

ELECTRICAL ENGINEERING TRADE

INTRODUCTORY

This trade covers the manufacture of electrical machinery, batteries, insulated cables, telegraph, telephone and wireless apparatus and other electrical plant, appliances and accessories. It also covers constructional or "contract" work done by manufacturers of electrical goods outside their factories, but similar work done by electrical contracting firms that were not engaged in manufacture is dealt with in the Building and Contracting Trade (*see* Part IV of the Report). Electrical work carried out by Electricity Supply Undertakings, other Public Utility Services and Government Departments is also excluded, being dealt with in the reports on those services in Part IV.

In Tables XIII-XLIV particulars regarding the size of establishments, areas in which business is carried on, output, and materials, fuel and electricity purchased and used, are given for 1935 in respect of each of the following subdivisions of the industry:—

- (i) Electrical machinery.
- (ii) Electric wires and cables.
- (iii) Telegraph and telephone apparatus.
- (iv) Wireless apparatus (except valves).
- (v) Wireless valves and electric lamps.
- (vi) Primary batteries and accumulators.
- (vii) Electric lighting accessories and fittings.
- (viii) Electrical heating and cooking apparatus.

Table I A.—General summary

Particulars	1935	1934	1933	1930*	1924
	£'000	£'000	£'000	£'000	£'000
Value of products (Gross output)...	106,853	91,413	74,734	87,674	69,117
Cost of materials, fuel and electricity used	49,214	42,279	33,627	42,513	35,833
Amount paid for work given out	295	265	182	328	247
Net output	57,344	48,869	40,925	44,833	33,037
Average number of persons employed	No. 247,948	No. 216,845	No. 195,450	No. 191,970	No. 150,884
Net output per person employed...	£ 231	£ 225	£ 209	£ 234	£ 219
Number of returns	No. 777	†	†	No. 653	No. 722
Number of establishments...	854	†	†	767	†

* The figures relate to Great Britain only, particulars of the small production in Northern Ireland not being available.

† Not available.

Table I B.—Firms employing not more than ten persons on the average

Particulars	1935	1930	1924
	No.	No.	No.
Number of returns received	1,364	1,221	808
Average number of persons employed:—			
Males... ..	6,365	5,357	2,855
Females	1,007	647	357
TOTAL	7,372	6,004	3,212
Number of firms not making returns	19	115	780

In 1924 the value of the gross output of the small firms making returns was 1.7 per cent. of the total.

Table II.—Size of establishments in 1935

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	209	1,415	732	3,742	196
25-49	193	2,601	1,357	6,947	195
50-99	133	3,943	1,945	9,296	209
100-199	122	7,823	3,917	17,107	229
200-299	49	5,029	2,519	11,900	212
300-399	18	2,745	1,431	6,279	228
400-499	17	4,967	2,378	7,662	310
500-749	38	10,881	5,686	23,289	244
750-999	15	5,406	2,841	13,237	215
1,000-1,499	27	14,726	7,694	32,900	234
1,500 and over... ..	33	47,317	26,844	115,589	232
TOTAL	854	106,853	57,344	247,948	231

Table III.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments†	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1	1935 457 1930 316	51,216 36,904	27,295 18,690	114,439 77,388	239 242
2	1935 96 1930 78	20,736 21,321	11,162 11,121	48,542 45,346	230 245
3	1935 44 1930 33	2,672 1,685	1,341 856	5,634 3,637	238 235
4	1935 21 1930 18	2,191 2,356	1,321 1,220	6,015 5,663	220 215
5	1935 109 1930 100	19,501 15,742	10,796 8,272	48,852 39,782	221 208
12 and 13	1935 9 1930 11	153 107	83 61	424 252	196 242
6	1935 31	2,543	1,202	6,125	196
8	1935 22	4,328	2,501	9,530	262
10	1935 15	1,678	730	3,792	192
7, 9 and 18	1935 14	575	265	1,296	205
6-10 and 18	1935 82 1930† 68	9,124 8,572	4,698 4,187	20,743 17,517	226 239
14	1935 22 1930 19	712 544	353 251	1,609 1,036	219 242
15	1935 9	464	244	1,480	165
16 and 17	1935 5	84	51	210	242
15-17	1935 14 1930 10	548 443	295 175	1,690 1,349	174 130
TOTAL	1935 854 1930 653	106,853 87,674	57,344 44,833	247,948 191,970	231 234

* For particulars *see* page xviii.

† Number of returns for 1930.

‡ Excluding Northern Ireland.

Table IV.—Sub-divisions of the industry

Group	Number of establishments*		Value of characteristic products		Number of persons employed		Net output per person employed
	No.	Gross output	Value of characteristic products	Net output	No.	Net output per person employed	
Electrical machinery	1935	162	£'000 31,602	£'000 21,927	£'000 18,615	No. 83,019	£ 224
	1930	133	24,797	18,634	13,443	64,742	208
Electric wires and cables ...	1935	64	20,906	15,314	9,064	32,548	278
	1930	42	21,586	16,480	7,865	28,921	272
Telegraph and telephone apparatus	1935	17	7,905	4,464	5,209	21,651	241
	1930	18	7,976	4,784	5,260	18,640	282
Wireless apparatus (except valves)	1935	93	14,879	13,720	6,793	32,141	211
	1930	87	5,870	5,053	3,112	13,582	229
Wireless valves and electric lamps ...	1935	42	4,660	4,497	2,841	10,595	268
	1930	17	2,829	2,579	1,967	6,577	299
Primary batteries and accumulators ...	1935	46	6,175	5,751	3,181	11,435	278
	1930	39	6,488	5,962	3,289	13,606	242
Electric lighting accessories, and fittings ...	1935	64	2,143	1,778	1,101	6,268	176
	1930	49	1,689	1,427	939	4,935	190
Electric heating and cooking apparatus ...	1935	31	3,212	2,419	1,459	7,483	195
All other output, including work done† ...	1935	335	15,371	...	9,081	42,808	212
Total ...	1935	366	18,583	...	10,540	50,291	210
	1930	268	16,439	...	8,958	40,967	219
TOTAL ...	1935	854	106,853	...	57,344	247,948	231
	1930	653	87,674	...	44,833	191,970	234

* Number of returns for 1930.

† Including general engineers not predominantly concerned with any one of the classes of goods specified.

PRODUCTION

Table V A.—Output of principal products

Note.—For 1935, parts of each specified class of electrical machinery were returned separately under the individual headings; for 1934, all parts of electrical machinery were recorded together under one heading.

Kind of output (a) Complete machines (b) Replacement parts	1935			1934	
	Quantity	Value	Entries	Quantity	Value
Electrical machinery :—	No.	£'000	No.	No.	£'000
Generators :—					
Alternating current :—					
Under 2,000 kilowatts	{ (a) 1,651 (b) ...	{ 260 11	{ 25	(a) 1,313	281
2,000 kilowatts and under 11,000 kilowatts ...	{ (a) 50 (b) ...	{ 265 27	{ 10	(a) 36	139
11,000 kilowatts and over ...	{ (a) 25 (b) ...	{ 391 76	{ 6	(a) 39	396
Direct current ...	{ (a) 11,234 (b) ...	{ 683 45	{ 37	(a) 9,220	551
Total—Generators ...	{ (a) ... (b) ...	{ 1,599 159	{ ...	(a) ...	1,367
Motors :—					
Railway and tramway	{ (a) 2,647 (b) ...	{ 541 48	{ 7	(a) 1,532	435
Other motors of 1 h.p. and over :—					
Alternating current :—					
1 h.p. and under 200 h.p. ...	{ (a) 157,231 (b) ...	{ 2,590 96	{ 61	(a) 136,939	2,363
200 h.p. and not exceeding 250 h.p. ...	{ (a) 449 (b) ...	{ 124 8	{ 15	(a) 966	338
Exceeding 250 h.p. and under 1,000 h.p. ...	{ (a) 708 (b) ...	{ 311 16	{ 14	(a) 781	93
1,000 h.p. and over	{ (a) 64 (b) ...	{ 130 4	{ 9	(a) 781	93
Direct current :—					
1 h.p. and under 250 h.p. ...	{ (a) 35,188 (b) ...	{ 1,175 80	{ 53	(a) 32,788	1,062
250 h.p. and over ...	{ (a) 104 (b) ...	{ 179 16	{ 11	(a) 32,788	1,062
Fractional horse-power motors (i.e., below 1 horse-power), alternating current and direct current ...	{ (a) 282,009 (b) ...	{ 703 25	{ 51	(a) 266,340	736
Total—Motors ...	{ (a) ... (b) ...	{ 5,753 293	{ ...	(a) ...	5,027

Kind of output (a) Complete machines (b) Replacement parts	1935			1934	
	Quantity	Value	Entries	Quantity	Value
Electrical machinery:— <i>contd.</i> Converters, rectifiers and transformers, other than wireless:—	No.	£'000	No.	No.	£'000
Rotary converters ... { (a) 8,124 182 } 24				(a) 8,352	470
... { (b) ... 5 }					
Rectifiers, mercury vapour (steel case or glass bulb, and metal) { (a) 2,731 277 } 10					
... { (b) ... 20 }					
Power transformers ... { (a) 82,686 2,517 } 30				(a) { 54,304* 1,983*	
... { (b) ... 42 }				{ ... 243*	
Instrument transformers ... { (a) 58,708 138 } 17				(a) { 22,540† 31†	
... { (b) ... 2 }				{ ... 26†	
Total — Converters, transformers, etc. ... { (a) ... 3,114 } ...				(a) ...	2,753
... { (b) ... 69 }					
Starting and controlling gear for electric motors { (a) 13.8 2,151 } 62	Th. tons			Th. tons	
... { (b) ... 116 }				(a) 9.7	1,495
Switch gear and switchboards (other than telegraph and telephone) ... { (a) 54.0 5,761 } 105				(a) { 32.2 4,098	
... { (b) ... 98 }				{ ... 799	
Starting and controlling gear and switch gear, unclassified ... { (a) — — } —				(a) 2.0	332
... { (b) ... — }					
Vacuum cleaners, electrically worked ... { (a) 409,345 3,286 } 23	No.			No.	
... { (b) ... 147 }				(a) 318,039	2,540
Ignition magnetos:— For motor vehicles, including motor cycles and tri-cars ... (a) 61,418 267 } 10				49,267	220
Other ... (a) { 10,062 17 } 6				8,833	36
Parts of magnetos† ... (a) ... 41					
Other electrical machinery ... { (a) ... 282 } 41				(a) ...	397
... { (b) ... 80 }					
Parts of electrical machinery (sold separately) ... † † ...					951
TOTAL — Electrical machinery ... { (a) ... 22,233 } ...				...	19,064
... { (b) ... 1,003 }				...	951
Electric lighting appliances, accessories and fittings, and parts thereof:—					
Arc lamps, searchlights and projection lamps, and parts thereof ... 138 16 ...				...	101
Electric torches, safety lamps, and parts thereof ... 322 15 ...				...	295
Other lamps, complete, with or without bulbs ... 31 9 ...				...	47
Bulbs, complete, ready for use:—					
20 volts and over:—	Thous.			Thous.	
Gas filled ... 61,027 2,345 23 47,689 1,935					
Other ... 20,236 755 22 19,602 719					
Under 20 volts:—					
For motor vehicles ... 12,495 293 13 11,040 281					
Other (including bulbs for flash lamps) ... 10,449 96 11 8,916 74					

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
Electric lighting appliances, accessories and fittings, and parts thereof:— <i>contd.</i>	Million	£'000	No.	Million	£'000
Electric lighting accessories and fittings not elsewhere specified, for indoor or outdoor use:—					
Accessories (e.g., lamp-holders, ceiling roses, wall plugs and sockets, switches, fuses, etc.) ... 2,171 86 ...				...	1,988
Fittings (ceiling, wall, standard, portable or pendant), excluding glassware ... 833 61 ...				...	671
Total — Electric lighting appliances, accessories and fittings, and parts thereof ... 6,984 ...				...	6,111
Electric bell apparatus, not telegraphic or telephonic ... 87 18 ...				...	75
Electrodes for welding, other than of carbon† ... 34.7 198 3 } ...				...	446
Electric carbons:—					
Lighting ... 14.5 200 5 } 10.0 112				...	...
Other (including carbon electrodes) ... 767.7 687 7 } 763.6 655				...	...
Telegraph apparatus ... 156 4 ... 115				...	...
Telephone apparatus ... 182 10 ... 184				...	...
... 5,508 32 ... 3,744				...	...
Wireless apparatus (except radio-gramophones, electrical reproducers and wireless valves):—					
Complete:—	Thous.			Thous.	
Receiving sets, other than radio-gramophones ... 1,724 10,463 54 1,607 9,876					
Transmitting and combined transmitting and receiving sets (including television apparatus) ... 737 8 ... 790					
Components and parts, sold separately (except wireless valves) ... 2,053 123 ... 1,883					
Total—Wireless apparatus ... 13,253 ... 12,549					
Electrical reproducers:—					
For sound films ... 1.6 150 13 0.5 89				...	44
Wireless ... 743.2 431 13 375.0 186				...	262
Other (e.g., for public speakers, etc.) ... 5.2 66 10 1.4 40				...	2
Radio-gramophones ... 125.8 1,766 42 149.9 2,167				...	...
Total — Electrical reproducers and radio-gramophones ... 2,562 ... 2,790					

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000
Wireless valves, sold separately§	11,777	2,215	15	11,108	2,204
Electric wires and cables, insulated :—					
Telegraph and telephone wires and cables :—					
Submarine ... ..	...	2,600	26	...	214
Other ... ..	...	...	...	...	1,643
Other descriptions :—					
Rubber insulated ... ..	...	5,505	41	...	4,830
Paper insulated ... ..	...	7,148	21	...	6,334
Other... ..	...	1,813	26	...	1,660
Total—Electric wires and cables, insulated ...	...	17,066	...	...	14,681
Joint boxes ... ..	...	631	26	...	661
Cable jointing materials and accessories ... ..	...	123	11	...	68†||
Fittings for overhead transmission lines ... ..	...	317	17	...	283
Electrical signalling apparatus (including traffic signals) ...	...	447	18	...	393
Batteries, primary, complete :—					
For hand flash lamps ... ..	...	151	13	...	1,048¶
For wireless sets ... ..	...	1,011	15	...	2,613¶
Other primary batteries ... ..	...	129	12	...	...
Unclassified (including parts other than carbons) ...	...	2,257	7	...	...
Total—Primary batteries and parts ... ..	...	3,548	...	...	3,661
Accumulators (including parts) :—					
Portable :—					
For vehicles, sold separately ... ..	...	1,391	23	...	1,290
Other... ..	...	814	24	...	779
Stationary ... ..	...	673	19	...	718
Total—Accumulators and parts ... ..	...	2,878	...	...	2,787
Electric condensers, and parts thereof... ..	...	852	17	...	739
Electricity meters :—					
House service meters :—	No.		No.		
Complete :—					
Prepayment type	422,164	1,286	14	397,710	1,171
Other	966,916	1,213	17	942,557	1,175
Parts... ..	...	127	13	...	64
Other integrating meters :—					
Switchboard meters ... ..	...	68	11	...	44
Other meters ... ..	...	72	8	...	57
Parts... ..	...	19	5	...	19
Commercial measuring instruments (including parts) :—					
Indicating ... ..	...	551	23	...	502
Recording ... ..	...	80	12	...	83
Other ... ..	...	194	9	...	166

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
	Tons	£'000	No.	Tons	£'000
Scientific electrical instruments ... ..	...	549	37	...	537
Electro - medical apparatus (other than X-ray apparatus) ... ..	...	130	29	...	98
X-ray apparatus :—					
Tubes and vacuum tubes ... ..	...	5	3	...	144
Other ... ..	...	153	12	...	...
Electrical heating apparatus :—					
Domestic ... ..	...	1,509	58	...	1,418
Commercial ... ..	...	71	17	...	51
Industrial ... ..	...	153	21	...	157||
* Electrical cooking apparatus... ..	...	1,454	33	...	1,228
Electrical signs :—					
Luminous tube signs... ..	...	480	32	...	363
Other ... ..	...	98	32	...	76
Electrical totalisator apparatus ... ..	...	267	11	...	29
* Electric fans ... ..	...	272	18	...	160†
Portable electric tools... ..	...	195	12	...	123
Sound recording equipment other than electrical reproducers† ... ..	...	64	5	...	61
Electric irons† ... ..	...	56	7	...	18
* Permanent hair-waving apparatus ... ..	...	258	14	...	247
* Electric hair dryers† ... ..	...	66	6	...	54
Electrical machinery and plant purchased second-hand and re-conditioned† ... ..	...	110	8	...	466
Other electrical apparatus, not elsewhere specified ... ..	...	1,641	...	...	...
Parts and accessories of electrical apparatus, not elsewhere specified ... ..	...	385	26	...	362||
Insulating materials, sold separately :—					
Of mica	619	348	19	...	517 247
Of moulded compositions	341	63	9	...	42 131
...	...	95	6	...	609 61
Cloth and tape :—					
Adhesive	1,031	100	10	...	286
Varnished and non-adhesive	385	102	4	...	207
...	...	101	5	...	...
Other**	1,458	240	13	...	...
...	...	167	17	...	...
TOTAL—Goods made ... ..	...	94,213	...	...	82,120
Electrical contract work carried out†† :—					
Installation and erection of generating plant and appliances... ..	...	384	43	...	2,927
Electric power and lighting lines or works ... ..	...	1,566	49	...	...
Telegraph and telephone wires and cables ... ..	...	455	6	...	...
Installation of wireless telegraph and telephone apparatus and appliances ... ..	...	389	21	...	...
Other electrical contract work ... ..	...	596	63	...	...
TOTAL — Electrical contract work carried out... ..	...	3,390	...	...	2,927

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
Repair and maintenance work for customers...	£'000	No.	...	£'000
Other work done	1,583††	231	...	978††
	...	194††	27	...	24††
TOTAL—Goods made and work done	99,380	...	...	86,049
Work in progress :—					
Addition on account of work in progress at the end of the year	10,825	...	...	8,193
Deduction on account of work in progress at the beginning of the year	8,441	...	...	6,959
TOTAL — PRINCIPAL PRODUCTS	101,764	...	...	87,283

* Described as "converters and transformers—static."

† So far as recorded separately.

‡ See the introductory note to this table.

§ The total output, including valves manufactured and incorporated in transmitting and receiving sets in the same works, was 12,808,000 in 1935 and 12,329,000 in 1934.

|| Corrected figure.

¶ Including parts other than carbons.

** Not including insulating materials of china or porcelain.

†† These amounts represent the value of the contract work done by firms making returns on schedules for this trade, and are exclusive of the value of any plant and fittings made by them, these values being included in those shown for the goods concerned (see also the introductory note on page 302).

‡‡ Amount received.

The figures shown in the preceding table include the following output recorded by firms whose returns were made on schedules for other trades and are not, therefore, included in Table I A.

Kind of output (a) Complete machines (b) Replacement parts	1935			1934	
	Quantity	Value	Entries	Quantity	Value
Electrical machinery :—	No.	£'000	No.	No.	£'000
Generators :—					
Alternating current ... (b)	...	3	3	} (a) 894	46
Direct current ... (a)	651	59	4		
	...	9			
Motors :—					
Railway and tramway (a)	25	2	1	} (a) 3,514	95
Other motors of 1 h.p. and over :—					
Alternating current :—					
1 h.p. and under (a)	1,856	35	} 9		
200 h.p. ... (b)	...	8			
Direct current :—					
1 h.p. and under (a)	1,568	77	} 9		
250 h.p. ... (b)	...	12			
250 h.p. and over ... (a)	3	2	1		
Fractional horse-power motors (i.e., below 1 horse-power), alternating current and direct current ... (a)	26,191 Th. tons	57	5	18,725 Th. tons	43
Starting and controlling gear for electric motors (a)	0.3	57	} 4	(a) 0.2	49
Switch gear and switchboards (other than telegraph and telephone) ... (b)	...	1			
	...	10	} 6	(a) —	—
	...	1			
	No.			No.	
Vacuum cleaners, electrically worked ... (a)	11,171	43	} 4	(a) 11,376	35
Other electrical machinery ... (b)	...	2			
	...	123	} ...	(a) ...	123
	...	6			
Parts of electrical machinery (sold separately) ...	...	...	...	...	15
Total — Electrical machinery ... (a)	...	465	} ...	...	391
	...	42			
Electric lighting appliances, accessories and fittings, and parts thereof ...	...	64	22	...	51
Electrodes other than of carbon	...	250	2	...	192
Wireless apparatus (except radio-gramophones, electrical reproducers and wireless valves) :—	Thous.			Thous.	
Receiving sets, complete ...	22.7	131	4	8	45
Components and parts ...	...	113	26	...	108
Radio-gramophones ...	11.4	82	4	9.2	65
Accumulators (including parts)	...	34	4	...	29
Electricity meters :—					
House service meters :—					
Complete :—	No.			No.	
Prepayment type ...	30,568	91	1	32,411	96
Other ...	6,529	8	2	4,580	5
Parts ...	...	1	1	...	4

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
		£'000	No.		£'000
Commercial measuring instruments (including parts)	23	2	...	10
Scientific electrical instruments	76	15	...	89
Electro - medical apparatus (including X-ray apparatus)	45	14	...	31
Electrical heating apparatus :—					
Domestic	108	11	...	121
Industrial	24	1	...	30
Electrical cooking apparatus...	22	5	...	12
Electrical signs	36	4	...	8
Electrical totalisator apparatus	29	3	...	3
Insulating materials, sold separately	127	19	...	159
Repair, maintenance and other work done	21*	9	...	1*
Other principal products	98	...	...	188
TOTAL	1,890	...	...	1,653

* Amount received.

Table V B.—Capacity of electrical machinery

Kind of machinery	1935			1934		
	Total number recorded	Machinery of which capacity was shown		Total number recorded	Machinery of which capacity was shown	
		Number	Capacity		Number	Capacity
	No.	No.	Th. kw.	No.	No.	Th. kw.
Generators :—						
Alternating current :—						
Under 2,000 kilowatts	1,651	1,337	194.7	1,313	1,071	201.2
2,000 kilowatts and under 11,000 kilowatts	50	50	234.6	36	36	128.3
11,000 kilowatts and over	25	25	582.5	39	39	605.1
Direct current	11,234	10,847	243.0	9,220	8,644	184.2
Motors :—						
Railway and tramway... ..	2,647	2,647	Th. h.p. 182.6	1,532	1,532	132.0
Other motors of 1 h.p. and over :—						
Alternating current :—						Th. h.p.
1 h.p. and under 200 h.p.	157,231	154,881	1,385.0	136,939	136,681	1,238.0
200 h.p. and not exceeding 250 h.p. Exceeding 250 h.p. and under 1,000 h.p.	449	449	100.9	966	966	324.0
1,000 h.p. and over	708	708	267.2			
Direct current :—				78†	78†	129.5
1 h.p. and under 250 h.p.	35,188	34,193	335.6	32,788	31,143	405.9
250 h.p. and over	104	104	92.6			
Fractional horsepower motors (i.e., below 1 h.p.), alternating current and direct current	282,009	258,164	54.5	266,340	265,517	49.9
Converters, rectifiers, and transformers, other than wireless :—						
Rotary converters	8,124	7,956	Th. kw. 65.4	8,352	8,306	205.0
Rectifiers, mercury vapour	2,731	2,584	94.9			
Power transformers	82,686	80,315	Th. k.v.a. 5,008.5	54,304*†	54,304†	Th. k.v.a. 3,770.6†

* Excluding the output returned by value only.

† Described as "converters and transformers—static."

‡ Corrected figure.

Table VI.—Average values of goods produced, exported and imported

Kind of goods	Production (at factory)		1935 as a percentage of 1934	Exports (f.o.b.)		Imports (c.i.f.)	
	Average value			Average value		Average value	
	1935	1934	Per cent.	£ per ton	£ per ton	£ per ton	£ per ton
Electrical machinery* :—							
Generators :—							
Alternating current :—							
Under 2,000 kilowatts	(a) 157.3	214.0	73.5				
2,000 kilowatts and under	(b) 1,307.8	1,364.3	95.9				
11,000 kilowatts	(a) 5,296.6	3,856.3	137.3				
11,000 kilowatts and over	(b) 1,128.8	1,082.1	104.3	151.4	151.7	347.3	336.8
Direct current	(a) 60.8	59.8	101.7				
Motors :—	(b) 2,776.9	2,808.1	98.9				
Railway and tramway	(a) 204.4	283.9	72.0				
Other motors of 1 h.p. and over :	(c) 2,963.2	...	...	239.2	211.8	...	—
Alternating current :—	(b) ...	3,294.9	...				
1 h.p. and under	(a) 16.5	17.3	95.4				
200 h.p. and under	(c) 1,842.3	1,920.8	95.9				
1,000 h.p. and over	(a) 335.9	349.6	96.1				
Direct current	(c) 1,181.5	1,042.3	113.4	122.8	124.7	159.7	144.6
Fractional horse-power motors (i.e., below 1 h.p.)	(a) 2.5	2.8	90.3				
alternating and direct current	(c) 12,011.3	14,645.4	82.0	261.2	253.7	191.3	281.7
Converters, rectifiers and transformers, other than wireless :—							
Rotary converters and rectifiers	(a) 42.3	56.3	75.1				
Power transformers	(b) 2,746.7	2,286.7	120.1	138.9	103.3	...	...
Instrument transformers	(a) 30.4	36.5	83.3				
...	(d) 450.4	509.1	88.5	94.6	87.6	473.0	230.3

Kind of goods	Production (at factory)		1935 as a percentage of 1934	Exports (f.o.b.)		Imports (c.i.f.)	
	Average value			Average value		Average value	
	1935	1934	Per cent.	£ per ton	£ per ton	£ per ton	£ per ton
Electrical machinery :— <i>contd.</i>							
Starting and controlling gear for electric motors...	155.3	154.4	100.6	246.5	244.3	...	...
Switch gear	106.6	127.2	83.8	174.9	175.8	384.4	182.0
Vacuum cleaners, electrically worked	£ each	£ each		£ each	£ each	£ each	£ each
Electric bulbs, complete, ready for use :—	8.03	7.99	100.5	4.66†	5.78	4.05†	12.90
20 volts and over :	s. per doz.	s. per doz.		s. per doz.	s. per doz.	s. per doz.	s. per doz.
Gas filled	9.22	9.74	94.7	9.92	10.78	3.53	3.19
Other	8.96	8.80	101.8	8.78	8.61	2.89	2.11
Under 20 volts :—							
For flash lamps	1.22	1.08	112.8	1.57	2.32	0.30	0.28
For motor vehicles	5.62	6.11	91.9	8.41	10.78	1.30	1.02
Other	6.93	7.44	93.2	4.53	7.26	0.65	1.06
Electric carbons :—							
Lighting	3.30	2.68	123.4	1.85	2.14	1.45	2.02
Other (excluding furnace carbons)	0.21	0.21	104.3	0.26	0.27	0.05	0.07
Wireless receiving sets, complete, other than radio-gramophones	£ each	£ each		£ each	£ each	£ each	£ each
Prepayment type	6.07	6.15	98.7	4.88‡	5.57‡	2.52‡	3.44‡
Other	s. each	s. each		s. each	s. each	s. each	s. each
Wireless valves	3.76	3.97	94.8	6.39	6.72	2.18	2.38
House service electricity meters, complete :—	£ each	£ each		£ each	£ each	£ each	£ each
Prepayment type	3.05	2.95	103.5	2.87	2.41	1.86	2.15
Other	1.26	1.25	100.6	1.08	1.07	1.47	1.62
Insulating materials :—	£ per ton	£ per ton					
Of mica	561.5	477.5	117.6	§	§	§	§
Of moulded compositions	184.7	215.3	85.8				

* The average values given relate to (a) £ each, (b) £ per thousand kilowatts, (c) £ per thousand h.p., (d) £ per thousand kilovolt-amperes. Particulars in respect of exports and imports include parts.

† Excludes parts.

‡ Excludes wireless valves.

§ Not recorded separately.

Table VII.—Volume of Production, 1924-1935

Output	1924	1930	1933	1934	1935
Value of output as returned ...	£'000 67,056	£'000 82,936	£'000 71,808	£'000 87,283	£'000 101,764
Estimated value at 1935 prices* ...	55,500	68,000	70,500	87,283	101,764
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Volume of production as a percentage of 1935 ...	55	67	70†	86	100

* In the absence of particulars of quantities these estimates are based on prices of materials used and other manufacturing costs.

† Owing to the exclusion of the Motor Vehicles Trade, the Scientific Instruments etc. Trade, and the Musical Instruments Trade from the scope of the 1933 Inquiry, the 1935 base figure has been adjusted in calculating this index to allow for the output of electrical goods by firms making returns on schedules for those trades.

Table VIII.—Production in relation to Exports and Imports

Kind of goods	Production	Exports	Proportion of production exported	Retained imports	Avail-able	Share
					for use in the United Kingdom	of home market held by British goods
	No.	No.	Per cent.	No.	No.	Per cent.
Vacuum cleaners... { 1935 409,345 27,813 6.8 13,150 394,682 96.7						
Electric bulbs, complete, ready for use:—						
20 volts and over:—						
Gas filled ... { 1935 61,027 9,216 15.1 1,511 53,322 97.2						
Other ... { 1934 47,689 7,390 15.5 2,050 42,349 95.2						
Under 20 volts:—						
For motor vehicles { 1935 12,495 384 3.1 8,047 20,158 60.1						
Other ... { 1934 11,040 117 1.1 7,191 18,114 60.3						
Wireless valves ... { 1935 10,449 2,790 26.7 26,975 34,634 22.1						
House service electricity meters, complete:—						
Prepayment type { 1935 8,916 2,066 23.2 46,198 53,048 12.9						
Other ... { 1934 12,808 1,550 12.1 1,758 13,016 86.5						
Wireless receiving sets, other than radio - gramophones ... { 1935 12,329 1,121 9.1 1,775 12,983 86.3						
Prepayment type { 1935 422.2 2.4 0.6 13.7 433.5 96.8						
Other ... { 1934 397.7 2.8 0.7 14.0 408.9 96.6						
Wireless receiving sets, other than radio - gramophones ... { 1935 966.9 146.8 15.2 2.7 822.8 99.7						
Other ... { 1934 942.6 114.2 12.1 5.4 833.8 99.4						
Wireless receiving sets, other than radio - gramophones ... { 1935 1,724 56 3.3 100 1,768 94.4						
Other ... { 1934 1,607 58 3.6 82 1,631 95.0						

Similar particulars cannot be given for the other principal products of the trade, since in cases where quantities were recorded, the units for production and for oversea trade were not the same. The values are shown in the following table. The production figures for individual

classes of electrical machinery for 1934 exclude the value of parts (see introductory note to Table V A); parts are, however, included in the total for each year.

Kind of goods	Production (value at factory)	Exports (f.o.b.)	Retained imports (c.i.f.)
	£'000	£'000	£'000
Electrical machinery:—			
Generators ... { 1935 1,758 787 18			
Other ... { 1934 1,367 650 22			
Motors:—			
Railway and tramway ... { 1935 589 42 0			
Other motors:— { 1934 435 40 0			
Not exceeding 1 h.p. ... { 1935 728 80 93			
Exceeding 1 h.p. ... { 1934 736 79 56			
Converters and transformers:—			
Rotary ... { 1935 4,729 900 138			
Static ... { 1934 3,856 869 119			
Starting and controlling gear for electric motors and switch gear (other than telegraph and telephone) ... { 1935 187* 59 3			
Vacuum cleaners, electrically worked ... { 1934 470* 62 3			
Other electrical machinery:—			
Magnetos, ignition ... { 1935 2,699† 530 22			
Other, including motor generators, etc. { 1934 2,283 363 12			
TOTAL—Electrical machinery and parts { 1935 8,126‡ 1,531 23			
Electric lighting appliances, accessories and fittings (except electric bulbs):—			
Arc lamps, searchlights and projection lamps ... { 1934 6,724‡ 1,102 53			
Other lamps, complete, with or without bulbs ... { 1935 3,433 158 241			
Electric lighting accessories and fittings for indoor and outdoor use ... { 1934 2,540 98 143			
Electric bell apparatus, not telegraphic or telephonic ... { 1935 328 26 36			
Electric carbons ... { 1934 256 18 15			
Telegraph and telephone apparatus (other than wireless) ... { 1935 659 144 31			
Wireless apparatus (except radio-gramophones, electrical reproducers and valves):—			
Receiving sets, other than radio-gramophones ... { 1934 397 113 52			
Transmitting sets ... { 1935 23,236 4,257 605			
Components and parts ... { 1934 20,015 3,394 475			
Electrical reproducers and radio-gramophones ... { 1935 138 18 7			
Other ... { 1934 101 12 2			
Receiving sets, other than radio-gramophones ... { 1935 353§ 42 133			
Other ... { 1934 342§ 33 113			
Transmitting sets ... { 1935 3,004 406 239			
Other ... { 1934 2,659 358 215			
Receiving sets, other than radio-gramophones ... { 1935 87 9 28			
Other ... { 1934 75 7 24			
Transmitting sets ... { 1935 1,043 48 115			
Other ... { 1934 882 58 161			
Receiving sets, other than radio-gramophones ... { 1935 5,690 1,722 60			
Other ... { 1934 3,928 1,107 52			
Receiving sets, other than radio-gramophones ... { 1935 10,463 273 249			
Other ... { 1934 9,876 325 281			
Transmitting sets ... { 1935 737|| 218 21			
Other ... { 1934 790|| 274 8			
Receiving sets, other than radio-gramophones ... { 1935 2,053 532 703			
Other ... { 1934 1,883 513 644			
Receiving sets, other than radio-gramophones ... { 1935 2,562 90 75			
Other ... { 1934 2,790 86 46			

Kind of goods	Production (value at factory)	Exports (f.o.b.)	Retained imports (c.i.f.)
	£'000	£'000	£'000
Electric wires and cables, insulated :—			
Telegraph and telephone wires and cables { 1935 2,600 556 5			
{ 1934 1,857 455 5			
Other descriptions :—			
Rubber insulated { 1935 5,505 1,055 118			
{ 1934 4,830 870 96			
Paper insulated { 1935 7,148 816 42			
{ 1934 6,334 527 29			
Other { 1935 1,813 257 74			
{ 1934 1,660 306 101			
TOTAL — Electric wires and cables, insulated { 1935 17,066 2,684 239			
{ 1934 14,681 2,158 231			
Batteries, primary :—			
Complete :—			
For hand flash lamps { 1935 23 1			
{ 1934 22 1			
Other { 1935 3,548 153 3			
{ 1934 3,661 170 5			
Parts, other than carbons { 1935 55 21			
{ 1934 38 11			
TOTAL—Primary batteries { 1935 3,548 231 25			
{ 1934 3,661 230 17			
Accumulators (including parts) :—			
Portable :—			
For vehicles { 1935 1,391 120 7			
{ 1934 1,290 ¶ 1			
Other { 1935 814 167 3			
{ 1934 779 300 2			
Stationary { 1935 673 217 6			
{ 1934 718 225 5			
Commercial measuring instruments (indicating, recording, etc.) { 1935 825 138 49			
{ 1934 751 108 44			
Scientific electrical instruments { 1935 549 65 89			
{ 1934 537 54 82			
Electro-medical apparatus, including X-ray apparatus and vacuum tubes { 1935 288 46 128			
{ 1934 242 51 99			
Electrical heating and cooking apparatus { 1935 3,187 222 140			
{ 1934 2,854 186 77			

* Including rectifiers.

† Described as power and instrument transformers.

‡ Including switchboards.

§ Including parts.

¶ Including combined transmitting and receiving sets, and in 1935, television apparatus.

¶¶ Not recorded separately.

Table IX.—Other output of the Electrical Engineering Trade

The value of the gross output of the firms whose returns were made on schedules for the Electrical Engineering Trade was £106,853,000 in 1935 and £91,413,000 in 1934, of which £99,874,000 in 1935 and £85,630,000 in 1934 consisted of products included in Table V A. Particulars of the remaining items are shown below.

Kind of output	1935	1934
	£'000	£'000
Refrigerating machinery	783	609
Electric lifts, cranes, hoists, etc....	195	80
Welding machinery, electrical	115	*
Steam turbines	1,271	480
Other mechanical plant (condensing plant, etc.)	662	795†
Iron and steel castings	115	95
Electrical conduits and fittings therefor	320	658
Other manufactures of iron and steel	221	288
Uninsulated copper wire :—		
Thinner than No. 20 gauge	230	188
No. 20 gauge and thicker	1,345	1,184
Other metal manufactures	451	412
Scientific instruments (other than electrical)	37	16
Motor cars, including parts and accessories	168	114
Other goods made	602	514
Scrap metals sold :—		
Iron and steel	90	75
Copper	174	123
Other metals	184	133
Other work, including work done for the trade	16‡	19‡
TOTAL	6,979	5,783

* Not recorded separately.

† Corrected figure.

‡ Amount received.

MATERIALS AND FUEL

Table X A.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	1935		1934	
	Quantity	Cost	Quantity	Cost
	Th. tons	£'000	Th. tons	£'000
Copper in all forms	150.1	7,159	131.2	6,327
Brass in all forms... ..	20.4	1,342	17.2	1,143
Iron castings	56.3	1,252	50.1	1,112
Steel castings	6.6	333	7.2	316
Steel forgings	10.6	338	8.0	279
Rubber in all forms	8.4	525	6.8	435
Paper, excluding packing and wrapping	11.5	420	9.2	345
Porcelain... ..	6.8	516	7.8	587
	...	122		
Synthetic resins :—				
Lump and powder, including moulding powder	4.6	292	3.7	247
All other forms... ..	0.9	212	0.8	190
Lead in all forms	141.4	2,054	}	31,298
Steel wire and tape	41.6	562		
Steel plates and sheets	96.2	1,524		
Wireless parts and accessories ... ..	...	4,381		
Fuel and electricity used for all purposes :—				
Coal	391.3	371		
Coke	68.0	98		
Heavy fuel oil	6,195 Th. B.T.U. (Kw.-hrs.)	112		
Purchased electricity*	305,356	885		
All other purchased materials and fuel...	...	26,716		
TOTAL ... ..	...	49,214	...	42,279

* Including electricity generated in other works under the same ownership.

Table X B.—Consumption of coal, coke and electricity in 1935 and 1930

Kind of fuel	1935	1930*
		Th. tons	Th. tons
Coal	391.3	317.4
Coke	68.0	54.3
	Th. B.T.U. (Kw.-hrs.)	Th. B.T.U. (Kw.-hrs.)
Electricity :—		
Generated in same works... ..	41,802	28,152
Generated in other works under same ownership	115	953
Purchased	305,241	188,584
Total electricity consumed	347,158	217,689

* Great Britain only.

EMPLOYMENT

Table XI A.—Average numbers employed in 1935 and 1934

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
Operatives (average for the year) ... { 1935 21,621 123,532 17,213 69,460 38,834 192,992* 1934 17,407 105,340 15,477 63,583 32,884 168,923*						
Administrative, technical and clerical staff† ... { 1935 2,498 38,373 3,336 16,583 5,834 54,956 1934 1,895 33,259 2,408 14,663 4,303 47,922						
TOTAL ... { 1935 24,119 161,905 20,549 86,043 44,668 247,948* 1934 19,302 138,599 17,885 78,246 37,187 216,845*						

* Including operatives engaged in outside work of erection, fitting, etc. The number of these operatives was 8,977 in 1935 and 7,654 in 1934.

† As at 12th October, 1935, and 13th October, 1934.

Table XI B.—Operatives employed in one week in each month of 1934 and 1935 by firms furnishing returns in respect of the twelve months ended December

Mid week of*	Operatives employed		Monthly index†		
	1934	1935	1933	1934	1935
January	106,180	129,479	77.4	79.2	95.7
February	105,561	128,546	74.6	78.7	95.0
March	105,287	126,203	72.9	78.5	93.2
April	107,212	126,640	71.1	79.9	93.6
May	110,654	129,903	71.9	82.5	96.0
June	112,519	130,990	72.7	83.9	96.8
July	116,771	134,464	75.3	87.1	99.3
August	123,216	139,454	78.3	91.9	103.0
September	129,648	146,347	84.1	96.7	108.1
October	132,001	146,439	86.6	98.4	108.2
November... ..	131,319	144,327	85.9	97.9	106.6
December	127,897	141,402	84.3	95.4	104.5
Average for the twelve months	117,355	135,350	77.9	87.5	100.0
Proportion of total operatives represented	69.47	70.13	...	...	...

* For the ending date of each week see page xiv.

† Based on the estimated average for the year 1935.

Table XI C.—Average numbers employed, 1924-1935

Year	Operatives	Administrative, technical and clerical staff	Total
1924	121,367	29,517	150,884
1930*	151,737	40,233	191,970
1933	150,413	45,037	195,450
1934	168,923	47,922	216,845
1935	192,992	54,956	247,948

* Great Britain only.

WAGES

Table XII.—Wages paid by firms furnishing returns of wages in 1935 and 1930

The aggregate amount of wages paid by firms furnishing returns of wages was £15,925,000 in 1935 representing 38.6 per cent. of the net output of these firms, the corresponding figures for 1930 being £13,120,000 and 37.4 per cent. The figures for these firms given below indicate the size of the sample and the extent to which it is representative.

Firms furnishing returns of wages	1935		1930*	
	Aggregate	Proportion of trade	Aggregate	Proportion of trade
Gross output... ..	£'000 75,584	Per cent. 70.7	£'000 65,684	Per cent. 74.7
Net output	41,236	71.9	35,104	78.3
Operative staff employed :—	No.		No.	
During mid-week of October :—				
Males	95,128	71.2	} †	†
Females... ..	51,568	68.7		
Total	146,696	70.3	116,195	74.9
Average for the year	135,098	70.0	114,465	75.4
Administrative, technical and clerical staff	42,286	76.9	†	†
Number of establishments	437	51.2	...	...

* Great Britain only.

† Not recorded separately.

SUB-DIVISIONS OF THE INDUSTRY (1935)

(I) ELECTRICAL MACHINERY

Table XIII.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	19	101	55	354	157
25-49	36	451	227	1,248	182
50-99	28	800	377	1,918	197
100-199	22	1,369	752	3,042	247
200-299	14	1,299	709	3,422	207
300-399	5	647	315	1,675	188
400-499	4	940	495	1,819	272
500-749	9	2,256	1,276	5,598	228
750-999	5	1,313	783	4,321	181
1,000-1,499	7	3,187	1,832	8,745	209
1,500 and over... ..	13	19,239	11,794	50,877	232
TOTAL	162	31,602	18,615	83,019	224

Table XIV.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1	63	6,442	4,022	15,776	255
2	23	6,599	3,795	18,649	203
3	15	1,981	1,006	3,806	264
4	9	2,056	1,243	5,542	224
5	26	10,810	6,321	28,144	225
6	3	336	128	1,201	106
8	8	2,377	1,551	6,509	238
14	4	99	58	291	200
Other areas	11	902	491	3,101	158
TOTAL	162	31,602	18,615	83,019	224

* For particulars see page xviii.

Table XV.—Output

Electrical machinery (a) Complete machines (b) Replacement parts	Returned by firms in the Electrical Machinery group			Returned by all firms	
	Quantity	Value	Entries	Quantity	Value
	No.	£'000	No.	No.	£'000
Generators :—					
Alternating current :—					
Under 2,000 kilowatts ...	{ (a) 1,589 (b) ...	{ 259 11	{ 22	{ 1,651	{ 260 11
2,000 kilowatts and under 11,000 kilowatts ...	{ (a) 50 (b) ...	{ 265 26	{ 9	{ 50	{ 265 27
11,000 kilowatts and over ...	{ (a) 25 (b) ...	{ 391 74	{ 5	{ 25	{ 391 76
Direct current ...	{ (a) 10,295 (b) ...	{ 621 36	{ 29	{ 11,234	{ 683 45
Total—Generators ...	{ (a) ... (b) ...	{ 1,536 147	{ ...	{ ...	{ 1,599 159
Motors :—					
Railway and tramway ...	{ (a) 2,622 (b) ...	{ 539 48	{ 6	{ 2,647	{ 541 48
Other motors of 1 h.p. and over :—					
Alternating current :—					
1 h.p. and under 200 h.p. ...	{ (a) 155,025 (b) ...	{ 2,551 88	{ 45	{ 157,231	{ 2,590 96
200 h.p. and not exceed- ing 250 h.p. ...	{ (a) 449 (b) ...	{ 124 8	{ 15	{ 449	{ 124 8
Exceeding 250 h.p. and under 1,000 h.p. ...	{ (a) 708 (b) ...	{ 311 16	{ 14	{ 708	{ 311 16
1,000 h.p. and over ...	{ (a) 64 (b) ...	{ 130 4	{ 9	{ 64	{ 130 4
Direct current :—					
1 h.p. and under 250 h.p. ...	{ (a) 33,367 (b) ...	{ 1,094 68	{ 34	{ 35,188	{ 1,175 80
250 h.p. and over ...	{ (a) 101 (b) ...	{ 177 16	{ 10	{ 104	{ 179 16
Fractional horse - power motors (i.e., below 1 horse- power) alternating current and direct current ...	{ (a) 254,927 (b) ...	{ 640 25	{ 43	{ 282,009	{ 703 25
Total—Motors ...	{ (a) ... (b) ...	{ 5,566 273	{ ...	{ ...	{ 5,753 293
Converters, rectifiers and trans- formers, other than wireless :—					
Rotary converters...	{ (a) 8,124 (b) ...	{ 182 5	{ 23	{ 8,124	{ 182 5
Rectifiers, mercury vapour (steel case or glass bulb, and metal) ...	{ (a) 2,356 (b) ...	{ 275 20	{ 9	{ 2,731	{ 277 20
Power transformers ...	{ (a) 66,625 (b) ...	{ 2,215 33	{ 19	{ 82,686	{ 2,517 42
Instrument transformers...	{ (a) 37,156 (b) ...	{ 81 *	{ 11	{ 58,708	{ 138 2
Total — Converters, transformers, etc. ...	{ (a) ... (b) ...	{ 2,753 58	{ ...	{ ...	{ 3,114 69

Electrical machinery (a) Complete machines (b) Replacement parts	Returned by firms in the Electrical Machinery group			Returned by all firms	
	Quantity	Value	Entries	Quantity	Value
	Th. tons	£'000	No.	Th. tons	£'000
Starting and controlling gear for electric motors... { (a) 13.5 (b) ...		{ 2,084 114	{ 51	{ 13.8	{ 2,151 116
Switch gear and switch boards (other than tele- graph and telephone) ... { (a) 50.4 (b) ...		{ 5,472 87	{ 43	{ 54.0	{ 5,761 98
★ Vacuum cleaners, electrically worked ... { (a) 376,545 (b) ...		{ 3,191 143	{ 15	{ 409,345	{ 3,286 147
Other electrical machinery { (a) ... (b) ...		{ 401 102	{ ...	{ ...	{ 569 121
TOTAL — Electrical machinery ... { (a) ... (b) ...		{ 21,003 924	{ ...	{ ...	{ 22,233 1,003

* Less than £500.

The value of the other output of these firms was £9,675,000, of which the following were the principal items :—

	£'000
Electric lighting appliances, accessories and fittings, and parts thereof ...	1,633
Electricity meters and parts thereof ...	415
Electrical heating and cooking apparatus ...	291
Other electrical goods and apparatus ...	1,864
Steam turbines, condensers and other mechanical plant ...	1,981
Other goods made and scrap metals sold ...	1,306
Contract work and other work done ...	783*
Add balance of work in progress at the end of the year ...	1,402
TOTAL ...	9,675

* See footnote (††) to Table V A.

Table XVI.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms	15.7	1,277
Brass in all forms	5.4	412
Iron castings	35.3	765
Steel castings	5.8	229
Steel forgings	10.0	298
Rubber in all forms	0.4	47
Paper, excluding packing and wrapping	0.5	38
Porcelain	3.9	238
Synthetic resins :—		41
Lump and powder, including moulding powder	1.1	86
All other forms	0.3	69
Lead in all forms	0.2	6
Steel wire and tape	1.4	27
Steel plates and sheets	57.3	854
Fuel and electricity used for all purposes :—		
Coal	136.9	116
Coke	30.4	42
Heavy fuel oil	523	14
Purchased electricity*	100,388	252
All other purchased materials and fuel		8,144
TOTAL		12,955

* Including electricity generated in other works under the same ownership.

(II) ELECTRIC WIRES AND CABLES**Table XVII.—Size of establishments**

Size of establishment (average number employed)	Number of establishments		Gross output	Net output	Number of persons employed		Net output per person employed
	No.	£'000			No.	£	
11-49	10	114	62	337	184		
50-99	8	344	135	613	220		
100-199	11	1,004	370	1,581	234		
200-299	7	986	362	1,823	199		
300-399	4	691	306	1,449	211		
400-499	7	2,753	1,106	3,215	344		
500-999	6	2,645	1,317	4,164	316		
1,000-1,499	7	5,211	2,311	8,570	270		
1,500 and over... ..	4	7,158	3,095	10,796	287		
TOTAL	64	20,906	9,064	32,548	278		

Table XVIII.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1... ..	31	8,961	3,618	12,879	281
2... ..	15	8,055	3,661	13,224	277
6... ..	5	787	290	903	321
Other areas	13	3,103	1,495	5,542	270
TOTAL	64	20,906	9,064	32,548	278

* For particulars see page xviii.

Table XIX.—Output

Kind of output	Returned by firms in the Electric Wires and Cables group		Returned by all firms
	Value	Entries	Value
	£'000	No.	£'000
Electric wires and cables, insulated :—			
Telegraph and telephone wires and cables...	1,573	19	2,600
Other descriptions :—			
Rubber insulated	5,337	33	5,595
Paper insulated	6,591	19	7,148
Other	1,813	26	1,813
TOTAL—Electric wires and cables	15,314	...	17,066

The value of the other output of these firms was £5,592,000 of which the following were the principal items :—

	£'000
Joint boxes	500
Cable jointing materials and accessories	119
Electric lighting appliances and accessories	146
Switchgear and switchboards	150
Other electrical goods and appliances... ..	727
Uninsulated copper wire	1,574
Manufactures of non-ferrous metals	314
Other goods made and scrap metals sold	270
Contract work and other work done	1,546*
Add balance of work in progress at the end of the year	246
TOTAL	5,592

* See footnote (††) to Table V A.

Table XX.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms	120.9	4,918
Brass in all forms	2.8	137
Iron castings	4.0	86
Steel forgings	0.1	4
Rubber in all forms	7.1	387
Paper, excluding packing and wrapping	7.6	207
Porcelain	0.5	51
Synthetic resins :—		7
Lump and powder, including moulding powder	0.4	26
All other forms	0.1	13
Lead in all forms	99.1	1,411
Steel wire and tape	32.9	409
Steel plates and sheets	0.5	5
Fuel and electricity used for all purposes :—		
Coal	114.1	114
Coke	7.0	9
Heavy fuel oil	2,780	47
Purchased electricity	76,470	229
All other purchased materials and fuel		3,669
TOTAL		11,723

(III) TELEGRAPH AND TELEPHONE APPARATUS

Table XXI.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-49	5	41	29	128	226
100-299	3	222	133	604	221
400-1,499	4	893	580	3,068	189
1,500 and over... ..	5	6,749	4,467	17,851	250
TOTAL	17	7,905	5,209	21,651	241

Table XXII.—Particulars of output, etc., in the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1... ..	12	4,033	2,697	10,008	269
2, 5 and 6	5	3,872	2,512	11,643	216
TOTAL	17	7,905	5,209	21,651	241

* For particulars see page xviii.

Table XXIII.—Output

Kind of output	Returned by firms in the Telegraph and Telephone Apparatus group		Returned by all firms
	Value	Entries	Value
	£'000	No.	£'000
Telegraph apparatus	4,464	15	182
Telephone apparatus			5,508
TOTAL	4,464	...	5,690

The value of the other output of these firms was £3,441,000, of which the following were the principal items:—

	£'000
Electric wires and cables, insulated :—	
Telegraph and telephone	660
Other descriptions	272
Wireless apparatus and parts thereof	750
Electrical signalling apparatus	265
Electrical totalisator apparatus	155
Other electrical goods and apparatus	295
Other goods made and scrap metals sold	133
Contract work and other work done	545*
Add balance of work in progress at the end of the year	366
TOTAL	3,441

* See footnote (†) to Table V A.

Table XXIV.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms	5.2	301
Brass in all forms	2.1	122
Iron castings	1.4	41
Paper, excluding packing and wrapping	0.8	45
Synthetic resins in all forms	0.2	29
Lead in all forms	10.1	178
Steel wire and tape	1.1	12
Steel plates and sheets	3.3	80
Wireless parts and accessories		175
Fuel and electricity used for all purposes :—		
Coal	37.2	31
Coke... ..	1.4	2
Heavy fuel oil	150	2
Purchased electricity	15,745	45
All other purchased materials and fuel		1,632
TOTAL		2,695

(IV) WIRELESS APPARATUS (EXCEPT VALVES)

Table XXV.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	24	152	70	415	170
25-49	17	320	142	620	228
50-99	14	497	186	1,008	185
100-199	15	1,095	437	2,178	201
200-299	8	978	447	1,889	236
300-999	7	2,516	929	4,832	192
1,000 and over... ..	8	9,321	4,582	21,199	216
TOTAL	93	14,879	6,793	32,141	211

Table XXVI.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1... ..	71	13,230	6,101	28,484	214
2... ..	5	241	141	1,086	130
3... ..	5	177	56	349	162
5... ..	6	107	49	191	256
6... ..	3	173	77	468	164
8 and 10	3	951	369	1,563	236
TOTAL	93	14,879	6,793	32,141	211

* For particulars see page xviii.

Table XXVII.—Output

Kind of output	Returned by firms in the Wireless Apparatus group			Returned by all firms	
	Quantity	Value	Entries	Quantity	Value
Wireless apparatus, complete :-	Thous.	£'000	No.	Thous.	£'000
Receiving sets, other than radio-gramophones ...	1,567	9,646	44	1,724	10,463
Transmitting and combined transmitting and receiving sets (including television apparatus) ...	...	2,065	64	...	737
Components and parts of wireless apparatus, sold separately (except wireless valves) ...	...	...	...	...	2,053
Electrical reproducers for wireless ...	733·0	412	10	743·2	431
Radio-gramophones ...	104·3	1,569	33	125·8	55
TOTAL ... ..	...	13,720	...	...	15,505

The value of the other output of these firms was £1,159,000, of which the following were the principal items:—

Primary batteries, complete	£'000
Other electrical goods and apparatus	276
Other output	556
Add balance of work in progress at the end of the year	286
	41
TOTAL	1,159

Table XXVIII.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms	1·4	196
Brass in all forms	2·1	117
Iron castings	0·2	3
Steel castings	0·3	45
Rubber in all forms	0·2	14
Paper, excluding packing and wrapping	0·6	23
Porcelain	0·1	18
Synthetic resins :-		
Lump and powder, including moulding powder	1·5	71
All other forms	0·1	25
Lead in all forms	0·2	4
Steel wire and tape	0·1	2
Steel plates and sheets	7·4	134
Wireless parts and accessories ... ..	...	3,825
Fuel and electricity used for all purposes :-		
Coal	26·0	30
Coke	4·8	8
Heavy fuel oil	415	7
	Th. galls.	
	Th. B.T.U.	
	(Kw.-hrs.)	
Purchased electricity	15,579	67
All other purchased materials and fuel ... ..	...	3,476
TOTAL ... ..	...	8,065

(V) WIRELESS VALVES AND ELECTRIC LAMPS

Table XXIX.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-49	13	161	100	411	243
50-99	12	257	154	811	190
100-199	5	341	205	684	299
200-399	4	507	289	1,224	236
400-749	3	1,031	660	1,703	388
750 and over... ..	5	2,363	1,433	5,762	249
TOTAL	42	4,660	2,841	10,595	268

Table XXX.—Particulars of output, etc., in the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
I... ..	33	3,904	2,335	9,110	256
Other areas	9	756	506	1,485	341
TOTAL	42	4,660	2,841	10,595	268

* For particulars see page xviii.

Table XXXI.—Output

Kind of output	Returned by firms in the Wireless Valves and Electric Lamps group			Returned by all firms	
	Quantity	Value	Entries	Quantity	Value
	Thous.	£'000	No.	Thous.	£'000
Wireless valves sold separately	10,812	1,934	8	11,777	2,215
Electric lamps and parts thereof:—					
Arc lamps, searchlights and projection lamps, and parts thereof ... ..	...	50	6	...	138
Bulbs, complete, ready for use:—					
20 volts and over:—					
Gas filled	43,188	1,595	20	61,027	2,345
Other	16,587	627	20	20,236	755
Under 20 volts:—					
For motor vehicles	8,848	203	9	12,495	293
Other (including bulbs for flash lamps)	10,166	88	9	10,449	96
TOTAL ... ..	...	4,497	...	...	5,842

The value of the other output of these firms was £163,000, of which the following were the principal items:—

	£'000
Other electrical goods and apparatus	126
Other output	19
Add balance of work in progress at the end of the year...	18
TOTAL	163

Table XXXII.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Brass in all forms	0.6	59
Iron castings	0.1	3
Synthetic resins	0.1	6
Lead in all forms	0.1	3
Wireless parts and accessories ... ..	...	190
Fuel and electricity used for all purposes:—		
Coal	2.1	3
Coke	2.9	5
Heavy fuel oil	Th. galls. 327	4
Purchased electricity	Th. B.T.U. (Kw.-hrs.) 22,124	62
All other purchased materials and fuel ... ..	...	1,483
TOTAL ... ..	...	1,818

(VI) PRIMARY BATTERIES AND ACCUMULATORS

Table XXXIII.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	9	101	42	155	270
25-49	11	239	120	440	273
50-99	7	221	105	487	215
100-199	5	471	259	746	347
200-299	3	312	174	655	266
300-999	8	2,468	1,216	4,915	247
1,000 and over... ..	3	2,363	1,265	4,037	313
TOTAL	46	6,175	3,181	11,435	278

Table XXXIV.—Particulars of output, etc., in the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
I... ..	28	2,653	1,365	5,210	262
5... ..	7	1,506	682	3,314	206
Other areas	11	2,016	1,134	2,911	390
TOTAL	46	6,175	3,181	11,435	278

* For particulars see page xviii.

Table XXXV.—Output

Kind of output	Returned by firms in the Primary Batteries and Accumulators group		Returned by all firms
	Value	Entries	Value
Batteries, primary :—	£'000	No.	£'000
Complete :—			
For hand flash lamps	80	10	151
For wireless sets	656	10	1,011
Other primary batteries	87	9	129
Unclassified (including parts other than carbons)	2,112	3	2,257
Accumulators (including parts) :—			
Portable :—			
For vehicles, sold separately	1,353	20	1,391
Other	810	21	814
Stationary	653	16	673
TOTAL	5,751	...	6,426

The value of the other output of these firms was £424,000, of which the following were the principal items:—

Electric lighting accessories and fittings... ..	£'000	149
Electric torches, safety lamps and parts thereof	99	
Other electrical goods and apparatus	46	
Other output	102	
Add balance of work in progress at the end of the year... ..	28	
TOTAL	424	

Table XXXVI.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms	0.1	11
Brass in all forms	0.6	64
Iron castings	0.1	2
Rubber in all forms	0.2	27
Paper, excluding packing and wrapping	0.3	6
Porcelain ... ..	...	7
Synthetic resins :—		
Lump and powder, including moulding powder	0.3	3
All other forms	0.1	17
Lead in all forms	25.3	359
Steel wire and tape	0.2	8
Steel plates and sheets	0.1	2
Fuel and electricity used for all purposes :—		
Coal	17.4	17
Coke... ..	5.3	8
Heavy fuel oil	234	4
	Th. B.T.U. (Kw.-hrs.)	
Purchased electricity	19,843	60
All other purchased materials and fuel ... ..	...	2,398
TOTAL ... ..	...	2,993

(VII) ELECTRIC LIGHTING ACCESSORIES AND FITTINGS
(INCLUDING ELECTRIC BELL APPARATUS)

Table XXXVII.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	20	127	64	359	177
25-49	15	196	101	555	182
50-99	12	273	150	835	180
100-299... ..	13	655	364	2,146	170
300 and over	4	892	422	2,373	178
TOTAL	64	2,143	1,101	6,268	176

Table XXXVIII.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1... ..	31	1,161	581	2,935	198
2... ..	7	178	103	646	159
3... ..	3	104	53	429	124
5... ..	17	639	333	2,064	161
6, 8 and 10	6	61	31	194	160
TOTAL	64	2,143	1,101	6,268	176

* For particulars see page xviii.

Table XXXIX.—Output

Kind of output	Returned by firms in the Electric Lighting Accessories and Fittings, etc., group		Returned by all firms
	Value	Entries	Value
	£'000	No.	£'000
Electric lighting accessories and fittings :—			
Accessories (e.g., lampholders, ceiling roses, wall plugs and sockets, switches, fuses, etc.)	1,249	42	2,171
Fittings (ceiling, wall, standard, portable or pendant), excluding glassware	466	32	833
Electric bell apparatus, not telegraphic or telephonic	63	7	87
TOTAL	1,778	...	3,091

The value of the other output of these firms was £365,000, of which the following were the principal items:—

	£'000
Wireless apparatus:—	
Components and parts	109
Other electrical goods and apparatus	152
Other output	90
Add balance of work in progress at the end of the year... ..	14
TOTAL	365

Table XL.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms	0.3	22
Brass in all forms	2.9	171
Iron castings	2.5	64
Rubber in all forms	0.1	5
Porcelain	1.4	110
... ..	...	14
Synthetic resins:—		
Lump and powder, including moulding powder	0.4	35
All other forms	0.1	26
Steel wire and tape	0.4	6
Steel plates and sheets	1.3	22
Wireless parts and accessories ... ..	...	56
Fuel and electricity used for all purposes:—		
Coal	1.0	1
Coke... ..	2.2	3
Heavy fuel oil	Th. galls. 283	4
Purchased electricity	Th. B.T.U. (Kw.-hrs.) 3,682	15
All other purchased materials and fuel ... ..	...	477
TOTAL ... ..	...	1,031

(VIII) ELECTRICAL HEATING AND COOKING APPARATUS

Table XLI.—Size of establishments

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	5	44	15	94	158
25-49	5	81	27	190	141
50-99	5	190	92	349	263
100-199... ..	7	470	225	993	227
200-399... ..	4	429	206	1,255	164
500 and over	5	1,998	894	4,602	194
TOTAL	31	3,212	1,459	7,483	195

Table XLII.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1	9	418	227	1,142	199
5	11	2,298	1,033	5,023	206
6	4	25	13	99	136
2, 10 and 12	4	283	115	613	187
14 and 15	3	188	71	606	117
TOTAL	31	3,212	1,459	7,483	195

* For particulars see page xviii.

Table XLIII.—Output

Kind of output	Returned by firms in the Electrical Heating and Cooking Apparatus group		Returned by all firms
	Value	Entries	Value
	£'000	No.	£'000
▲ Electrical heating apparatus:—			
Domestic	1,152	27	1,509
Commercial	52	9	71
Industrial	119	11	153
× Electrical cooking apparatus	1,096	17	1,454
TOTAL	2,419	...	3,187

The value of the other output of these firms was £793,000, of which the following were the principal items:—

	£'000
Electrical machinery, including parts	104
Electric lighting accessories	139
Electric lighting fittings	277
Other electrical goods and apparatus	71
Other output	200
Add balance of work in progress at the end of the year	2
TOTAL	793

Table XLIV.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Quantity	Cost
	Th. tons	£'000
Copper in all forms ...	0.6	50
Brass in all forms ...	1.1	74
Iron castings ...	8.1	165
Porcelain ...	0.6	67
Steel wire and tape ...	0.1	2
Steel plates and sheets ...	6.0	81
Fuel and electricity used for all purposes :—		
Coal ...	6.3	6
Coke ...	3.0	5
Heavy fuel oil ...	Th. galls. 45	4
	Th. B.T.U. (Kw.-hrs.) 12,927	32
Purchased electricity* ...		1,149
All other purchased materials and fuel ...		
TOTAL ...		1,676

* Including electricity generated in other works under the same ownership.

COUNTRY TABLES (1935)

Note.—The figures given in the following tables relate only to firms whose returns were made on schedules for the Electrical Engineering Trade.

Owing to the possible disclosure of information relating to individual firms, separate particulars for Northern Ireland cannot be given.

Table I.—General summary

Particulars	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Value of products (Gross output)...	£'000	105,593	1,260	106,853
Cost of materials, fuel and electricity used	"	48,615	599	49,214
Amount paid for work given out ...	"	282	13	295
Net output ...	"	56,696	648	57,344
Average number of persons employed ...	No.	244,649	3,299	247,948
Net output per person employed ...	£	232	196	231
Number of returns ...	No.	742	35	777
Number of establishments ...	"	818	36	854

Table II.—Output

Kind of output (a) Complete machines (b) Replacement parts	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Electrical machinery :—				
Generators :—				
Alternating current :—				
Under 2,000 kilowatts ...	(a) { No. £'000 }	*	*	{ 1,649 260
	(b) { " } " }	10	1	{ 11 50
2,000 kilowatts and under 11,000 kilowatts ...	(a) { No. £'000 }	*	*	{ 265 26
	(b) { " } " }	26	—	{ 25 391
11,000 kilowatts and over ...	(a) { No. £'000 }	25	—	{ 74 391
	(b) { " } " }	391	—	{ 74 10,583
Direct current ...	(a) { No. £'000 }	10,459	124	{ 624 36
	(b) { " } " }	607	17	{ 1 147
Total—Generators ...	(a) { £'000 } (b) { " }	1,510	30	{ 1,540 147
Motors :—				
Railway and tramway ...	(a) { No. £'000 }	2,620	2	{ 2,622 539
	(b) { " } " }	539	†	{ 48 48
Other motors of 1 h.p. and over :—				
Alternating current :—				
1 h.p. and under 200 h.p. ...	(a) { No. £'000 }	153,665	1,710	{ 2,555 88
	(b) { " } " }	2,491	64	{ 449 124
200 h.p. and not exceeding 250 h.p. ...	(a) { No. £'000 }	83	5	{ 124 8
	(b) { " } " }	430	19	{ 6 1
	(b) { " } " }	118	6	{ 8
	(b) { " } " }	7	1	{ 8

Kind of output (a) Complete machines (b) Replacement parts	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Electrical machinery:—contd.				
Motors:—contd.				
Other motors of 1 h.p. and over:— <i>contd.</i>				
Alternating current:— <i>contd.</i>				
Exceeding 250 h.p. and under 1,000 h.p. ...	(a) { No. } { £'000 }	*	*	{ 708 311 16 64 130 4 }
1,000 h.p. and over ...	(b) { " } { " }			
Direct current:—				
1 h.p. and under 250 h.p. ...	(a) { No. } { £'000 }	33,420	200	33,620
250 h.p. and over... ..	(b) { " } { " }	1,080	18	1,098
Fractional horse-power motors (i.e., below 1 horse-power) alternating current and direct current	(a) { No. } { £'000 }	66	2	68
	(b) { " } { " }	101	—	101
	(a) { No. } { £'000 }	177	—	177
	(b) { " } { " }	16	—	16
	(a) { No. } { £'000 }	255,818	—	255,818
	(b) { " } { " }	646	—	646
	(a) { No. } { £'000 }	25	—	25
	(b) { " } { " }	—	—	—
Total—Motors	(a) { £'000 }	5,477	103	5,580
	(b) { " }	264	9	273
Converters, rectifiers and transformers, other than wireless:—				
Rotary converters	(a) { No. } { £'000 }	*	*	{ 8,124 182 5 2,731 277 20 82,686 2,517 41 58,708 138 2 }
Rectifiers, mercury vapour (steel case or glass bulb, and metal)	(b) { " } { " }			
Power transformers	(a) { No. } { £'000 }			
Instrument transformers	(b) { " } { " }			
Total — Converters, transformers, etc.	(a) { £'000 }	2,992	122	3,114
	(b) { " }	65	3	68
Starting and controlling gear for electric motors	(a) { Th. tons } { £'000 }	13.4	0.1	13.5
	(b) { " } { " }	2,073	21	2,094
Switch gear and switchboards (other than telegraph and telephone)	(a) { Th. tons } { £'000 }	114	1	115
	(b) { " } { " }	53.5	0.4	53.9
	(a) { £'000 }	5,669	82	5,751
	(b) { " }	84	13	97
Other electrical machinery	(a) { £'000 }	3,663	26	3,689
	(b) { " }	259	2	261
TOTAL—Electrical machinery	(a) { £'000 }	21,384	384	21,768
	(b) { " }	931	30	961

Kind of output	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Electric lighting appliances, accessories and fittings, and parts thereof:—				
Arc lamps, searchlights and projection lamps, and parts thereof	£'000	138	—	138
Electric torches, safety lamps, and parts thereof... ..	"	313	—	313
Other lamps, complete, with or without bulbs	"	31	—	31
Bulbs, complete, ready for use:—				
20 volts and over:—				
Gas filled	Thous. £'000	61,027	—	61,027
Other	Thous. £'000	2,345	—	2,345
	£'000	20,236	—	20,236
	£'000	755	—	755
Under 20 volts:—				
For motor vehicles	Thous. £'000	12,495	—	12,495
Other (including bulbs for flash lamps)	Thous. £'000	293	—	293
Electric lighting accessories and fittings not elsewhere specified, for indoor or outdoor use:—	Thous. £'000	10,449	—	10,449
Accessories (e.g., lampholders, ceiling roses, wall plugs and sockets, switches, fuses, etc.)	£'000	96	—	96
Fittings (ceiling, wall, standard, portable or pendant), excluding glassware	£'000	2,125	—	2,125
	"	824	—	824
Total—Electric lighting appliances, accessories and fittings, and parts thereof	£'000	6,920	—	6,920
Electric bell apparatus, not telegraphic or telephonic	£'000	82	—	82
Electrodes for welding other than of carbon †	Million £'000	34.7	—	34.7
	£'000	198	—	198
Electric carbons:—				
Lighting	Million £'000	14.5	—	14.5
Other (including carbon electrodes)	Million £'000	200	—	200
Telegraph apparatus	"	*	*	767.7
Telephone apparatus	"	*	*	687
	"	182	—	149
	"	5,502	—	182
	"	—	—	5,502
Wireless apparatus (except radio-gramophones, electrical reproducers and wireless valves):—				
Complete:—				
Receiving sets, other than radio-gramophones	Thous. £'000	1,701	—	1,701
Transmitting and combined transmitting and receiving sets (including television apparatus)	£'000	10,332	—	10,332
Components and parts, sold separately (except wireless valves)	"	737	—	737
	"	1,940	—	1,940
Total—Wireless apparatus	£'000	13,009	—	13,009

Kind of output	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Electrical reproducers :—				
For sound films	<i>Quantity stated...</i> } <i>Thous.</i>	1.5	—	1.5
	<i>Quantity not stated</i> } <i>£'000</i>	147	—	147
Wireless...	<i>Quantity stated...</i> } <i>Thous.</i>	743.2	—	743.2
	<i>Quantity not stated</i> } <i>£'000</i>	431	—	431
Other ...	<i>Quantity stated...</i> } <i>Thous.</i>	5.1	—	5.1
	<i>Quantity not stated</i> } <i>£'000</i>	64	—	64
Radio-gramophones ...	<i>Quantity stated...</i> } <i>Thous.</i>	114.4	—	114.4
	<i>Quantity not stated</i> } <i>£'000</i>	1,684	—	1,684
Total—Electrical reproducers and radio-gramophones ...	<i>£'000</i>	2,473	—	2,473
Wireless valves, sold separately ...	<i>Thous.</i>	11,777	—	11,777
	<i>£'000</i>	2,215	—	2,215
Electric wires and cables, insulated :—				
Telegraph and telephone wires and cables ...	<i>£'000</i>	2,600	—	2,600
Other descriptions :—				
Rubber insulated ...	"	*	*	5,505
Paper insulated ...	"	*	*	7,148
Other ...	"	*	*	1,813
Total—Electric wires and cables, insulated ...	<i>£'000</i>	*	*	17,066
Joint boxes ...	<i>£'000</i>	630	1	631
Cable jointing materials and accessories	"	123	—	123
Fittings for overhead transmission lines	"	317	—	317
Electrical signalling apparatus (including traffic signals) ...	"	447	—	447
Batteries, primary, complete :—				
For hand flash lamps ...	"	151	—	151
For wireless sets ...	"	1,011	—	1,011
Other primary batteries ...	"	129	—	129
Unclassified (including parts other than carbons) ...	"	2,257	—	2,257
Total — Primary batteries and parts ...	<i>£'000</i>	3,548	—	3,548
Accumulators (including parts) :—				
Portable :—				
For vehicles, sold separately ...	<i>£'000</i>	1,364	—	1,364
Other ...	"	814	—	814
Stationary ...	"	666	—	666
Total—Accumulators and parts	<i>£'000</i>	2,844	—	2,844

Kind of output	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Electric condensers and parts thereof ...	<i>£'000</i>	852	—	852
Electricity meters :—				
House service meters :—				
Complete :—				
Prepayment type ...	<i>No.</i>	391,596	—	391,596
	<i>£'000</i>	1,195	—	1,195
Other ...	<i>No.</i>	960,387	—	960,387
	<i>£'000</i>	1,205	—	1,205
Parts ...	"	126	—	126
Other integrating meters and parts :—				
Switchboard meters...	"	68	—	68
Other meters...	"	72	—	72
Parts ...	"	19	—	19
Commercial measuring instruments (including parts) :—				
Indicating ...	"	541	—	541
Recording ...	"	67	—	67
Other ...	"	194	—	194
Scientific electrical instruments...	"	473	—	473
Electro-medical apparatus (other than X-ray apparatus) ...	"	91	—	91
X-ray apparatus :—				
Tubes and vacuum tubes ...	"	5	—	5
Other ...	"	147	—	147
Electrical heating apparatus :—				
Domestic ...	"	1,337	64	1,401
Commercial ...	"	*	*	71
Industrial ...	"	*	*	129
Electrical cooking apparatus ...	"	*	*	1,432
Electrical signs :—				
Luminous tube signs ...	"	98	—	444
Other ...	"	98	—	98
Electrical totalisator apparatus...	"	238	—	238
Electric fans ...	"	271	—	271
Portable electric tools ...	"	195	—	195
Sound-recording equipment other than electrical reproducers† ...	"	64	—	64
Electric irons† ...	"	48	—	48
Permanent hair-waving apparatus ...	"	249	—	249
Electric hair dryers† ...	"	66	—	66
Electrical machinery purchased second-hand and re-conditioned† ...	"	105	5	110
Other electrical apparatus, not elsewhere specified...	"	1,593	—	1,593
Parts and accessories of electrical apparatus, not elsewhere specified ...	"	378	—	378
Insulating materials, sold separately :—				
Of mica ...	<i>Tons</i>	*	*	615
	<i>£'000</i>	*	*	346
Of moulded com-positions ...	<i>Quantity stated...</i> } <i>Tons</i>	341	—	341
	<i>Quantity not stated</i> } <i>£'000</i>	63	—	63
	"	94	—	94
Cloth and tape :—				
Adhesive ...	<i>Tons</i>	406	—	406
	<i>£'000</i>	57	—	57
Varnished and non-adhesive ...	<i>Quantity stated...</i> } <i>Tons</i>	*	*	385
	<i>Quantity not stated</i> } <i>£'000</i>	*	*	102
	"	45	—	45
Other§ ...	<i>Quantity stated...</i> } <i>Tons</i>	911	—	911
	<i>Quantity not stated</i> } <i>£'000</i>	230	—	230
	"	152	—	152
Refrigerating machinery...	"	783	—	783
Electric lifts, cranes, hoists, etc. ...	"	195	—	195

Kind of output	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Welding machinery, electrical	£'000	*	*	115
Other mechanical plant (steam turbines, condensing plant, etc.)	"	1,933	—	1,933
Iron and steel castings	"	115	—	115
Electrical conduits and fittings therefor	"	*	*	320
Other manufactures of iron and steel ...	"	221	—	221
Uninsulated copper wire:—				
Thinner than No. 20 gauge	"	230	—	230
No. 20 gauge and thicker	"	1,345	—	1,345
Other metal manufactures	"	449	2	451
Scientific instruments (other than electrical)	"	37	—	37
Motor cars, including parts and accessories	"	168	—	168
Other goods made	"	597	5	602
Scrap metals sold:—				
Iron and steel	"	87	3	90
Copper	"	174	—	174
Other metals	"	184	—	184
TOTAL—Goods made (including scrap metals sold)	£'000	98,336	971	99,307
Electrical contract work carried out ||:—				
Installation and erection of generating plant and appliances	£'000	376	8	384
Electric power and lighting lines or works... ..	"	1,447	119	1,566
Telegraph and telephone wires and cables... ..	"	455	—	455
Installation of wireless telegraph and telephone apparatus and appliances	"	388	1	389
Other electrical contract work	"	573	23	596
Total—Electrical contract work carried out	£'000	3,239	151	3,390
Repair and maintenance work for customers	£'000	1,506¶	62¶	1,568¶
Other work done, including work done for the trade	"	168¶	36¶	204¶
TOTAL—Work done	£'000	4,913¶	249¶	5,162¶
TOTAL—GOODS MADE AND WORK DONE	£'000	103,249	1,220	104,469
Work in progress:—				
Addition on account of work in progress at the end of the year	£'000	10,734	91	10,825
Deduction on account of work in progress at the beginning of the year... ..	"	8,390	51	8,441
TOTAL—VALUE OF OUTPUT	£'000	105,593	1,260	106,853

* Owing to the possible disclosure of information relating to individual firms separate particulars cannot be given.

† Less than £500.

‡ So far as recorded separately.

§ Not including insulating materials of china or porcelain.

|| See footnote (††) to Table V A.

¶ Amount received.

Table III A.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	Unit	England and Wales and Northern Ireland	Scotland	United Kingdom
Copper in all forms	Th. tons	149.0	1.1	150.1
	£'000	7,086	73	7,159
Brass in all forms	Th. tons	20.2	0.2	20.4
	£'000	1,331	11	1,342
Iron castings... ..	Th. tons	54.5	1.8	56.3
	£'000	1,218	34	1,252
Steel castings	Th. tons	*	*	6.6
	£'000			333
Steel forgings	Th. tons	10.4	0.2	10.6
	£'000	334	4	338
Rubber in all forms... ..	Th. tons	8.3	0.1	8.4
	£'000	521	4	525
Paper, excluding packing and wrapping	Th. tons	11.4	0.1	11.5
	£'000	417	3	420
Porcelain ... { Quantity stated ...	Th. tons	6.7	0.1	6.8
	£'000	509	7	516
	£'000	120	2	122
Synthetic resins:—				
Lump and powder, including moulding powder	Th. tons	4.6	—	4.6
	£'000	292	—	292
All other forms	Th. tons	0.9	†	0.9
	£'000	210	2	212
Lead in all forms	Th. tons	*	*	141.4
	£'000			2,054
Steel wire and tape	Th. tons	41.0	0.6	41.6
	£'000	553	9	562
Steel plates and sheets	Th. tons	93.0	3.2	96.2
	£'000	1,478	46	1,524
Wireless parts and accessories	£'000	4,381	—	4,381
Fuel and electricity used for all purposes:—				
Coal	Th. tons	386.0	5.3	391.3
	£'000	367	4	371
Coke	Th. tons	67.8	0.2	68.0
	£'000	98	†	98
Heavy fuel oil	Th. galls.	6,186	9	6,195
	£'000	112	†	112
Purchased electricity ‡... ..	Th. B.T.U. (Kw.-hrs.)	300,649	4,707	305,356
	£'000	872	13	885
All other purchased materials and fuel	£'000	26,352	364	26,716
TOTAL	£'000	48,615	599	49,214

* Owing to the possible disclosure of information relating to individual firms, separate particulars cannot be given.

† Less than 500.

‡ Including electricity generated in other works under the same ownership.

Table III B.—Consumption of electricity

Electricity consumed	England and Wales and Northern Ireland	Scotland	United Kingdom
	Th. B.T.U. (Kw.-hrs.)	Th. B.T.U. (Kw.-hrs.)	Th. B.T.U. (Kw.-hrs.)
Generated in same works	41,799	3	41,802
Generated in other works under same ownership	84	31	115
Purchased	300,565	4,676	305,241
Total	342,448	4,710	347,158

Table IV A.—Numbers employed in week ended 12th October, 1935

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
England and Wales and Northern Ireland :—						
Operatives	22,794	131,399	18,384	74,663	41,178	206,062
Administrative, etc.* ...	2,451	37,853	3,285	16,350	5,736	54,203
Total	25,245	169,252	21,669	91,013	46,914	260,265
Scotland :—						
Operatives	582	2,164	227	440	809	2,604
Administrative, etc.* ...	47	520	51	233	98	753
Total	629	2,684	278	673	907	3,357
United Kingdom :—						
Operatives	23,376	133,563	18,611	75,103	41,987	208,666
Administrative, etc.* ...	2,498	38,373	3,336	16,583	5,834	54,956
TOTAL	25,874	171,936	21,947	91,686	47,821	263,622

* Administrative, technical and clerical staff.

Table IV B.—Operatives employed in one week in each month of 1935

Week ended	Males and females		
	England and Wales and Northern Ireland	Scotland	United Kingdom
January 19	184,946	2,594	187,540
February 16	183,128	2,530	185,658
March 16	180,316	2,474	182,790
April 13	177,398	2,429	179,827
May 18	181,646	2,428	184,074
June 15	182,658	2,405	185,123
July 13	187,897	2,463	190,360
August 17	194,783	2,488	197,271
September 14	203,711	2,598	206,309
October 12	206,062	2,604	208,666
November 16	203,621	2,725	206,346
December 14	199,186	2,758	201,944
Average for the twelve months	190,446	2,546	192,992

Table V.—Firms employing not more than ten persons on the average

Particulars	England and Wales and Northern Ireland	Scotland	United Kingdom
	No.	No.	No.
Number of returns received	1,247	117	1,364
Average number of persons employed :—			
Males	5,831	534	6,365
Females	920	87	1,007
Total	6,751	621	7,372