ..	67 32 68

TABLE 23 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Value £'000	Quantity	Value £'000	Quantity Thous. Th. kW.	Value £'000
Principal products (contd.)						
Miscellaneous electrical goods and apparatus (contd.)						
Electrical heating apparatus, not elsewhere specified (contd.)						
Complete (contd.)						
Industrial	..	(a)	..	(a)	77 33 ..	122 147 94
Parts and accessories	..	1,272	..	34	..	1,306
Electric fans	Thous. Tons					
Desk and ceiling	81 37	1,042 ..	511 134	-	81 37	1,042 134
Other	..	..	(a)	..	78 33 ..	1,760 278 316
Electric irons	..	..	(a)	..	1,095 ..	1,161 110
Portable mechanical appliances, electrically operated						
Complete						
Vacuum cleaners	..	..	(a)	..	566 62	5,761 518
Hair clippers, dry shavers and other appliances, including food and drink mixers, dish washers, and fruit juice extractors	..	..	(a)	..	..	1,202
Parts	..	..	(a)	..	..	1,193
Joint boxes	..	..	(a)	..	..	229
Cable jointing materials and accessories, except tape, cloth and other insulating materials	..	..	(a)	..	..	207
Fittings for overhead transmission lines	..	396	-	-	..	396
Capacitors, other than for power factor improvement, fixed and variable (including drives and complings), and parts	..	2,593	-	-	..	2,593
Transformers						
Instrument (potential and current)	Thous. 72	495	-	-	Thous. 72	495
Other (excluding power transformers)	..	..	(a)	..	249 ..	582 548

TABLE 23 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
	Thous.	£'000		£'000	Thous.	£'000
Principal products (contd.)						
Miscellaneous electrical goods and apparatus (contd.)						
Electricity meters						
House service meters						
Complete						
Prepayment type	58	439	-	-	58	439
Other	..	(a)	..	(a)	1,465	4,343
Parts	..	293	-	-	..	293
Other integrating meters						
Complete	76	426	-	-	76	426
Parts	..	56	-	-	..	56
Commercial electrical measuring instruments						
Complete						
Indicating, other than for motor vehicles	..	(a)	..	(a)	723	2,256
Recording and other descriptions	36.1	359	-	-	36.1	359
	..	129			..	129
Parts, excluding valves	..	214	-	-	..	214
Scientific instruments, electrical						
Pyrometers	..	(a)	..	(a)	6.1	141
					..	89
Other, not elsewhere specified	..	(a)	..	(a)	270.4	114
					..	637
Electro-medical apparatus, other than vacuum tubes and X-ray apparatus	15.7	352	-	-	15.7	352
	..	418			..	418
X-ray apparatus, including X-ray tubes and X-ray rectifying valves, and parts	..	1,244	-	-	..	1,244
Coils, ignition, complete, other than for motor vehicles	6	18	-	-	6	18
	..	6			..	6
Magnets, permanent	6,439	525	-	-	6,439	525
	..	68			..	68
Permanent hair-waving apparatus	..	241	-	-	..	241
Aircraft electrical equipment, parts and accessories, not elsewhere specified	..	668	-	-	..	668

TABLE 23 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
	Tons	£'000		£'000	Tons	£'000
Principal products (contd.)						
Miscellaneous electrical goods and apparatus (contd.)						
Time switches	103	385	-	-	103	385
	..	178			..	178
Other electrical goods and apparatus, including electrical totalisator apparatus	..	6,676	..	139	..	6,815
Electrical insulating materials, sold separately (other than complete insulators)						
Of mica	..	(a)	..	(a)	140	350
					..	590
Of built-up mica "Micanite")	550	655	-	-	550	655
	..	106			..	106
Other electrical insulating materials, including sleeving other than rubber sleeving (c)	..	1,179	-	-	..	1,179
Mica stampings and punchings, sold as such, other than for electrical insulating purposes						
Stove and furnace plates and windows	..	(a)	..	(a)	1,913	30
					..	6
Other	..	(a)	..	(a)	2,000	46
					..	30
Ground mica, so far as recorded separately; and waste products, other than scrap metals	..	(a)	..	(a)	..	146
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		55,546		2,123		57,669
Contract and other work carried out (d)						
Contract work done as main contractors						
Installation and erection of generating plant and appliances		(a)		(a)		6,553
Other electrical contract work		889		180		1,069
Electrical contract work done as sub-contractors						
Work on buildings		101		-		101
Other contract work		(a)		(a)		143

TABLE 23 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
		£'000		£'000		£'000
Principal products (contd.)						
Contract and other work carried out (contd.)						
Repair and maintenance work for customers		5,899		366		6,265
Research and development work (b)		(a)		(a)		1,545
Other work done, including work done for the trade		1,069		24		1,093
Total contract and other work		15,973		795		16,768
Less estimated value of goods made by firms and separately recorded as sold, which were used in this work		5,519		20		5,539
Total contract and other work exclusive of the value of goods made by firms and used in the work		10,455		775		11,230
Total principal products		171,731		5,954		177,684
Other output						
Electric light bulbs	..	2,629	-	-	..	2,629
Telegraph and telephone apparatus	..	412	-	-	..	412
Other radio, telecommunication and electronic apparatus and parts	..	4,457	..	34	..	4,491
Batteries and accumulators	..	2,976	..	3	..	2,978
Electric wires and cables	..	170	-	-	..	170
Electric lighting accessories and fittings and electric bell apparatus	..	3,894	..	3	..	3,897
Electric clocks and parts	..	259	-	-	..	259
Portable power tools	..	222	-	-	..	222
Steam turbines	..	(a)	..	(a)	..	4,166
Condensers	..	871	-	-	..	871
Refrigerating machinery	..	(a)	..	(a)	..	1,379
Electric lifts, cranes, hoists, etc.	..	(a)	..	(a)	..	341
Welding machinery, electrical	..	(a)	..	(a)	..	780
Welding electrodes	..	362	-	-	..	362
Washing machines and parts	..	1,027	-	-	..	1,027

TABLE 23 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Value	Quantity	Value	Quantity	Value
		£'000		£'000		£'000
Other output (contd.)						
Other machinery and plant	..	6,579	..	91	..	6,670
Motor vehicles, motor cycles, and parts and accessories	..	4,114	-	-	..	4,114
Scientific instruments	..	(a)	..	(a)	..	982
Electrical conduit tubes and fittings	..	(a)	..	(a)	..	79
Insulating materials						
Of moulded compositions	..	656	-	-	..	656
Cloth and tape	..	521	-	-	..	521
Iron and steel castings	..	857	-	-	..	857
Other manufactures of iron and steel	..	204	..	11	..	214
Manufactures of non-ferrous metals	..	1,099	-	-	..	1,099
Other tools and implements	..	(a)	..	(a)	..	247
Scrap metal sold						
Iron and steel	..	222	..	6	..	228
Copper	..	228	..	5	..	234
Brass	..	229	..	3	..	232
Other	..	596	..	6	..	602
Naval, military and air force stores, etc.	..	338	-	-	..	338
Other goods	..	2,770	..	58	..	2,829
Work done (c)		(a)		(a)		319
Total		215,965		6,424		222,389

- (a) Owing to the risk of disclosure of information relating to individual firms, separate figures cannot be given.
(b) So far as recorded separately.
(c) Except of ceramics, cloth and tape and rubber sleeving, and of synthetic resins.
(d) Amount charged.
(e) Excluding work on telegraph and telephone lines and works, on the installation of radio and telecommunication apparatus and appliances, and on electric power and lighting lines and works.

Purchased materials and fuel

Larger establishments

TABLE 24

	England and Wales		Scotland		Great Britain	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
	Th. tons	£'000	Th. tons	£'000	Th. tons	£'000
Materials						
Iron and steel						
Angles, shapes and sections, of iron and non-alloy steel	13.2	346	0.9	24	14.0	370
	..	63	..	2	..	65
Bars and rods						
Alloy steel	4.1	355	0.1	8	4.2	363
Iron and non-alloy steel	33.0	937	0.9	23	33.9	960
	..	156	..	2	..	158
Sheets and strip, of alloy steel	..	(a)	..	(a)	20.0	981
Plates and sheets, of iron and non-alloy steel	104.8	3,429	4.2	171	108.9	3,600
Wire of iron and non-alloy steel	1.9	103	0.2	10	2.1	113
	..	27	..	..	..	27
Iron castings, in the rough	53.5	3,582	1.6	96	55.1	3,679
Steel castings and forgings, in the rough						
Alloy steel	..	(a)	..	(a)	3.0	316
Non-alloy steel	..	(a)	..	(a)	13.4	1,286
Machined castings, iron and steel (including alloy steel)	..	(a)	..	(a)	1.6	139
					..	85
Hoop and strip (including tape), of iron and non-alloy steel	..	(a)	..	(a)	6.3	255
Other descriptions, except finished parts						
Alloy steel	..	(a)	..	(a)	5.1	424
					..	54
Iron and non-alloy steel	21.0	784	0.1	9	21.1	793
	..	173	..	20	..	193
Unclassified						
Alloy steel	..	789	..	1	..	790
Iron and non-alloy steel	..	2,086	..	21	..	2,107

TABLE 24 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
	Th. cwt.	£'000	Th. cwt.	£'000	Th. cwt.	£'000
Materials (contd.)						
Aluminium and aluminium alloys						
Plates, sheets, strip and circles	50.9	315	1.0	6	51.8	322
	..	33	..	..	..	33
Extruded tubes, bars, sections and wire	..	(a)	..	(a)	24.8	183
					..	21
Castings and forgings, rough dressed	177.9	1,585	15.0	129	192.8	1,714
Foil	..	(a)	..	(a)	5.8	113
Other descriptions, except finished parts	..	(a)	..	(a)	28.7	158
					..	43
Unclassified	..	343	..	16	..	359
Brass (including all alloys of copper other than nickel alloys)						
Plates, sheet and strip	124.1	986	1.6	13	125.7	999
Castings	76.7	904	3.1	36	79.8	939
Other descriptions, except finished parts	131.0	1,098	3.5	28	134.5	1,124
	..	160	..	..	..	160
Unclassified	..	1,467	..	12	..	1,479
Copper						
Plates, sheet and strip	233.2	2,153	9.1	86	242.3	2,239
Ingots, bars, billets, cathodes and anodes	16.9	137	0.5	5	17.4	142
Wire, cables and flexibles, uninsulated	33.9	365	0.5	4	34.4	369
	..	40	..	..	..	40
Wire rods	10.5	124	0.6	6	11.1	130
Other descriptions, except finished parts	163.2	1,522	0.7	8	163.9	1,531
Unclassified	..	686	..	6	..	692

TABLE 24 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Materials (contd.)	Th.cwts.	£'000	Th.cwts.	£'000	Th.cwts.	£'000
Lead and alloys of lead						
Pig, ingots, blocks, bars, slabs and cakes	..	(a)	..	(a)	6.3	39
Sheet	1.5	7	0.1	-	1.5	8
	..	9			..	9
Solder	11.4	115	0.2	2	11.6	117
Other descriptions	..	(a)	..	(a)	7.9	56
					..	26
Unclassified	..	23	..	-	..	23
Tin in all forms, except finished parts	6.2	133	0.2	5	6.4	139
Zinc and alloys of zinc	34.7	238	..	-	34.7	238
	..	41			..	41
Fractional horse-power motors						
Not exceeding one-third h.p.						
Alternating current	..	(a)	..	(a)	H.p. 4,859	111
Direct current and universal	..	(a)	..	(a)	1,664	37
					..	35
Over one-third, but under 1 h.p.						
Alternating current	..	(a)	..	(a)	1,456	24
					..	5
Direct current and universal	..	(a)	..	(a)	221	5
					..	7
Unclassified	..	30	..	-	..	30
Porcelain	38.0	440	4.3	20	Th.cwts. 42.2	460
	..	1,010	..	19	..	1,029
Paper, excluding packing and wrapping	80.6	636	1.6	10	82.2	647
	..	225	..	1	..	226
Rubber						
Tubing	..	(a)	..	(a)	1.5	14
					..	18
Other descriptions	14.1	211	..	1	14.1	211
	..	125			..	126
Synthetic resins						
Lump and powder, including moulding powder	..	(a)	..	(a)	75.2	603
All other forms	..	(a)	..	(a)	22.7	170
					..	293

TABLE 24 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Materials (contd.)	Thous.	£'000	Thous.	£'000	Thous.	£'000
Valves, electronic, other than X-ray valves						
Complete						
Transmitting and industrial						
Not exceeding 50 watts anode dissipation	..	(a)	..	(a)	79.6	34
Over 50 watts anode dissipation	3.1	16	-	-	3.1	16
	..	17			..	17
Other electronic valves, including rectifying valves and stabilising tubes	40.1	23	-	-	40.1	23
	..	18			..	18
Unclassified	..	30	..	-	..	30
Parts	..	6	..	-	..	6
Cathode ray tubes, complete	2.3	9	-	-	2.3	9
	..	2			..	2
Radio and television parts and accessories, not elsewhere specified	..	(a)	..	(a)	..	166
Packing materials	..	2,611	..	79	..	2,690
Glass	Th.cwts.		Th.cwts.		Th.cwts.	
Rod and tube	..	(a)	..	(a)	13.2	130
Blown	..	36	..	-	..	36
Other descriptions	8.9	118	..	1	8.9	118
	..	284			..	285
Unclassified	..	59	..	-	..	59
Mica						
Block	..	(a)	..	(a)	6.4	488
Splittings	13.7	419	0.1	4	13.7	423
	..	204			..	204
Built-up ("Micanite")	3.7	255	0.2	10	3.8	265
	..	118			..	118
Unclassified	..	295	..	1	..	296
Shellac, except shellac varnish	..	(a)	..	(a)	2.3	38
Paint, enamel and varnish	97.0	519	0.9	20	97.8	539
	Th.galls. 334.9	305	Th.galls. 13.5	16	Th.galls. 348.4	321
	..	323	..	14	..	337
Ceramics, other than porcelain	..	(a)	..	(a)	Th.cwts. 26.8	218
					..	273

TABLE 24 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Materials (contd.)	Th.cwts.	£'000	Th.cwts.	£'000	Th.cwts.	£'000
Bitumen and bitumastic compound	32.0	49	0.1	-	32.1	50
	Th.lbs.	32	Th.lbs.	-	Th.lbs.	33
Cotton yarn and thread	1,212	449	19	7	1,230	456
	..	187	..	16	..	203
Silk yarn, thread and cloth	..	(a)	..	(a)	59.5	59
					..	93
Rayon, nylon, etc. yarn, thread and cloth	27.6	12	-	-	27.6	12
	..	27	..	..	..	27
Insulated wires	..	6,552	..	355	..	6,907
Accumulators, complete	..	(a)	..	(a)	Thous. 63.9	128
Batteries, complete	..	63	..	-	..	63
Magnets, permanent	..	(a)	..	(a)	3,444	294
					..	53
Nickel compounds for plating	..	(a)	..	(a)	Th.cwts. 2.6	21
					..	5
Chromium compounds for plating	..	(a)	..	(a)	0.9	8
					..	2
Timber (excluding timber used for making into cases, etc., or for repairing returnable cases)					Th.cu.ft.	
Hardwood	..	(a)	..	(a)	58.6	44
	Th. standards		Th. standards		..	24
Softwood	1.7	118	-	1	1.7	119
					Th.sq.ft. 526.5	51
Plywood and veneers	..	(a)	..	(a)	..	90
Unclassified	..	9	..	-	..	9
Purchased components, not elsewhere specified	..	28,099	..	1,221	..	29,320
Replacement parts for firms' machinery, other than machined castings	..	1,033	..	19	..	1,053
Consumable tools bought as replacement	..	1,628	..	43	..	1,671
All other purchased materials	..	16,110	..	477	..	16,587
Unclassified materials	..	403	-	-	..	403
Fuel and electricity	Th.tons		Th.tons		Th.tons	
Coal	269.8	728	14.3	40	284.1	768
Coke	59.9	256	0.8	3	60.6	259

TABLE 24 (contd.)

	England and Wales		Scotland		Great Britain	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Fuel and electricity (contd.)	Th.B.T.U. (kW.hrs.)	£'000	Th.B.T.U. (kW.hrs.)	£'000	Th.B.T.U. (kW.hrs.)	£'000
Electricity purchased (b)						
From public supply	441,817	1,701	10,760	45	452,577	1,746
From other sources	1,122	5	-	-	1,122	5
Electricity obtained from other works under the same ownership	..	(a)	..	(a)	805	4
Motor spirit (petrol) and derv. fuel	Th.galls.		Th.galls.		Th.galls.	
Used for road vehicles	1,261	121	38	4	1,300	125
Used for other power purposes	..	(a)	..	(a)	488	27
Other oil fuel (including creosote/pitch mixtures)	10,787	515	38	2	10,825	517
Gas purchased	Th.therms		Th.therms		Th.therms	
From public supply	15,954 Th.cu.ft. 272,482	539	214 Th.cu.ft. 4,633	7	16,168 Th.cu.ft. 277,115 Th.therms 168	546
From other sources	..	(a)	..	(a)	Th.cu.ft. 2,224	1
All other purchased fuel	..	27	..	-	..	27
Materials and fuel unclassified	..	157	..	3	..	160
Total		99,948		3,512		103,460

(a) Owing to the risk of disclosure of information relating to individual firms separate figures cannot be given.

(b) The total quantities of electricity generated and consumed in the same works were 22,780,000 B.T. units in England and Wales and 100,000 B.T. units in Scotland.

Employment and remuneration

Larger establishments

TABLE 25

	England and Wales			Scotland			Great Britain		
	Average number of operatives	Administrative, technical and clerical employees (a)	Total	Average number of operatives	Administrative, technical and clerical employees (a)	Total	Average number of operatives	Administrative, technical and clerical employees (a)	Total
Males									
Under 18	8,376	1,003	9,379	477	59	536	8,853	1,062	9,915
All ages	131,074	38,237	169,311	3,703	1,012	4,715	134,777	39,249	174,026
Females									
Under 18	3,443	2,917	6,360	107	102	209	3,550	3,019	6,569
All ages	60,476	21,521	81,997	1,871	589	2,460	62,347	22,110	84,457
Total									
Under 18	11,819	3,920	15,739	584	161	745	12,403	4,081	16,484
All ages	191,550 (b)	59,758 (c)	251,308 (c) (d)	5,574 (b)	1,601 (c)	7,175 (c) (d)	197,124 (b)	61,359 (c)	258,483 (c) (d)
Total remuneration	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
	53,971	23,550	77,520	1,373	601	1,974	55,344	24,150	79,495

(a) Number at September 25, 1948.

(b) Including operatives employed in outside work of erection, fitting, etc., the numbers so included being 3,280 in Great Britain; 3,099 in England and Wales and 181 in Scotland.

(c) There were, in addition, 78 working proprietors (75 males 3 females) in Great Britain; 63 males and 3 females in England and Wales, and 12 males in Scotland.

(d) The employers' share of contributions to all National Insurance Schemes payable during the year in respect of these workers amounted to a total of £2,000,000; £1,944,000 for England and Wales, and £56,000 for Scotland.

In addition to the employees in the above table the firms in this trade employed outworkers whose number and remuneration are set out below:-

	Average number of outworkers employed			Total amount paid to outworkers £'000
	Males	Females	Total	
England and Wales	21	536	557	48
Scotland	-	-	-	-
Great Britain	21	536	557	48

Monthly index of employment of operatives: Larger establishments

(average employment in 1948 = 100)

TABLE 26

Month	Monthly index (a)			Month	Monthly index (a)		
	England and Wales	Scotland	Great Britain		England and Wales	Scotland	Great Britain
1948				1948			
January	99.3	97.8	99.3	August	99.8	99.8	99.8
February	100.3	99.4	100.3	September	99.9	100.7	100.0
March	100.2	98.8	100.2	October	100.2	103.7	100.4
April	100.9	100.4	100.8	November	99.9	106.0	100.1
May	101.4	99.5	101.3	December	99.0	105.7	99.2
June	101.2	99.3	100.1	Percentage employment in this trade covered by the index	53.7	63.9	54.0
July	99.0	88.8	98.6				

(a) The index numbers are calculated from the number of operatives employed in one week in each month returned by larger establishments that made returns for the calendar year 1948. The question of man-hours worked in this trade will be dealt with in a later summary volume.

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