

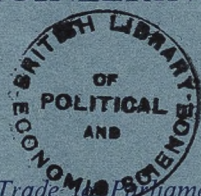
BOARD OF TRADE

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*The Report on the
Census of Production
for 1954*

Volume 4: Industry K

ELECTRICAL ENGINEERING (GENERAL)



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

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The Report on the Census of Production for 1954

VOLUME 4 INDUSTRY K

ELECTRICAL ENGINEERING (GENERAL)

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

This industry 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).

Production by Government Departments in Northern Ireland in the Radio and Telecommunications Industry has been included in this Report for 1951 and 1954.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

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The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d. net).

Industrial Classification: Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

Specialist producers normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

Intermediate products: For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

Larger establishments: The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

Small firms are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

Gross output (production) is the total value of goods made and other work done during the year: it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out, and, for 1951 and 1954, any transport payments made. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits.

Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. The value of sales is the net selling value, i.e., the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

Materials and fuel: The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes: packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements. Purchases of goods for merchanting are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

Stocks: Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

Customs and Excise Duty paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

Employment: Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

Working proprietors are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

Administrative, technical and clerical employees include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, i.e., broadly speaking, all manual workers.

Outworkers are persons employed by the firm who work on materials supplied by the firm in their own homes.

Wages and salaries include all overtime payments, bonuses and commissions without any deductions for income tax, insurances, contributory pensions etc. They exclude payments to working proprietors.

Capital expenditure includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

Symbols used:

.. for not available

- for nil or negligible (less than half the final digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

Industry summary

Estimates for the industry as a whole

TABLE 1

	United Kingdom			Scotland 1954	Wales 1954
	1948	1951	1954		
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	238.1	369.9	462.8	20.50	12.66
Net output	132.9	187.4	248.8	10.74	6.28
Total stocks and work in progress					
At beginning of year	82.9	98.2	150.0	4.38	3.02
Change during year	+ 13.7	+ 32.7	+ 5.7	+ 0.25	+ 0.05
Capital expenditure less disposals (a)	8.2	10.5	14.8	0.55	0.26
Wages and salaries	82.4	110.5	146.3	6.38	3.19
Total employment (including working proprietors)	Thousands 267.9	Thousands 298.1	Thousands 312.7	Thousands 14.26	Thousands 7.19

(a) Capital expenditure on new building work, plant, machinery and vehicles (including (except in 1948) that incurred in Great Britain for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of.

Summary of returns received

TABLE 2

	Unit	Great Britain	United Kingdom	
		1948	1951	1954
FIRMS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS				
Number of establishments	No.	892	1,024	1,019
Total value of sales and work done	£'000	222,389	345,017	448,315
Products on hand for sale		51,197	62,465	100,913
and work in progress		+ 8,897	+ 17,985	+ 5,931
Gross output (production) (a)		229,791	363,002	454,245
Purchases of materials and fuel		103,460	184,992	197,227
Stocks of materials and fuel		28,831	33,888	46,281
{ at beginning of year		+ 4,286	+ 14,072	- 290
{ change during year		99,173	170,920	197,517
Cost of materials and fuel used		2,385	4,678	7,734
Payment for work done on materials given out		1,495	3,529	4,809
Payment for transport (b)				
Net output		128,233	183,875	244,185
Average number of employees		197,124	216,371	222,265
{ operatives	No.	61,359 (c)	76,040	84,578
{ others		258,561	292,483	306,893
Total employment (d)		496	629	796
Net output per person employed (d)	£	55,344	72,545	94,578
Wages and salaries	£'000	24,150	35,857	49,010
{ of operatives				
{ of others				
Capital expenditure				
New building work (e)		2,088	2,806	3,968
Plant and machinery		5,651	6,845	9,287
{ acquisitions (e)		216	284	301
{ disposals		440	988	1,218
Vehicles		77	165	262
{ acquisitions (e)				
{ disposals				
FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS				
Number of returns	No.	972	841 (f)	769
Total employment, including working proprietors		5,599	5,005 (f)	4,581

(a) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold. For subsequent years gross output includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services.

(b) Payments to other firms and undertakings and to firms' own separate transport organisations. For the year 1948 payments cover only transport outwards of finished goods sold. For subsequent years they cover payments for transport of both finished goods sold and materials and fuel purchased.

(c) Number in week ended September 25, 1948.

(d) Excluding outworkers and including working proprietors.

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

(f) Excluding Northern Ireland. No information about small firms was collected in Northern Ireland for 1951.

TABLE 3 Analysis by size, 1954: Larger establishments in the United Kingdom

Average number employed (a)	Estab-lish-ments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (b)	Net output per person employed (a)
				Operatives	Others	Operatives	Others		
	Number	£'000	£'000	Number	Number	£'000	£'000	£'000	£
11 - 24(c)	246	5,215	2,725	3,056	864	1,073	489	248	691
25 - 49	224	10,168	5,346	6,237	1,633	2,132	997	353	678
50 - 99	168	15,691	8,501	9,200	2,850	3,224	1,664	603	705
100 - 199	143	28,281	15,099	15,665	4,520	5,673	2,679	1,707	748
200 - 299	45	16,454	9,060	8,089	3,006	3,200	1,762	544	817
300 - 399	41	19,866	10,612	11,039	3,150	4,429	1,760	591	748
400 - 499	31	19,383	10,877	10,327	3,436	3,886	1,970	499	790
500 - 749	27	23,575	12,326	11,891	4,016	4,691	2,168	865	775
750 - 999	24	29,984	15,633	15,460	5,396	6,382	2,911	762	750
1,000 - 1,499	31	57,015	30,703	28,300	10,373	11,972	5,817	1,627	794
1,500 - 1,999	14	36,137	19,057	16,321	6,958	7,359	4,308	1,103	819
2,000 - 2,499	7	23,294	12,055	11,582	3,689	4,827	1,982	352	789
2,500 - 3,999	8	42,752	23,325	18,723	7,213	8,936	3,926	1,328	899
4,000 - 7,499	6	60,831	30,881	22,326	12,694	10,609	7,906	1,925	882
7,500 and over	4	65,599	37,984	34,049	14,780	16,183	8,668	1,966	778
Total	1,019	454,245	244,185	222,265	84,578	94,578	49,010	14,473	796

(a) Excluding outworkers and including working proprietors.

(b) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles, excluding expenditure for establishments not yet in production.

(c) Including a small number of establishments with fewer than 11 persons employed, particulars of which were included with those for larger establishments on a single return.

Analysis according to specialisation within the industry, 1954

Larger establishments in the United Kingdom

TABLE 4

Unit	Specialist producers of			Establishments specialising in		Re-remainder of the industry	Total	
	Elec-trical machinery	Elec-trical equipment for motor vehicles, cycles and aircraft	Elec-trical cooking and heating apparatus	Elec-trical contract work	Other electrical work for customers			
Number of establishments	No.	309	44	78	8	180	400	1,019
Total value of sales and work done	£'000	227,839	40,376	22,733	565	13,344	143,457	448,315
Sales of characteristic products	"	157,455	31,703	16,083	519(a)	10,259(a)		
Products on hand for sale and work in progress	{ at beginning of year change during year	66,897 + 2,590	2,467 + 536	1,578 + 504	(b) - 63	(b) + 94	28,442 + 2,270	100,913 + 5,931
Gross output (production)	"	230,429	40,913	23,237	502	13,438	145,726	454,245
Purchases of materials and fuel	"	97,124	21,353	13,040	187	4,234	61,290	197,227
Stocks of materials and fuel	{ at beginning of year change during year	27,422 - 1,753	1,426 + 397	2,611 + 559	(b) - 64	(b) + 152	13,464 + 419	46,281 - 290
Cost of materials and fuel used	"	98,877	20,955	12,481	251	4,082	60,871	197,517
Payment for work done on materials given out	"	2,476	745	389	3	426	3,696	7,734
Payment for transport	"	2,479	470	258	5	104	1,493	4,809
Net output	"	126,598	18,743	10,108	243	8,826	79,666	244,185
Average number of employees	{ operatives others	112,782 47,895	17,593 3,840	12,243 2,570	256 44	8,801 4,229	70,590 26,000	222,265 84,578
Total employment (c)	"	160,688	21,434	14,819	301	13,047	96,604	306,893
Net output per person employed (c)	£	788	874	682	807	677	825	796
Wages and salaries	{ of operatives of others	49,927 26,988	7,593 2,217	4,677 1,354	124 37	3,451 2,467	28,806 15,948	94,578 49,010
Capital expenditure	"							
New building work (d)	"	2,437	151	188	1	174	1,017	3,968
Plant and machinery	{ acquisitions (d) disposals	4,801 124	752 (b)	324 (b)	1 1	333 20	3,077 97	9,287 301
Vehicles	{ acquisitions (d) disposals	478 89	54 6	118 20	3 -	92 21	472 127	1,218 262

(a) Amount charged.

(b) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

(c) Excluding outworkers and including working proprietors.

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

Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 5

Kind of output (i) Complete machines (ii) Parts	1951			1954			Entries
	Quantity		Value	Quantity		Value	
	Number	Th.kVA	£'000	Number	Th.kVA	£'000	Number
Electrical machinery							
Generators							
Alternating current							
Not over 250 kVA	(i) { 16,469 1,070	397.2 ..	2,808 220	17,142 7,733	287.6 ..	2,389 1,758	38
	(ii) { .. ..	.. ..	414 116	.. ..	.. ..	389 264	
251-10,000 kVA	(i) { 632 23	1,198.9 ..	1,968 84	673 78	638.2 ..	3,320 149	17
	(ii) { .. ..	.. ..	109	..	..	100	
10,001-30,000 kVA	(i) { 43	708.8	1,661	25	505.4	1,426	6
	(ii) { ..	..	157	5	..	191	
Over 30,000 kVA	(i) { 45	2,401.7	4,223	68	3,483.2	6,559	5
	(ii) { ..	..	329	..	..	759	
Direct current		Th.kW.			Th.kW.		
Not over 200 kW.	(i) { 16,179 2,756	166.6 ..	1,709 372	11,842 17,275	147.1 ..	2,119 1,337	42
	(ii) { ..	..	147	..	..	257	
Over 200 kW.	(i) { 241 1	117.4 ..	570 1	293 136	161.2 ..	1,120 344	17
	(ii) { ..	..	83	..	..	13	
Generator sets (a)		No. of sets			No. of sets		
	(i) { 3,058	2.9	33(b)	1,145	..	501	20
	(ii) { ..	..	1,277	..	0.7	123	
Motors							
Railway, tramway and trolley bus	(i) { 1,780	291.6	1,909	1,743	257.5	2,038	6
	(ii) { ..	..	380	..	..	200	
Other traction	(i) { 4,674	13.7	229	1,372	7.1	78	9
	(ii) { ..	..	186	4,588	..	314	
Fractional horse-power (i.e. under 1 horse-power), sold separately							
Not over one-third h.p.	(i) { 2,105,545 106,919	307.4 ..	7,478 335	749,040 421,225	131.1 ..	4,070 1,353	70
	(ii) { ..	..	542	..	..	4,088	
Over one-third but under 1 h.p.	(i) { 280,632 9,965	172.4 ..	2,268 55	223,948 11,066	137.9 ..	1,865 222	46
	(ii) { ..	..	88	..	..	631	
Motors of 1 h.p. and over, other than traction							
Alternating current							
1-50 h.p.	(i) { 492,448 11,942	2,422.6 ..	13,044 326	326,952 23,899	1,921.1 ..	10,396 1,138	62
	(ii) { ..	..	453	..	..	936	
51-250 h.p.	(i) { 9,750 277	846.0 ..	3,816 108	9,117 321	894.8 ..	4,604 128	26
	(ii) { ..	..	159	..	..	182	

TABLE 5 (contd.)

Kind of output (i) Complete machines (ii) Parts	1951			1954			Entries
	Quantity		Value	Quantity		Value	
	Number	Th.h.p.	£'000	Number	Th.h.p.	£'000	
Electrical machinery (contd.)							
Motors (contd.)							
Motors of 1 h.p. and over, other than traction (contd.)							
Alternating current (contd.)							
251-1,000 h.p.	{ (i) { 751 24	292.1 ..	1,182 38	1,861 6	581.6 ..	2,631 7	15
	{ (ii) { .. ..	.. ..	71 ..	.. ..	.. ..	108 97	
Over 1,000 h.p.	{ (i) { 115 2	213.8 ..	641 11	209 ..	375.9 ..	1,388 92	10
	{ (ii) { .. ..	.. ..	37 ..	.. ..	.. ..	131 ..	
Direct current							
1-50 h.p.	{ (i) { 35,411 795	286.4 ..	2,893 65	17,593 5,603	162.4 ..	2,292 1,085	45
	{ (ii) { .. ..	.. ..	299 ..	.. ..	.. ..	185 240	
51-250 h.p.	{ (i) { 2,493 76	151.8 ..	890 27	1,374 126	126.8 ..	1,196 177	17
	{ (ii) { .. ..	.. ..	74 ..	.. ..	.. ..	109 35	
251-1,000 h.p.	{ (i) { 99 4	43.9 ..	328 13	118 3	44.3 ..	380 12	9
	{ (ii) { .. ..	.. ..	17 ..	.. ..	.. ..	30 16	
Over 1,000 h.p.	{ (i) { 47	125.9	846	46	110.7	1,177	5
	{ (ii) { ..	..	19	..	..	10 82	
Converting machinery	{ (i) { 12,659 3,196	Th.kW. 158.8	1,030 79	4,081 6,259	Th.kW. 13.6	371 293	10
	{ (ii) { .. ..	.. ..	63 ..	.. ..	.. ..	73 ..	
Rectifiers, static							
Mercury pool (glass bulb and steel tank)	{ (i) { 2,323 ..	376.4 ..	1,478 1,348	782 459	370.0 ..	1,911 355	10
	{ (ii) { .. ..	.. ..	94 ..	.. ..	.. ..	2,267 103	
Others, including metal but excluding electronic valves	{ (i) { 14,916 6,428	14.1 ..	324 53	11,441 9,135	7.0 ..	383 85	21
	{ (ii) { .. ..	.. ..	103 201	.. ..	.. ..	546 504	
Transformers for lighting, heating and power, including choke coils							
Not over 5 kVA	{ (i) { 118,032 187,091	Th.kVA 54.2	526 322	82,736 109,910	Th.kVA 61.7	670 432	77
	{ (ii) { .. ..	.. ..	61 ..	.. ..	.. ..	592 51	
Over 5-800 kVA	{ (i) { 23,179 1,098	3,294.2 ..	6,781 318	18,460 3,319	2,495.2 ..	5,524 291	55
	{ (ii) { .. ..	.. ..	162 ..	.. ..	.. ..	1,626 171	
Over 800-5,000 kVA	{ (i) { 1,574 101	2,465.5 ..	3,617 232	1,282 ..	2,412.4 ..	3,939 336	24
	{ (ii) { .. ..	.. ..	90 ..	.. ..	.. ..	296 ..	
Over 5,000-30,000 kVA	{ (i) { 395 1	4,799.5 ..	4,495 8	521 ..	6,993.7 ..	8,661 5	17
	{ (ii) { .. ..	.. ..	173 ..	.. ..	.. ..	252 ..	
Over 30,000 kVA	{ (i) { 79	3,963.6	2,512	111	5,990.3	4,419	11
	{ (ii) { ..	..	55	..	..	9 101	
Current limiting reactors	{ (i) { Number 353		296	Number 958		622	13
	{ (ii) { ..		5	..		12	
Capacitors for power factor improvement	{ (i) { Th. 1,283		1,487	Th. 1,167		2,180	18
	{ (ii) { ..		16	..		19	

TABLE 5 (contd.)

Kind of output (i) Complete machines (ii) Parts	1951		1954		
	Quantity	Value	Quantity	Value	Entries
		£'000		£'000	Number
Electrical machinery (contd.)					
Starting and control gear for marine, traction and other electric motors	{ (i) .. { (ii) ..	14,692 963	.. ..	20,750 1,699	69 46
Switchgear and switchboards (other than telegraph and telephone)					
Not exceeding 660 volts	{ (i) .. { (ii) ..	10,530 852	.. ..	14,826 933	112 65
Over 660 volts and not exceeding 15,000 volts or 350 mVA	{ (i) .. { (ii) ..	11,683 616	.. ..	17,812 832	35 23
Over 15,000 volts or 350 mVA	{ (i) .. { (ii) ..	10,446 382	.. ..	10,988 347	14 13
Fuses and fuse gear	{ (i) .. { (ii) ..	6,950 676	.. ..	6,452 488	60 30
Battery chargers (metal and valve rectifiers) (c)	(i) { Th. 23 ..	347 50	Th. 9 ..	149 368	14
	Number		Number		
Electroplating plant and machinery (c)	(i) and (ii) ..	838			
Other electrical machinery, new (d)	{ (i) 3,077 { (ii) ..	992 1,091	{ (i) .. { (ii) ..	5,179 495	64 31
Electrical machinery, reconditioned	{ (i) .. { (ii) ..	1,290 47	.. ..	688 102	37 12
Electrical machinery, unclassified	(ii) ..	914	..	1,600	24
Total electrical machinery		146,123(e)		194,199	..
Miscellaneous electrical goods and apparatus					
Cable jointing materials and accessories (other than solder and tape, cloth and other insulating materials)	..	1,617	..	1,668	21
Capacitors (other than for power factor improvement)					
Complete	Th. 173,958	5,651	Th. 239,355	66	27
Fixed	..	1,038	7,073	495	6
Variable, including drives and couplings	..	..	..	148	..
Parts	Mn. 649.6	3,445	Mn 109.7	3,387	15
Carbons (electric) including carbon and graphite electrodes, complete and parts	..	1,792	..	1,698	
Coils, ignition, complete and parts	..	906(e)	..	786	14
Cooking apparatus and appliances, electric					
Domestic cookers, complete	Th. 121	1,751	Th. 61	433	10
Under 3 kW	224	4,495	348	8,478	12
3 kW and over	3	274	3	197	5
Industrial cookers, complete	..	1,832	..	2,250	26
Parts and accessories of cookers	564	1,026	719	1,421	17
Kettles	..	2,198	..	2,652	44
Other electric cooking appliances and parts	..	..	..	..	..

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th. sets	£'000	Th. sets	£'000	Number
Miscellaneous electrical goods and apparatus (contd.)					
Dynamo lighting sets for cycles	1,460	1,338	1,534	1,376	12
	..	351			
Electric equipment for motor vehicles, not elsewhere specified	..	23,146 (e)	..	33,828	81
Electric equipment for aircraft, not elsewhere specified	..	2,210 (c)	..	6,346	..
Electricity meters					
Complete					
House service meters					
Pre-payment type	Th. 25	165	Th. 87	689	9
Other types	.. 1,490	3,936 (e)	.. 1,221	3,720	17
Other integrating meters	.. 24	465 (e)	.. 52	844	8
Parts	..	733	..	598	26
Electro-medical apparatus (other than vacuum tubes, X-ray apparatus, and hearing aids with valve amplification)					
Complete	..	628	..	804	27
Parts (f)	..	200	..	47	8
Fans (g)					
Complete					
Desk	162	678	92	428	9
Ceiling	57	565	45	677	6
Other	128	1,536	109	1,580	17
	..	509	..	988	
Parts					
Desk and ceiling	..	135	..	203	7
Other	..	..	..	152	11
Flashlight cases of all types and descriptions (exclusive of bulbs and batteries)					
Complete					
Adapted for use on cycles	4,405	334	4,689	396	8
	..	125			
Other	..	610	..	533	12
Parts					
Arc lamps, electric searchlights and projection lamps, including parts (except bulbs sold separately)	..	289	..	404	10
Other lamps (except motor vehicle lamps)					
Complete, with or without bulbs	854	846 (h)	199	64	15
	..	1,040 (e)	..	905	
Parts, except bulbs	..	1,381 (i)	..	1,058	..
Heating apparatus, electric, not elsewhere specified, other than industrial radio frequency					
Complete					
Domestic portable fires	624	1,427	929	1,880	38
Other space heating	..	(j)	335	937	37
			..	514	
Water heaters, including immersion heaters					
Domestic	407	2,052	492	2,283	22
Other	..	(j)	13	111	15
			..	132	

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th.	£'000	Th.	£'000	Number
Miscellaneous electrical goods and apparatus (contd.)					
Heating apparatus, electric, not elsewhere specified, other than industrial radio frequency (contd.)					
Complete (contd.)					
Other heating apparatus	441	1,549	305	817	47
	..	477	..	688	
Parts and accessories	..	1,747	..	1,365	54
Insulating materials sold separately					
Of mica	Th.cwt. 24.4	1,877	Th.cwt. 4.7	1,087	25
	..	215	..	835	
Of built-up mica ('Micanite')	23.2	1,473	6.1	429	16
			..	807	
Sleeving, other than rubber	Mn.lin. ft. 107.5	302	Mn.lin. ft. ..	289	11
Other electrical insulating materials, including complete insulators (k)	..	1,629	..	3,151	32
Flat irons, electric	Th. 1,942	2,351	Th. 2,257	3,440	30
Joint boxes	..	1,850	..	2,303	34
Magnetos, ignition					
For motor vehicles, including motor cycles and three-wheelers	180	487	36	132	7
	..	1,232	..	1,118	
Other	176	1,200	6	566	5
			..	438	
Magnets, permanent	26,231	2,184	23,267	2,209	14
	..	363	..	783	
Measuring instruments, commercial					
Indicating, complete					
For motor vehicles	30	62	27	49	..
			..	14	
Other than for motor vehicles	690	3,237	515	2,086	29
			..	605	
Other descriptions, complete	27	302	141	1,096	29
	..	217	..	1,565	
Parts, excluding valves	..	501	..	345	15
Overhead transmission line fittings	..	1,271	..	1,890	20
Permanent hair-waving apparatus	..	214	..	235	10
Portable (mechanical) appliances, electrically operated, not elsewhere specified					
Complete					
Vacuum cleaners and floor polishers	1,244	12,374	1,409	14,279	21
Hair clippers and dry shavers	459	1,178	865	1,793	8
Other	..	1,602	..	2,066	29
Parts	..	1,616	..	1,156	40
Scientific instruments, electrical					
Pyrometers	6.7	297 (e)	1.8	41	6
			..	254	
Other (l)	6.7	410 (e)	9.1	404	97
	..	2,097	..	7,631	
Time switches	..	1,006	..	1,692	19

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th.	£'000	Th.	£'000	Number
Miscellaneous electrical goods and apparatus (contd.)					
Transformers (other than for lighting, heating and power)					
Instrument	142	557	346	850	50
	..	92	..	209	
Other (m)	1,540	1,879	5,221	2,614	72
			..	913	
Washing machines, electrically operated, other than dry cleaning washers, not exceeding 250 lbs. net weight	636	13,295(n)	781	17,799	40
X-ray apparatus, including parts (other than tubes and valves)	..	2,002	..	3,736	20
Remote control equipment (electrical) other than electronic control equipment (c)	..	1,660	..	2,757	13
Ground mica sold as such (so far as recorded separately) and waste products, other than scrap metals	..	227	..	222	34
Other electrical goods	..	12,452	..	16,130	227
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		148,599(e)		195,765	..
Structural work carried out in the United Kingdom. (Electrical and other contract work on buildings, civil engineering works, etc., excluding the installation of machinery, etc., but including space heating plant installed) (o)(p)					
Work done as main or direct contractors (including specialist work done for principals) including the value of work done for them by sub-contractors					
Work on new houses and flats				35	11
Repair and maintenance of houses and flats (including conversions and alterations)				32	8
Other new constructional work (q)		2,202(r)		1,026	35
Other electrical contract work including electrical installation work other than installation of machinery, etc. (q); and all other repair and maintenance				985	17
Structural work done as sub-contractors		804(s)		65	11
Other work for which payment was receivable (o)					
Installation and erection of					
Generating plant and appliances		11,213(t)		2,142(u)	15
Other machinery and plant, except radio (including television), telegraph and telephone apparatus and appliances		(j)		1,562(u)	39
Repair and maintenance work on customers' machinery and plant		7,537(t)(v)		10,894	280

TABLE 5 (contd.)

	1951		1954		
	Quantity	Value	Quantity	Value	Entries
		£'000		£'000	Number
Other work for which payment was receivable (o) (contd.)					
Research and development work		4,396(t)		6,421	48
Other work, including work done for the industry		2,145(t)		2,979	133
Total structural and other work		28,296		26,141	..
Less the estimated values of goods made by the firms, which were included in the amounts charged recorded above (w)		10,735		107	..
Total structural and other work exclusive of the value of goods made by firms and used in the work		17,562		26,034	..
Total goods sold and work done		312,284		415,998	..
Sales in other industries (see Table 6)		34,116		52,862	..
Principal products of this industry sold by establishments in the industry		278,168		363,136	796

- (a) Firms were asked, wherever practicable, to show separate figures for the prime mover and generator components of generating sets.
- (b) Described as 'Petrol-diesel electric generating sets, so far as recorded separately'.
- (c) So far as recorded separately.
- (d) Excluding welding machinery, other than tube making, and welding electrodes (other than carbon and graphite), for which see the Machine Tools Industry (Volume 4, Industry C), and hoists and other lifting machinery, for which see the Mechanical Handling Equipment Industry (Volume 4, Industry G).
- (e) Amended figure.
- (f) Including parts of hearing aids with valve amplification.
- (g) Described in 1951 as 'Fans, electric or power driven'.
- (h) Described as 'Other lamps with or without bulbs, complete'.
- (i) Described as 'Parts of other lamps with or without bulbs'.
- (j) Not separately recorded.
- (k) Except of ceramics, for which see the China and Earthenware Industry (Volume 1, Industry G), cloth and tape, and rubber sleeving, for which see the Rubber Industry (Volume 11, Industry A), and of synthetic resins, for which see the Plastic Goods and Fancy Articles Industry (Volume 11, Industry I).
- (l) Excluding thermostats, for which see the Scientific, Surgical and Photographic Instruments, etc. Industry (Volume 5, Industry H).
- (m) Excluding any transformers recorded as parts of radio apparatus, for which see the Radio and Telecommunications Industry (Volume 4, Industry M).
- (n) Described as 'Washing machines for domestic use, electrically driven.'
- (o) Amount charged.
- (p) Output of electrical engineering industries only, including the value of all plant incorporated and materials used, whether purchased, or made or fabricated by the firms carrying out the work.
- (q) Excluding work on power stations (thermal and hydro-electric) and electric power and lighting lines and works, for which see the Electric Wires and Cables Industry (Volume 4, Industry L), and on telecommunication lines and works, for which see the Radio and Telecommunications Industry (Volume 4, Industry M).
- (r) Described as 'Electrical contract work done as main contractors, other than the installation and erection of generating plant and appliances, excluding work on electric power and lighting lines and works, and on telegraph and telephone lines and works and on the installation of radio, telegraph, and telephone apparatus and appliances'.
- (s) Described as 'Electrical contract work done as sub-contractors'.
- (t) Including the value of all goods or materials used, whether purchased or made by the firms carrying out the work.
- (u) Including the value of machinery purchased, but excluding the value of machinery made by the firms carrying out the work.
- (v) Described as 'Repair and maintenance work'.
- (w) See notes (p), (t) and (u).

ELECTRICAL ENGINEERING (GENERAL)

Sales of principal products of the industry by establishments
classified to other industries

Larger establishments in the United Kingdom

TABLE 6

Kind of output (i) Complete machines (ii) Parts	1954				Principal industries in which produced (a)
	Quantity		Value	Entries	
	Number	Th.kVA	£'000	Number	
Electrical machinery					
Generators					
Alternating current					
Not over 250 kVA	(i) { 1,572	0.4 ..	7 634	..	3I, 4I
Over 250 kVA	(i) and (ii) ..	..	498	..	4I
Direct current	{ (i) { 16 205 (ii) { ..	Th.kW 5.6	43 429 202 1	..	3I, 4I
Generator sets	{ (i) { 733 (ii) { ..	.. ..	244 1,959 63	11 5	3I, 4B, 4G, 4I
Motors					
Fractional horse-power (i.e. under 1 horse-power), sold separately	(i) and (ii) ..	..	2,165	12	3I, 4I, 4M, 5H
Motors of 1 horse-power and over, other than traction					
Alternating current	(i) and (ii) ..	..	302	..	4C, 4I
Direct current					
Rectifiers, static, other than mercury pool (glass bulb and steel tank), including metal but excluding electronic valves	(i) and (ii) ..	..	1,576	9	4I, 4M
Transformers for lighting, heating and power, including choke coils, not exceeding 30,000 kVA	(i) and (ii) ..	..	816	10	4I, 4L, 4M, 4O
Capacitors for power factor improvement	(i) and (ii) ..	..	1,603	6	4L, 4M
Starting and control gear for marine, traction and other electric motors	(i) and (ii) ..	..	815	9	3F, 4C, 4I, 4O
Switchgear and switchboards (other than telegraph and telephone)	{ (i) .. (ii) ..	..	686 344	13 8	3C, 4L, 4M, 4O
Fuses and fuse gear	(i) and (ii) ..	..	1,178	11	4L, 4M, 4O, 5E
Battery chargers (metal and valve rectifiers)	(i) { 4 ..	Th. ..	52 94	8	4I, 4M, 4N, 11I
Electroplating plant and machinery, and other electrical machinery, new	{ (i) .. (ii) ..	..	186 16	12 5	
Electrical machinery, reconditioned	(i) ..	..	48	..	
Electrical machinery, unclassified	(ii) ..	..	597	12	
Total electrical machinery			14,559	..	
Miscellaneous electrical goods and apparatus					
Cable jointing materials and accessories (other than solder and tape, cloth and other insulating materials)	..	..	1,343	15	3G, 4L, 4M, 4O

ELECTRICAL ENGINEERING (GENERAL)

TABLE 6 (contd.)

	1954			Principal industries in which produced (a)
	Quantity	Value	Entries	
		£'000	Number	
Miscellaneous electrical goods and apparatus (contd.)				
Capacitors (other than for power factor improvement) including drives and couplings, complete	..	1,854	12	4L, 4M, 5K
Carbons (electric) including carbon and graphite electrodes, complete and parts; and coils, ignition, complete and parts	..	47	..	4N, 12A
Cooking apparatus and appliances, electric				
Kettles	Th. 7	12	5	4O
Other electric cooking appliances and parts, except domestic cookers, complete, under 3kW	..	343	14	4M, 4N, 4O, 5E
Dynamo lighting sets for cycles, and electric equipment for motor vehicles, not elsewhere specified	..	6,576	55	3I, 4C, 4L, 4M
Electrical equipment for aircraft, not elsewhere specified	..	3,948	18	3K, 4J, 4M, 4O
Electricity meters and parts, and electro-medical apparatus and parts (other than vacuum tubes, X-ray apparatus and hearing aids with valve amplification)	..	727	21	3G, 4I, 4M, 5H
Fans, complete, other than ceiling fans, and parts of fans other than desk and ceiling fans				
Flashlight cases of all types and descriptions (exclusive of bulbs and batteries)	..	611	10	3I, 4M, 4N, 10A
Complete				
Adapted for use on cycles				
Other	..	424	5	3I, 4M, 4N, 4O
Parts				
Arc lamps, electric searchlights and projection lamps, including parts (except bulbs sold separately)	..	118	..	4G, 4I, 4M
Other lamps (except motor vehicle lamps), complete with or without bulbs, and parts, except bulbs	..	797	7	4L, 4N, 4O, 5C
Heating apparatus, electric, not elsewhere specified, other than industrial radio frequency				
Complete				
Domestic portable electric fires	27	44	9	4M, 4O
Other space heating	6	29	9	3C, 4M, 4O, 5E
Other heating apparatus, including water heaters	1	6	11	3I, 4O, 5E, 5F
Parts and accessories	..	162	6	4M, 5E
Insulating materials, sold separately				
Of mica, and of built-up mica ('Micanite')	..	249	..	5K, 11I
Sleeving, other than rubber	..	121	..	4L
Other electrical insulating materials, including complete insulators	..	455	11	4A, 4I, 4M, 11A
Flat irons, electric	144	213	8	3F, 4I, 4M, 4O
Joint boxes	..	2,049	22	3I, 4L, 4M, 4O
Magnets, permanent	{ 9,635 ..	{ 731 606	{ 8	3B, 4C, 4M, 5B
Measuring instruments, commercial, complete and parts (excluding valves), other than complete indicating instruments for motor vehicles	..	171	14	4I, 4M, 4O, 5H

TABLE 6 (contd.)

	1954			Principal industries in which produced (a)
	Quantity	Value £'000	Entries Number	
Miscellaneous electrical goods and apparatus (contd.)				
Overhead transmission line fittings	..	631	8	4I, 4J, 4L, 4M
Portable (mechanical) appliances, electrically operated, not elsewhere specified				
Complete	Th.			
Vacuum cleaners and floor polishers	390	3,442	8	4I, 4M, 4O
Other, including hair clippers and dry shavers	..	710	8	4J, 4M, 5B, 12A
Parts	..	448	20	3I, 4I, 4M, 11I
Scientific instruments, electrical	..	2,471	56	4I, 4M, 4O, 5H
Transformers (other than for lighting, heating and power)				
Instrument	201	80	8	4M
Other	2,240	537	22	4M, 4O, 11D
	..	113		
Washing machines, electrically operated, other than dry cleaning washers, not exceeding 250 lbs. net weight	131	3,280	28	3I, 3K, 4I, 5E
X-ray apparatus, including parts (other than tubes and valves)	..	140	7	4M, 5H
Remote control equipment (electrical), other than electronic control equipment	..	751	..	3B, 3K, 4M
Permanent hair-waving apparatus; time switches; and other electrical goods	..	1,668	83	
Total miscellaneous electrical goods and apparatus, insulating materials, etc.		36,442	..	
Structural work carried out in Great Britain. (Electrical and other contract work on buildings, civil engineering works, etc., excluding the installation of machinery, etc., but including space heating plant installed) (b)				
New constructional work done as main or direct contractors (including specialist work done for principals) other than work on new houses and flats		857	9	4L, 4M, 4O
Other work for which payment was receivable (b)				
Installation and erection of machinery and plant, other than generating plant and appliances, and radio (including television), telegraph and telephone apparatus and appliances; and repair and maintenance work on customers' machinery and plant		341	18	
Other work, except research and development work, including work done for the industry		663	38	
Total structural and other work		1,860	..	
Total		52,862	..	

(a) The volume number and industry references given are to the industries shown in the list at the back of this report.

(b) Amount charged.

Sales in the industry of other than principal products
Larger establishments in the United Kingdom

TABLE 7

	1954	
	Quantity	Value £'000
Electric lamps	..	3,269
Telegraph and telephone apparatus and parts	..	1,123
Valves, electronic, other than X-ray valves, sold separately	..	943
Radio communication and navigational aids (including radar equipment), complete	..	4,754
Other radio, telecommunication and electronic apparatus and parts	..	8,298
Electric lighting accessories and fittings and electric bell apparatus	..	7,824
Electric wires and cables	..	1,189
Portable power tools	..	41
Steam turbines and parts	..	12,354
Welding machinery, electrical	..	1,127
Welding electrodes	..	594
Mechanical handling equipment	..	773
Prime movers	..	2,091
Other machinery and plant	..	7,577
Motor vehicles, motor cycles, and parts and accessories	..	4,352
Scientific, surgical and photographic instruments, etc.	..	1,133
Insulating materials of synthetic resins and cloth and tape	..	1,036
Iron and steel castings	..	637
Other manufactures of iron and steel	..	3,063
Other manufactures of non-ferrous metals	..	2,081
Other tools and implements	..	835
Scrap metals sold	..	601
Iron and steel	..	847
Copper	..	1,691
Brass	..	481
Other	..	1,483
Naval, military and air force stores, etc.	..	11,836
Other goods	..	3,146
Work done (a)		85,178
Total		85,178

(a) Amount charged.

TABLE 8 - Total make of intermediate products
Larger establishments in the United Kingdom

Owing to the risk of disclosure of information relating to individual firms this information cannot be given.

Purchases of materials and fuel, 1954

Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th. tons	£'000
Materials		
Iron and steel	0.9	137
Drop-forgings	..	116
Wrought tubes and fitting for wrought tubes	3.7	350
Wire and wire manufactures, including wire cables and ropes	4.3	329
Transmission and conveyer chains	..	22
Iron and steel scrap	7.8	58
Other iron	..	135
Pig-iron, except refined pig-iron	34.4	653
Castings in the rough or machined except machined castings elsewhere specified	68.5	4,866
Other iron, except finished parts	1.1	90
Ferro-alloys	..	96
Spiegeleisen and ferro-manganese (other than refined)	0.2	22
Other ferro-alloys	0.7	232
Other steel (alloy and non-alloy)	..	109
Ingot, blooms, billets and slabs, and sheet and tinplate bars	3.7	218
Angles, shapes, sections, bars, rods (including wire rods) and girders, beams and joists (not fabricated)	60.6	3,170
Castings in the rough or machined, except machined castings elsewhere specified	7.4	1,210
Forgings, except drop-forgings, in the rough or machined, except machined forgings elsewhere specified	7.0	1,059
Tin-, terne- and black-plate and tinned and terne sheets	4.4	240
Electrical quality sheets	80.0	6,870
Other plates and sheets 1/8 in. thick and over, and hoop and strip (including tape) of all thicknesses	70.9	2,960
Other plates and sheets under 1/8 in. thick	72.1	3,865
Springs, laminated and other types	0.6	107
Aluminium and aluminium alloys	..	573
Plates, sheets, strip, circles, blanks and foil	Th.cwt. 127.6	1,876
Castings and forgings, rough dressed	..	278
Other descriptions (except finished parts, wire and scrap)	155.9	2,554
Brass and other alloys of copper, including nickel silver and cupro-nickel, but excluding other nickel alloys	..	737
Plates, sheets and strip	126.2	1,274
Other descriptions (except finished parts, wire and scrap)	..	342
Copper	..	..
Plates, sheets and strip	111.1	1,718
Wire rods	..	934
	176.5	2,836
	..	1,250
	236.2	4,408
	..	726
	32.8	659
	..	523

(92900/1)

TABLE 9 (contd.)

	Quantity	Cost
	Th.cwt.	£'000
Materials (contd.)		
Copper (contd.)	..	..
Wire, cables and flexibles, uninsulated	119.8	2,147
Other descriptions (except finished parts and scrap)	..	364
Lead and alloys of lead in all forms (except solder, finished parts and scrap)	63.1	1,271
Tin in all forms (except finished parts and scrap)	..	149
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	24.3	183
Soft solder	..	2,085
Non-ferrous metal scrap	5.6	180
Uninsulated wire, cables and flexibles of non-ferrous metals except copper	..	25
Bitumen and bitumastic compound	51.8	427
Glass	..	390
Blown	10.8	274
Other descriptions	..	73
Insulating oils	2.1	23
Mica	13.0	316
Block and splittings	..	179
Built up ('Micanite')	Th. tons 3.0	117
Paint, enamel and varnish, including emulsion paints, cellulose-based paints and lacquers	..	218
Paper and paperboard, including press-board and paper yarn, tubes, etc. (excluding packaging material)	Th.cwt. 7.6	94
Plastic materials	..	254
Synthetic resins	7.1	138
Moulding powders	..	740
Sheet, foil, rods, tubes, film, etc. including laminated sheets	Th.gal. 6,541.5	1,280
Plating compounds	..	..
Porcelain and other ceramics in all forms	Th.cwt. 96.2	1,723
Rubber, including hard rubber, balata, gutta percha and synthetic rubber in all forms including finished parts	..	828
Timber (excluding timber for packing, i.e. for making into cases, drums, etc. or for repairing returnable cases)	6.4	541
Hardwood and softwood	..	247
Plywood including block-board, batten-board and laminboard	Th.gal. 1,471.7	1,956
	..	339
	Th.cwt. 152.5	1,426
	..	556
	54.8	350
	..	84
	99.4	931
	..	406
	35.1	608
	..	643
	14.6	86
	..	168
	115.9	823
	..	2,038
	23.5	448
	..	1,059
	Th.cu.ft. 415	339
	Th.sq.ft. 701	52
	..	13

(92900/1)

TABLE 9 (contd.)

	Quantity		Cost £'000
	Th.lb.		
Materials (contd.)			
Yarn, thread, tape and cloth, not oiled or otherwise coated or impregnated with insulating materials			
Of cotton			
Yarn and thread	480.3		197
	..		21
Tape and cloth	1,705.3		605
	..		477
Of man-made fibres (rayon, nylon, etc.)	119.7		60
	..		98
Of silk	17.6		41
	..		85
Of jute	75.6		8
	..		23
Electrical insulating materials not elsewhere specified	..		2,061
Insulated wires, cables, flexibles, strips and strands	..		14,816
Purchased components for incorporation in firms' own products			
Ball and roller bearings and parts	..		1,398
Batteries and accumulators	..		849
	Th.	H.p.	
Fractional horse-power electric motors, i.e. less than one horse-power	69.9	16,291	304
	224.4	..	833
	..	101	1
	..	..	968
Internal combustion engines	0.6	15,822	221
	3.7	..	204
	..	..	268
	Th.		
Loudspeakers and microphones	220.4		82
Magnets, permanent	5,439.2		706
	..		172
Measuring and control instruments, including ammeters, voltmeters, thermostats, etc.	..		3,859
Valves, electronic (other than X-ray valves), electronic stabilising tubes and cathode ray tubes, excluding mercury pool rectifiers			
Transmitting and industrial	1,782.2		541
Other, including cathode ray tubes	638.2		856
	..		59
Electrical machinery not included elsewhere	..		6,472
Other purchased electrical components not elsewhere specified	..		3,576
Other finished parts not elsewhere specified			
Wholly or mainly of plastic materials	..		2,555
Other, except those of rubber and glass	..		18,876
Lubricating oils and greases, including cutting oils and emulsions	Th.gal. 936.8		234
	..		130
Replacement parts for firms' own plant, machinery and vehicles, and accessories bought as replacement	..		2,354
Consumable tools, including engineers' small tools, jigs, fixtures and measuring instruments, bought as replacement	..		2,494
Packing materials	Th.cu.ft. or Th.cu.ft. of timber used		
Timber and wooden crates, packing cases, etc.	1,452		961
	..		1,054
Paper, including transparent cellulose wrapping, and paper-board and containers made from these materials, including fibreboard packing cases	..		1,750

TABLE 9 (contd.)

	Quantity		Cost £'000
Materials (contd.)			
Packing materials (contd.)			
Jute, piece goods, including hessian and jute sacks	..		56
Other packing materials	..		561
All other purchased materials	..		35,135
Fuel and electricity	Th.tons		
Coal	419.0		1,548
Coke	55.6		341
	..		40
Liquid fuel (including creosote/pitch mixtures)			
For use in internal combustion engines	Th.gal.		
Motor spirit (petrol) for use in road vehicles and derv. fuel	3,325		692
Other	2,454		149
For burning in furnaces, boilers, kilns, etc.	16,767		697
Gas purchased (a)	Th.therms		
From Gas Boards	19,584		980
	..		207
From other sources, including other departments of the same firms	1,640		65
	..		9
Electricity purchased (b)	Th.kWh.		
From Electricity Boards	599,665		2,893
	..		492
From other sources, including other departments of the same firms	28,761		153
All other purchased fuel	..		52
Total cost			197,227

(a) Owing to the risk of disclosure of information relating to individual firms, the total quantity of gas produced in firms' own establishments cannot be given.

(b) The total quantity of electricity generated in firms' own establishments in this industry in 1954 was 39,785 Th.kWh.

ELECTRICAL ENGINEERING (GENERAL)

Average number of employees and wages, salaries
and superannuation payments (a)

Larger establishments in the United Kingdom

TABLE 10

	1951	1954
	Number	Number
Average number of employees		
Operatives	216,371	222,265
Administrative, technical and clerical employees	76,040	84,578
Total	292,411	306,843
	£'000	£'000
Wages and salaries paid to		
Operatives	72,545	94,578
Administrative, technical and clerical employees	35,857	49,010
Total	108,402	143,587
	£	£
Wages and salaries per head		
Operatives	335	426
Administrative, technical and clerical employees	472	579
Superannuation and other pension funds for employees and dependants (b)		£'000
Employers' contributions	..	2,909
		Number
Employees covered	..	177,769
Pension, etc. payments to former employees and dependants (b)		£'000
		189

(a) The following persons, not included above, were also employed by larger establishments in this industry ('other workers' includes, for example, employees engaged in merchanting):

	1951	1954
	Number	Number
Canteen workers		
Males	184	150
Females	2,427	2,412
Total	2,611	2,562
Other workers		
Males	755	1,061
Females	405	555
Total	1,160	1,616
Total excluded employees	3,771	4,178

Outworkers. The firms in this industry employed 33 male and 975 female outworkers in 1951 and 95 male and 785 female outworkers in 1954, the amounts paid to them being £85,000 in 1951 and £97,000 in 1954.

(b) The figures given relate to larger establishments in Great Britain only.

Employment in a specified week (a)

Larger establishments in the United Kingdom

TABLE 11

	Number					
	1951			1954		
	Males	Females	Total	Males	Females	Total
Working proprietors	66	6	72	44	6	50
Operatives	149,663	69,137	218,800	155,186	70,991	226,177
Administrative, technical and clerical employees	50,143	27,083	77,226	57,179	28,738	85,917
Total employees	199,806	96,220	296,026	212,365	99,729	312,094

(a) Week ended September 22, 1951, or October 30, 1954.

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