

GAS UNDERTAKINGS.

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Introductory.*

The tables on pages 322 to 331 are based on returns received from Local Authorities and Companies in the United Kingdom engaged in the production of gas and of residual products in the year 1924. The number of such separate returns was 1,364.

The particulars given cover all gas undertakings operating for public supply. Such information as is available concerning the production of gas at coke ovens and at undertakings operated by Railway Companies, etc., is given in the reports on those establishments and services.

Summary of results.—The following table shows the main results of the Censuses of 1924, 1912 and 1907, comparisons between the figures for the three years being subject to the qualifications mentioned in the next paragraph. It should be noted that the accounting period normally used by Local Authorities is the financial year ending on the 31st March in England and Wales and in Northern Ireland, and, for Authorities in Scotland, on the 15th May; the returns received from Gas Undertakings operated by Local Authorities, therefore, usually covered periods of twelve months to those dates in the years 1925, 1913 and 1908.

* See also the Notes on pages vii to xv.

Particulars.	Unit.	1924.			1912.	1907.
		Companies.	Local Authorities.	Total.	Total.	Total.
Value of products and work done (Gross output)	£'000	43,795	21,788	65,583	32,696	31,611
Cost of materials used	"	24,066	11,441	35,507	14,351	14,324
Net output	"	19,729	10,347	30,076	18,345	17,287
Average number of persons employed	No.	76,444	34,217	110,661	93,215	83,440
Net output per person employed	£	258	302	272	197	211
Mechanical power available:—						
Prime movers	H.P.	116,059	55,297	171,356	67,156	89,903
Electric motors driven by purchased electricity	"	5,138	12,082	17,220	*	*

* Not recorded.

Qualifications affecting comparisons.—In considering the above table and the other tables in this report which show figures for different censal years, it should be borne in mind that:—

(1) The comparability of figures relating to value or cost is affected by the changes which have taken place in the general purchasing power of money.

(2) The Census of 1907 covered Great Britain and the whole of Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. The exclusion of Southern Ireland does not seriously affect the comparability of the figures, since, according to the Census of Production taken by the Government of the Irish Free State in respect of the year 1926, the total value of gas and residual products made and of work done for customers by employees of Gas Undertakings in that year amounted to £1,004,000, and the numbers employed to 1,730. Further, in 1907 the gross output of Gas Undertakings in the whole of Ireland was valued at £966,000, and the number of persons employed was 2,807.

(3) The Censuses of 1907 and 1924 extended to all undertakings, however small, but, in 1912, undertakings employing not more than five persons (excluding the proprietors) were merely required to state the average number of persons employed by them in the year. According to the information so furnished, the average number of persons employed in the establishments thus excluded was 1,977, or about 2·1 per cent. of the number employed by the remaining undertakings as shown in the above table. Moreover, correspondence on defective returns for 1912 had not been completed when the war compelled suspension of this work, and in these circumstances detailed information for 1912 is not given in this report. The defects in the aggregate figures given above are, however, not important.

Valuation of output and cost of materials.—The figures of gross output shown in the above table represent the total net selling value of gas and residual products made for sale in the year, *plus* the total amount charged for fitting and repairing meters, stoves, etc., for consumers, so far as separately returned. In the absence of separate particulars for work of new construction and repair work, the cost of new construction and repair work on buildings, plant, street mains, etc., carried out by employees of gas undertakings, whether defrayed out of capital or revenue, has, like similar work carried out for gas undertakings by contracting firms, been treated as a charge upon the value of the gas and residual products sold, and the total value of such work returned to the Census is therefore not included in the gross output shown above. Such work, in its entirety, is, however, not necessarily a charge on the value of the products made in the year in which the work is carried out. Particulars of such work of construction and repair were obtained in order to complete the survey of building and contracting work done in the year and in the report on the Building and Contracting Trades* its value has been taken into account, together with that of work of similar kinds carried out by builders and contractors.

As the cost of all construction and repair work done by employees of gas undertakings, whether charged to revenue or to capital account, was returned to the Census, the figures relating to the cost of materials used are inclusive of expenditure on materials used in all such work. Consequently, the figures for cost of materials may be somewhat overstated in relation to those for gross output, since work done on capital account, excluded from the latter, may be included in the former. There may also, should current extension work have been exceptionally great in the censal year, be some similar overstatement in the figures shown for numbers of persons employed in relation to the gross output figures. These factors should be borne in mind in considering the net output and net output per head for gas undertakings taken by themselves, and also in relation to corresponding figures for other industries.

It should, further, be noted that the value of the output of, and the cost of materials used by, gas undertakings as a whole are overstated also in respect of any gas purchased by one undertaking from another and included by both in the Census returns. This matter is discussed on page 318, where it is estimated that the total amount of duplication involved amounted to about £100,000.

Production.

Total quantity of gas produced.

Owing to the limitations imposed by the Census of Production Act, 1906, the Board of Trade were precluded from requiring Gas Undertakings to furnish compulsory statements of the quantities of gas produced, but the information received in response to a

* See pages 273 to 288.

voluntary question on this point was practically complete. In the following statement the total quantities of gas made in the United Kingdom in 1924 are shown together with those recorded for 1912 and 1907. It should be noted that these figures are inclusive of gas used in the works in which it was produced and are not, therefore, exactly comparable with the value statements given in the next section.

Gas made.	1924.	1912.	1907.
	Mill. cub. feet.	Mill. cub. feet.	Mill. cub. feet.
By Companies	181,487	150,890	125,760
By Local Authorities	101,236	78,268	70,527
TOTAL	282,723	229,158	196,287

The quantity of gas produced was about 44 per cent. greater in 1924 than in 1907, the proportionate increase being about the same for Companies as for Local Authorities. Companies produced 64·1 per cent. of the total in 1907, 65·8 per cent. in 1912, and 64·2 per cent. in 1924.

Aggregates for the two chief categories of gas (*coal gas and producer gas, water gas, etc.*) made in 1924 are given below:—

Kind of gas.	Unit.	Companies.	Local Authorities.	Total.
Coal gas :				
{ Returned in cubic feet and therms	Mill. cub. feet	129,995	49,970	179,965
{ Returned in cubic feet only	Th. therms	672,104	234,901	907,005
{ Returned in cubic feet only	Mill. cub. feet	14,898	43,751	58,649
Producer gas and other gases :				
{ Returned in cubic feet and therms	Mill. cub. feet	30,539	4,308	34,847
{ Returned in cubic feet only	Th. therms	129,819	17,059	146,878
{ Returned in cubic feet only	Mill. cub. feet	5,995	3,207	9,202
Gas not separately distinguished :				
{ Returned in cubic feet and therms	Mill. cub. feet	44	—	44
{ Returned in cubic feet only	Th. therms	188	—	188
{ Returned in cubic feet only	Mill. cub. feet	16	—	16

It will be noted that, in the case of coal gas, the output of Company undertakings averaged 193 cubic feet to the therm and that of Local Authority undertakings 213 cubic feet to the therm. For gas other than coal gas the proportions were 235 and 253 cubic feet, respectively, to the therm. The gas not adequately described in the returns received from Company undertakings averaged 234 feet to the therm. The proportion of the Local Authority output not returned in calorific units was about 46 per cent. Of that so returned the average thermal equivalent was smaller than the average for the output of Company undertakings. If the average thermal equivalent was, in the case of each of the aggregates shown, equal to that of the part returned in terms of therms, the aggregate output amounted in the censal year to 1,375 million therms, of which little short of 1,200 million therms was in respect of coal gas. The output of Company undertakings, on the hypothesis indicated, represented slightly more than 900 million therms, or 65·8 per cent. of the total output.

It would appear, from the information given on page 308 that the total quantity of coal carbonised in retorts in the production of the coal gas shown in the preceding table was about 18,100,000 tons.

Production for sale.

Detailed particulars relating to the output of Gas Undertakings and the constructional and repair work carried out by their own employees in the year 1924 will be found, for Companies, in Table II on pages 322 and 323, and, for Local Authorities, in Table II on pages 327 and 328.

Gas and residual products.—The following statement gives particulars of the value and (where recorded) the quantity of gas and residual products manufactured at Gas Undertakings operated by Companies and by Local Authorities in the years 1924 and 1907:—

Products made for sale.	Unit.	Companies.		Local Authorities.		Companies and Local Authorities.	
		1924.	1907.	1924.	1907.	1924.	1907.
Coal gas and water gas	£'000	31,555	15,328	15,572	7,833	47,127	23,161
Coke and breeze	<i>Th. tons</i>	4,958	4,707	3,023	2,877	7,981	7,584
	£'000	7,561	2,968	3,838	1,466	11,399	4,434
Tar	<i>Th. tons</i>	354	369	313	285	667	654
	£'000	1,150	366	894	300	2,044	666
	<i>Th. galls.</i>	17,517	—	6,831	—	24,348	—
	£'000	354	—	136	—	490	—
Ammoniacal liquor	<i>Th. butts</i>	584	..	641	..	1,225	..
	£'000	51	140	84	181	135	321
Tar and ammoniacal liquor, not separately distinguished	£'000	2	18	39	166	41	184
By-products:—							
Sulphate of ammonia	<i>Th. tons</i>	83	73	47	32	130	105
	£'000	875	729	476	349	1,351	1,078
Benzol and toluol	<i>Th. galls.</i>	1,587	38	374	8	1,961	46
	£'000	103	2	18	*	121	2
Naphtha ..	<i>Th. galls.</i>	254	57	318	290	572	347
	£'000	14	3	11	6	25	9
Pitch ..	<i>Th. tons</i>	89	64	33	21	122	85
	£'000	245	88	85	23	330	111
Tar oil, creosote oil and other heavy coal tar oils.	<i>Th. galls.</i>	14,893	6,401	6,859	2,118	21,752	8,519
	£'000	459	69	173	21	632	90
Other tar distillation products	£'000	237	177	130	30	367	207
Waste and other products	£'000	228	6	57	21	285	27
TOTAL VALUE OF PRODUCTS MADE FOR SALE	£'000	42,834	19,894	21,513	10,396	64,347	30,290

* Less than £500.

Gas and coke used in the works in which they were made are not included in the figures shown against the first two headings in the above table. It would appear from the particulars furnished in the annual return relating to Authorised Gas Undertakings in Great Britain that about 30 per cent. of the coke and breeze produced was used in the gas works.

According to the information furnished for the three censal years, the average revenue from the sale of gas, per 1,000 cubic feet of gas made, was as follows:—

	1924.	1912.	1907.
	<i>d.</i>	<i>d.</i>	<i>d.</i>
Companies ..	41·73	24·33	29·25
Local Authorities ..	36·92	24·52	26·65

In calculating these prices no allowance has been made for gas used in the works and the figures shown are, therefore, probably slightly lower than the average prices charged in each of the three years.

In both years the production by Companies of coke and breeze for sale was 62·1 per cent. of the aggregate production for sale. The average value was, however, higher than in the case of Local Authorities by about 2s. 6d. per ton in 1907 and 5s. 0d. per ton in 1924. The tar sold as such was considerably less in proportion to the coke sold in the case of Companies than in that of Local Authorities. The proportion of the total output that was represented by by-products was, however, about the same for the two groups of undertakings in 1924, viz., about 5 per cent., a proportion differing little from that for 1907.

Large quantities of coal tar products are also produced at coke ovens* and in other Chemical and Allied Trades*; the total production of coal tar and certain by-products in 1924, as returned on schedules for all trades, was as follows:—

Coal tar	<i>returned in galls.</i>	..	41,239,000 galls.
	<i>returned in tons</i>	..	1,390,000 tons.
Pitch ..	..	..	603,000 tons.
Sulphate of ammonia ..	..	..	419,750 tons.
Benzol ..	..	..	51,776,000 galls.
Toluol ..	..	..	741,000 galls.
Naphtha ..	..	..	5,841,000 galls.
Tar oil, creosote oil, and other heavy coal tar oils ..	..	..	90,548,000 galls.

Work of construction and repair by gas undertakings operating for general supply.

The following statement shows the value of the principal classes of constructional and repair work carried out in 1924 and 1907 by employees of Companies and of Local Authorities. Such work was valued at cost, i.e., at a sum made up of wages paid to the employees and the cost of materials used in the work, with a proportion of the general establishment charges fairly applicable thereto.

* See separate volume containing reports on the Chemical and Allied Trades.

Kind of work.	Companies.		Local Authorities.		Total.	
	1924.	1907.	1924.	1907.	1924.	1907.
	£'000	£'000	£'000	£'000	£'000	£'000
Fitting and repairing meters, stoves and other appliances for consumers (exclusive of cost of meters, etc., fitted) so far as returned separately ..	961	950	275	371	1,236	1,321
Work of construction and repair:						
On buildings and plant ..	4,529	1,479	1,646	648	6,175	2,127
On street mains and services	5,911	702	2,544	391	8,455	1,093
Work not separately distinguished .. .. .	..	172	..	142	..	314
TOTAL VALUE	11,401	3,303	4,465	1,552	15,866	4,855

These figures cover all work of the specified kinds, whether charged to revenue or capital account, carried out by employees of gas supply undertakings in the two years, but for the reason explained on page 314 only the amounts shown against the first heading in the table have been treated as additions to the value of the output of these undertakings. Work of fitting and repairing meters, etc., was not in all cases shown separately in 1924, being frequently combined with that carried out "on street mains and services." The degree of overlap between these two headings in 1924 is sufficiently important to impair the comparability of the figures given for that year with those relating to 1907 when the separation was generally maintained.

Sales of gas between undertakings.

The gross value of gas produced in 1924 for sale (£47,127,000) is overstated to the extent of the value of gas supplied by one undertaking and distributed to consumers by another, and included by both in their statement of output. It is not practicable to identify such duplicated output from the Census returns, but an estimate approximating reasonably closely to the facts may be based on the figure of 623,478,000 cubic feet, shown by the Annual Return relating to Gas Undertakings as sold by authorised undertakings to other authorised undertakings in Great Britain in 1924. The value of this duplicated output may be roughly estimated as £100,000. Further duplication may have arisen by reason of the sale between undertakings of crude residual products for further manufacture, but the amount involved cannot be estimated and, in any case, is probably not important.

Cost of materials.

The cost of materials used by Companies and Local Authorities in 1924 was returned as £24,066,000 and £11,441,000, respectively. The total of £35,507,000 is, by the exclusion of purchases of gas by certain undertakings from other undertakings, reduced to about £35,400,000; the corresponding figures for 1907 were £9,287,000 and £5,037,000, or £14,324,000 for all undertakings. The extent of the duplication involved in the 1907 figures, if any, was not estimated.

Net output.

The net output in 1924 of Companies and Local Authorities was £19,729,000 and £10,347,000, respectively, those sums representing the total amounts by which the value of the aggregate output exceeded the cost of the materials used.

The net output per head of persons employed in the censal year 1924 was, for Companies, £258, and for Local Authorities, £302, as compared with £211 and £200, respectively, in 1907.

Employment.

The detailed information relating to employment in 1924 is summarised, for Companies, in Table III on pages 324 and 325, and, for Local Authorities, in Table III on pages 329 and 330. The following table sets out certain particulars for that year together with those relating to the 1907 Census. For the purpose of this comparison, the average numbers of operatives of each sex returned for 1924 have been divided between the two age-groups in the proportions shown by the data relating to the week ended 18th October.

Average number.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
1924.						
Operatives	2,412	62,915	21	562	2,433	63,477
Administrative, etc. ..	579	11,590	117	1,377	696	12,967
TOTAL	2,991	74,505	138	1,939	3,129	76,444
1907.						
Wage earners	1,566	49,260	1	153	1,567	49,413
Salaried	242	5,381	7	72	249	5,453
TOTAL	1,808	54,641	8	225	1,816	54,866
1924.						
LOCAL AUTHORITIES.						
Operatives	642	28,981	5	290	647	29,271
Administrative, etc. ..	223	4,504	32	442	255	4,946
TOTAL	865	33,485	37	732	902	34,217
1907.						
Wage earners	391	25,390	2	81	393	25,471
Salaried	168	3,083	1	20	169	3,103
TOTAL	559	28,473	3	101	562	28,574
1924.						
COMPANIES AND LOCAL AUTHORITIES.						
Operatives	3,054	91,896	26	852	3,080	92,748
Administrative, etc. ..	802	16,094	149	1,819	951	17,913
TOTAL	3,856	107,990	175	2,671	4,031	110,661
1907.						
Wage earners	1,957	74,650	3	234	1,960	74,884
Salaried	410	8,464	8	92	418	8,556
TOTAL	2,367	83,114	11	326	2,378	83,440

The proportion of administrative staff to operative staff was, in 1924, greater in the case of Companies than in that of Local Authorities, while in 1907 the proportion of salaried staff was greater for Local Authorities than for Companies.

The numbers of operatives recorded month by month by Companies in 1924 ranged from 1,333 below the average, in June, to 1,640 above the average, in November, (see Table IIIB, page 325). Those recorded by Local Authorities ranged from 1,019 below the average, in June, to 1,446 above the average, in December (see Table IIIB, page 330). Taking together both classes of undertakings, the total number employed decreased month by month from January to June and increased thereafter till the end of the year.

Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised, for Companies, in Table IV on page 326, and, for Local Authorities, in Table IV on page 331. The following table sets out the particulars for 1924 and 1907 relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

Power equipment.	Companies.		Local Authorities.		Companies and Local Authorities.	
	1924.	1907.	1924.	1907.	1924.	1907.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS:—						
Reciprocating steam engines	57,933	44,282	34,021	27,421	91,954	71,703
Steam turbines	14,080	1,087	7,385	676	21,465	1,763
Gas engines ..	42,862	11,065	13,435	4,922	56,297	15,987
Petrol and light oil engines ..	1,161		456		1,617	
Heavy oil engines	21		—		21	
Water power ..	2	105	—	68	—	173
Other ..	—	115	—	162	—	277
TOTAL ..	116,059	56,654	55,297	33,249	171,356	89,903
ELECTRIC GENERATORS:						
Driven by—	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	5,501	*	1,756	*	7,257	*
Steam turbines	1,036		800		1,836	
Gas engines ..	12,668		2,924		15,592	
Petrol and light oil engines ..	85	—	—	85		
TOTAL ..	19,290	*	5,480	*	24,770	*

* Not recorded.

The capacity of *electric motors* recorded in 1924 was as shown below:—

Electric motors.	1924.		
	Companies.	Local Authorities.	Companies and Local Authorities.
Driven by—	H.P.	H.P.	H.P.
Electricity generated in own works	27,786	10,766	38,552
Purchased electricity	5,138	12,082	17,220

Corresponding information was not required for 1907.

Capacity of gas retorts and generators.

The following particulars were received in response to a request for voluntary information as to the capacity of gas retorts and generators available at the end of 1924. What proportion of the idle retorts constituted a reserve against special demands or breakdown was not shown in the returns. The undertakings in respect of which these particulars were given produced gas valued at £43,115,000, or over 91 per cent. of the total value of all gas made in 1924.

Maximum weekly capacity.

	In use.		Idle.	
	Tons.	Tons.	Tons.	Tons.
Gas retorts (in terms of coal carbonized)	452,900	107,700		
	Th. c. ft.	Th. c. ft.		
Water gas generators ..	1,594,557	988,303		

Obsolete retorts and generators are not included in these figures.

TABLES.

COMPANIES.

I.—Summary of results.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Value of products and work done (Gross output) ..	£'000	42,646	1,011	43,657	138
Cost of materials used ..	"	23,484	504	23,988	78
Net output	"	19,162	507	19,669	60
Average number of persons employed	No.	74,970	1,236	76,206	238
Net output per person employed	£	256	410	258	252
Mechanical power available: Prime movers	H.P.	113,672	2,021	115,693	366
Electric motors driven by purchased electricity ..	"	5,106	32	5,138	—

II.—Production.

A.—TOTAL QUANTITY OF GAS MADE IN THE YEAR 1924 (INCLUDING THAT USED IN GAS WORKS), AS RETURNED BY GAS COMPANIES.

Kind of gas.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Coal gas:—					
Returned in cubic feet and therms ..	Mill. cub. ft.	128,950	1,045	129,995	—
Returned in cubic feet only	Th. therms	667,064	5,040	672,104	—
Producer gas and other gases:—					
Returned in cubic feet and therms ..	Mill. cub. ft.	30,411	128	30,539	—
Returned in cubic feet only	Th. therms	129,427	392	129,819	—
Gas, not separately distinguished:—					
Returned in cubic feet and therms ..	Mill. cub. ft.	5,813	155	5,968	27
Returned in cubic feet only	Th. therms	44	—	44	—
TOTAL:—					
Returned in cubic feet and therms ..	Mill. cub. ft.	159,405	1,173	160,578	—
Returned in cubic feet only	Th. therms	796,679	5,432	802,111	—
	Mill. cub. ft.	18,181	2,328	20,509	400

B.—OUTPUT SOLD OR ADDED TO STOCK AND WORK DONE.

Kind of products and work done.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
		Quantity and selling value.			
Coal gas and water gas	£'000	30,649	803	31,452	103
Coke and breeze	Th. tons	4,854	94	4,948	10
	£'000	7,398	140	7,538	23
Tar { returned in tons	Th. tons	338	15	353	1
	£'000	1,121	27	1,148	2
Tar { returned in galls.	Th. galls.	15,840	1,413	17,253	264
	£'000	334	14	348	6
Ammoniacal liquor	Th. butts	540	44	584	—
	£'000	48	3	51	—
Tar and ammoniacal liquor, not separately distinguished ..	£'000	—	2	2	—
By-products:—					
Sulphate of ammonia	Th. tons	82	1	83	*
	£'000	858	14	872	3
Benzol and toluol	Th. galls.	1,585	2	1,587	—
	£'000	103	†	103	—
Naphtha	Th. galls.	254	—	254	—
	£'000	14	—	14	—
Pitch	Th. tons	89	—	89	—
	£'000	245	—	245	—
Tar oil, creosote oil and other heavy coal tar oils ..	Th. galls.	14,891	2	14,893	—
	£'000	459	†	459	—
Other tar distillation products ..	£'000	237	—	237	—
Waste and other products	£'000	228	—	228	—
Fitting and repairing meters, stoves and other appliances for consumers (so far as returned separately)	£'000	952‡	8‡	960‡	1‡
TOTAL VALUE OF PRODUCTS AND WORK DONE (GROSS OUTPUT) ..	£'000	42,646	1,011	43,657	138

* Less than 500 tons. † Less than £500. ‡ Amount received for work done.

C.—VALUE OF CONSTRUCTION AND REPAIR WORK CARRIED OUT BY EMPLOYEES OF GAS COMPANIES.

Construction and repair work.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	£'000	£'000	£'000	£'000
On buildings and plant	4,481	32	4,513	16
On street mains and services* ..	5,846	54	5,900	11
TOTAL VALUE OF CONSTRUCTION AND REPAIR WORK DONE ..	10,327	86	10,413	27

* See letterpress following table on page 318.

III.—Employment.

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales</i> :—						
Operatives	2,434	62,973	21	555	2,455	63,528
Administrative, etc.*	569	11,305	110	1,312	679	12,617
TOTAL	3,003	74,278	131	1,867	3,134	76,145
<i>Scotland</i> :—						
Operatives	22	947	—	5	22	952
Administrative, etc.*	9	244	7	57	16	301
TOTAL	31	1,191	7	62	38	1,253
<i>Great Britain</i> :—						
Operatives	2,456	63,920	21	560	2,477	64,480
Administrative, etc.*	578	11,549	117	1,369	695	12,918
TOTAL	3,034	75,469	138	1,929	3,172	77,398
<i>Northern Ireland</i> :—						
Operatives	2	184	—	—	2	184
Administrative, etc.*	1	41	—	8	1	49
TOTAL	3	225	—	8	3	233
<i>United Kingdom</i> :—						
TOTAL	3,037	75,694	138	1,937	3,175	77,631

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

England and Wales. (Annual average : Males, 61,796 ; Females, 557 ; Total, 62,353.)

Week ended	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th ..	62,161	558	62,719	July 19th ..	60,810	555	61,365
Feb. 16th ..	61,604	551	62,155	Aug. 16th ..	61,029	558	61,587
Mar. 15th ..	61,694	565	62,259	Sept. 13th ..	61,787	558	62,345
April 12th ..	61,371	553	61,924	Oct. 18th ..	62,973	555	63,528
May 17th ..	61,049	559	61,608	Nov. 15th ..	63,378	556	63,934
June 21st ..	60,524	550	61,074	Dec. 13th ..	63,174	565	63,739

Scotland. (Annual average : Males, 930 ; Females, 5 ; Total, 935.)

Jan. 12th ..	962	5	967	July 19th ..	884	6	890
Feb. 16th ..	950	5	955	Aug. 16th ..	900	6	906
Mar. 15th ..	932	5	937	Sept. 13th ..	915	6	921
April 12th ..	916	4	920	Oct. 18th ..	947	5	952
May 17th ..	902	4	906	Nov. 15th ..	983	5	988
June 21st ..	890	4	894	Dec. 13th ..	974	5	979

Great Britain. (Annual average : Males, 62,726 ; Females, 562 ; Total, 63,288.)

Jan. 12th ..	63,123	563	63,686	July 19th ..	61,694	561	62,255
Feb. 16th ..	62,554	556	63,110	Aug. 16th ..	61,929	564	62,493
Mar. 15th ..	62,626	570	63,196	Sept. 13th ..	62,702	564	63,266
April 12th ..	62,287	557	62,844	Oct. 18th ..	63,920	560	64,480
May 17th ..	61,951	563	62,514	Nov. 15th ..	64,361	561	64,922
June 21st ..	61,414	554	61,968	Dec. 13th ..	64,148	570	64,718

Northern Ireland. (Annual average : Males, 189 ; Females, — ; Total, 189.)

Jan. 12th ..	193	—	193	July 19th ..	179	—	179
Feb. 16th ..	200	—	200	Aug. 16th ..	186	—	186
Mar. 15th ..	203	—	203	Sept. 13th ..	189	—	189
April 12th ..	186	—	186	Oct. 18th ..	184	—	184
May 17th ..	184	—	184	Nov. 15th ..	195	—	195
June 21st ..	176	—	176	Dec. 13th ..	191	—	191

IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

(a) Ordinarily in use. (b) In reserve or idle.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—				
Reciprocating steam engines	{ (a) 42,355 (b) 14,215	977 245	43,332 14,460	100 41
Steam turbines	{ (a) 9,585 (b) 4,390	57 48	9,642 4,438	—
Gas engines	{ (a) 31,999 (b) 9,944	530 164	32,529 10,108	204 21
Petrol and light oil engines	{ (a) 1,104 (b) 57	—	1,104 57	—
Heavy oil engines	{ (a) 11 (b) 10	—	11 10	—
Water power	{ (a) 1 (b) 1	—	1 1	—
TOTAL	{ (a) 85,055 (b) 28,617	1,564 457	86,619 29,074	304 62
TOTAL OF PRIME MOVERS INSTALLED	113,672	2,021	115,693	366
ELECTRIC GENERATORS :—				
Driven by—	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	{ (a) 3,281 (b) 2,218	2 —	3,283 2,218	—
Steam turbines	{ (a) 919 (b) 105	12 —	931 105	—
Gas engines	{ (a) 9,337 (b) 3,146	90 30	9,427 3,176	65
Petrol and light oil engines	{ (a) 52 (b) 33	—	52 33	—
TOTAL	{ (a) 13,589 (b) 5,502	104 30	13,693 5,532	65
TOTAL OF ELECTRIC GENERATORS INSTALLED	19,091	134	19,225	65
ELECTRIC MOTORS :—				
Driven by—	H.P.	H.P.	H.P.	H.P.
Electricity generated in own works	{ (a) 23,361 (b) 4,150	230 —	23,591 4,150	35 10
Purchased electricity	{ (a) 4,199 (b) 907	32 —	4,231 907	—

LOCAL AUTHORITIES.

I.—Summary of results.

Particulars.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Value of products and work done (Gross output) ..	£'000	16,350	4,685	21,035	753
Cost of materials used ..	„	8,723	2,296	11,019	422
Net output	„	7,627	2,389	10,016	331
Average number of persons employed	No.	26,086	6,845	32,931	1,286
Net output per person employed	£	292	349	304	257
Mechanical power available :—					
Prime movers	H.P.	41,140	13,131	54,271	1,026
Electric motors driven by purchased electricity ..	„	7,657	4,425	12,082	—

II.—Production.

A.—TOTAL QUANTITY OF GAS MADE IN THE YEAR 1924 (INCLUDING THAT USED IN GAS WORKS), AS RETURNED BY LOCAL AUTHORITIES).

Kind of gas.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Coal gas :—					
Returned in cubic feet and therms	Mill. cub. ft. Th. therms	29,780 139,322	17,474 82,931	47,254 222,253	2,716 12,648
Returned in cubic feet only	Mill. cub. ft.	40,147	3,169	43,316	435
Producer gas and other gases :—					
Returned in cubic feet and therms	Mill. cub. ft. Th. therms	2,098 8,191	1,178 4,607	3,276 12,798	1,032 4,261
Returned in cubic feet only	Mill. cub. ft.	2,861	346	3,207	*
TOTAL :—					
Returned in cubic feet and therms	Mill. cub. ft. Th. therms	31,878 147,513	18,652 87,538	50,530 235,051	3,748 16,909
Returned in cubic feet only	Mill. cub. ft.	43,008	3,515	46,523	435

* Less than 500,000 cub. feet.

B.—OUTPUT SOLD OR ADDED TO STOCK AND WORK DONE.

Kind of products and work done.	Unit.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
Quantity and selling value.					
Coal gas and water gas	£'000	11,748	3,292	15,040	532
Coke and breeze	<i>Th. tons</i>	2,433	531	2,964	59
	£'000	3,015	711	3,726	112
Tar {	<i>Th. tons</i>	267	38	305	8
	£'000	735	107	842	52
returned in galls.	<i>Th. galls.</i>	2,059	4,476	6,535	296
	£'000	37	91	128	8
Ammoniacal liquor	<i>Th. butts</i>	609	32	641	—
	£'000	78	6	84	—
Tar and ammoniacal liquor, not separately distinguished	£'000	—	39	39	—
By-products :—					
Sulphate of ammonia	<i>Th. tons</i>	28	17	45	2
	£'000	272	185	457	19
Benzol	<i>Th. galls.</i>	346	20	366	8
	£'000	16	1	17	1
Naphtha	<i>Th. galls.</i>	122	194	316	2
	£'000	3	8	11	*
Pitch	<i>Th. tons</i>	18	13	31	2
	£'000	51	28	79	6
Tar oil, creosote oil and other heavy coal tar oils	<i>Th. galls.</i>	2,841	3,479	6,420	439
	£'000	74	84	158	15
Other tar distillation products	£'000	26	98	124	6
Waste and other products	£'000	50	6	56	1
Fitting and repairing meters, stoves and other appliances for consumers (so far as returned separately)	£'000	245†	29†	274†	1†
TOTAL VALUE OF PRODUCTS AND WORK DONE (GROSS OUTPUT)	£'000	16,350	4,685	21,035	753

* Less than £500. † Amount received for work done.

C.—VALUE OF CONSTRUCTION AND REPAIR WORK CARRIED OUT BY EMPLOYEES OF LOCAL AUTHORITIES.

Construction and repair work.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	£'000	£'000	£'000	£'000
On buildings and plant	1,305	279	1,584	62
On street mains and services*	1,788	671	2,459	85
TOTAL VALUE OF CONSTRUCTION AND REPAIR WORK DONE	3,093	950	4,043	147

* See letterpress following table on page 318.

III.—Employment.

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales :—</i>						
Operatives	585	22,691	5	230	590	22,921
Administrative, etc.*	183	3,397	23	269	206	3,666
TOTAL	768	26,088	28	499	796	26,587
<i>Scotland :—</i>						
Operatives	44	5,670	—	52	44	5,722
Administrative, etc.*	32	908	7	154	39	1,062
TOTAL	76	6,578	7	206	83	6,784
<i>Great Britain :—</i>						
Operatives	629	28,361	5	282	634	28,643
Administrative, etc.*	215	4,305	30	423	245	4,728
TOTAL	844	32,666	35	705	879	33,371
<i>Northern Ireland :—</i>						
Operatives	22	1,016	—	5	22	1,021
Administrative, etc.*	8	199	2	19	10	218
TOTAL	30	1,215	2	24	32	1,239
<i>United Kingdom :—</i>						
TOTAL	874	33,881	37	729	911	34,610

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

England and Wales. (Annual average : Males, 22,189 ; Females, 231 ; Total, 22,420.)

Week ended	Males.	Females.	Total.	Week ended	Males.	Females.	Total.
Jan. 12th ..	22,475	231	22,706	July 19th ..	21,743	233	21,976
Feb. 16th ..	22,225	233	22,458	Aug. 16th ..	21,751	230	21,981
Mar. 15th ..	22,168	228	22,396	Sept. 13th ..	22,174	228	22,402
April 12th ..	21,816	231	22,047	Oct. 18th ..	22,691	230	22,921
May 17th ..	21,462	231	21,693	Nov. 15th ..	22,960	230	23,190
June 21st ..	21,423	233	21,656	Dec. 13th ..	23,382	231	23,613

Scotland. (Annual average : Males, 5,729 ; Females, 54 ; Total, 5,783.)

Jan. 12th ..	5,994	56	6,050	July 19th ..	5,493	53	5,546
Feb. 16th ..	5,864	60	5,924	Aug. 16th ..	5,537	52	5,589
Mar. 15th ..	5,841	59	5,900	Sept. 13th ..	5,582	52	5,634
April 12th ..	5,791	56	5,847	Oct. 18th ..	5,670	52	5,722
May 17th ..	5,693	55	5,748	Nov. 15th ..	5,873	52	5,925
June 21st ..	5,468	55	5,523	Dec. 13th ..	5,943	51	5,994

Great Britain. (Annual average : Males, 27,918 ; Females, 285 ; Total, 28,203.)

Jan. 12th ..	28,469	287	28,756	July 19th ..	27,236	286	27,522
Feb. 16th ..	28,089	293	28,382	Aug. 16th ..	27,288	282	27,570
Mar. 15th ..	28,009	287	28,296	Sept. 13th ..	27,756	280	28,036
April 12th ..	27,607	287	27,894	Oct. 18th ..	28,361	282	28,643
May 17th ..	27,155	286	27,441	Nov. 15th ..	28,833	282	29,115
June 21st ..	26,891	288	27,179	Dec. 13th ..	29,325	282	29,607

Northern Ireland. (Annual average : Males, 1,063 ; Females, 5 ; Total, 1,068.)

Jan. 12th ..	1,122	5	1,127	July 19th ..	1,057	5	1,062
Feb. 16th ..	1,086	5	1,091	Aug. 16th ..	1,051	5	1,056
Mar. 15th ..	1,082	5	1,087	Sept. 13th ..	1,039	5	1,044
April 12th ..	1,049	5	1,054	Oct. 18th ..	1,016	5	1,021
May 17th ..	1,035	5	1,040	Nov. 15th ..	1,051	5	1,056
June 21st ..	1,068	5	1,073	Dec. 13th ..	1,105	5	1,110

IV.—Mechanical Power.

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

(a) Ordinarily in use. (b) In reserve or idle.	England and Wales.	Scotland.	Great Britain.	Northern Ireland.
	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—				
Reciprocating steam engines	{ (a) 19,214 (b) 5,632	{ 6,398 2,528	{ 25,612 8,160	{ 153 96
Steam turbines	{ (a) 3,132 (b) 2,140	{ 971 867	{ 4,103 3,007	{ 165 110
Gas engines	{ (a) 8,130 (b) 2,447	{ 1,634 722	{ 9,764 3,169	{ 382 120
Petrol and light oil engines	{ (a) 402 (b) 43	{ 11 —	{ 413 43	{ — —
TOTAL	{ (a) 30,878 (b) 10,262	{ 9,014 4,117	{ 39,892 14,379	{ 700 326
TOTAL OF PRIME MOVERS INSTALLED				
	41,140	13,131	54,271	1,026
	Kw.	Kw.	Kw.	Kw.
ELECTRIC GENERATORS :—				
Driven by—				
Reciprocating steam engines	{ (a) 1,593 (b) 163	{ — —	{ 1,593 163	{ — —
Steam turbines	{ (a) 400 (b) 400	{ — —	{ 400 400	{ — —
Gas engines	{ (a) 1,614 (b) 641	{ 283 145	{ 1,897 786	{ 167 74
TOTAL	{ (a) 3,607 (b) 1,204	{ 283 145	{ 3,890 1,349	{ 167 74
TOTAL OF ELECTRIC GENERATORS INSTALLED				
	4,811	428	5,239	241
	H.P.	H.P.	H.P.	H.P.
ELECTRIC MOTORS :—				
Driven by—				
Electricity generated in own works	{ (a) 8,086 (b) 1,503	{ 472 118	{ 8,558 1,621	{ 525 62
Purchased electricity	{ (a) 6,587 (b) 1,070	{ 3,328 1,097	{ 9,915 2,167	{ — —