WATER UNDERTAKINGS

WATER UNDERTAKINGS

Note.—For information regarding the scope of the Census, instructions for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

Introductory

The following report relates to returns received from water undertakings (including hydraulic power companies). The particulars given do not cover private waterworks owned by railway companies and other concerns maintaining waterworks solely for their own use nor water undertakings controlled by Government Departments. Details in respect of Water Boards are included throughout this report with those relating to Local Authorities.

The following table shows the main results of the Censuses of 1930 and 1924 in respect of undertakings in Great Britain that employed an average of more than ten persons. The period for which returns were made by Local Authorities in England and Wales was usually the financial year ended 31st March, 1931 or 1925, and in Scotland, the year ended 15th May following.

tor statute the		a la constante	1930		1924			
Particulars	Unit	Com- panies	Local Authori- ties	Total	Com- panies	Local Authori- ties	Total	
Value of water sup- plied and work done for consumers						- Net		
(Gross output) Cost of materials	£'000	4,444	18,331	22,775	3,779	15,172	18,951	
used	,	907	3,596	4,503	885	2,899	3,784	
Net output Average number of	,,	3,537	14,735	18,272	2,894	12,273	15,167	
persons employed Net output per per-	No.	5,917	24,133	30,050	5,420	23,829	29,249	
son employed Power available :	£	598	611	608	534	515	519	
Prime movers Electric motors driven by pur- chased electri-	H.P.	73,117	112,042	185,159	58,581	100,498	159,079	
city Number of returns	,, No.	11,851 80	29,826 233	41,677 313	6,844 82	$11,312 \\ 220$	18,156 302	
Number of estab-	110.	00	200	515	84	220	302	
lishments	"	155	422	577	*	*	*	

* Not available.

The gross output figures shown above are made up of the total net selling value of water supplied together with the total amounts charged for work done for consumers; the value of constructional or maintenance work done by employees of Local Authorities or Companies in extending and maintaining the properties of the water

undertaking is excluded (see page 513) and the figures also exclude any work done for consumers for which no charge was made. The figure of cost of materials used, however, includes the materials used in all work carried out by employees of the undertakings, including work involving important extensions of the properties and plant, the cost of which would not necessarily form a charge on the revenue of the censal year; and, as the employees engaged on all such work are included in the recorded aggregates, the numbers of persons employed may be somewhat overstated in relation to the gross output of the year in which the work was done. The selling value of the water being very largely a percentage charge based upon the rateable value of the property concerned, it is not necessarily related precisely to the cost of production, including depreciation and maintenance charges, but may include some allowance for normal capital expenditure. Net output, and net output per person employed, are much affected by the amount of work of new construction carried out in the year, and comparisons between the figures for 1930 and those for 1924 may be affected by these considerations. Comparisons with corresponding figures for other industries are likewise affected.

Deficiencies in 1930 aggregates.—The aggregate number of persons employed in 1930 by water undertakings at which not more than ten persons were employed on the average was 2,627, the corresponding figure for 1924 being 2,863, of which 2,359 were employed at undertakings owned by Local Authorities. The value of the gross output of the small undertakings in 1924 was $\pounds 1,667,000$, of which those owned by Local Authorities recorded $\pounds 1,364,000$. The value of the work of construction, etc., done by these small undertakings on their own properties was $\pounds 294,000$.

In addition, 111 small undertakings to which schedules were sent at the 1930 Census furnished no information.

Size of undertakings.—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns :—

Size of undertakin (average numbers employed)	0	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
		No.	£'000	£'000	No.	£
11-24		136	1,652	1,211	2,185	554
25-49		75	2,036	1,607	2,634	610
50-99		41	2,234	1,718	2,732	629
100–199		32	3,908	3,159	4,846	652
200-299		12	1,902	1,374	3,019	455
300-749		13	3,888	3,210	5,895	545
750 and over		4	7,155	5,993	8,739	686
TOTAL		313	22,775	18,272	30,050	608

WATER UNDERTAKINGS

Regional distribution.—In the following table, which relates to both Local Authorities and Companies, the results recorded at the Censuses of 1930 and 1924 are grouped according to the areas^{*} into which Great Britain has been sub-divided :—

	Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
		No.	£'000	£'000	No.	£
1	∫ 1930	8	5,606	4,933	6,060	814
1	1924	26	5,668	4,499	6,835	658
2	∫ 1930	47	3,744	3,182	5,732	555
4	1924	45	3,243	2,575	5,188	496
3	∫ 1930	28	2,359	1,746	3,224	542
0	1924	24	2,221	1,715	4,359	393
4	∫ 1930	10	1,144	997	1,248	799
T	1924	9	861	685	1,143	599
5	{ 1930	18	1,817	1,123	2,673	420
	(1924	21	1,573	1,308	2,030	644
6	∫ 1930	143	5,602	4,241	7,863	539
•	1924	121	3,393	2,733	5,517	495
7	∫ 1930	21	897	689	1,165	591
	1924	22	630	495	1,911	259
8	£ 1930	8	68	59	133	446
	1924	10	68	54	214	252
9	∫ 1930	9	863	740	993	746
] 1924	10	847	729	1,336	546
0	∫ 1930	21	675	562	959	586
Jane 1	2 1924	14	447	374	716	522
Тот	∫ 193 0	313	22,775	18,272	30,050	608
101	AL 1924	302	18,951	15,167	29,249	519

Northern Ireland.—The following table summarises the particulars recorded at the Census of Production taken by the Government of Northern Ireland for 1930, together with those furnished at the 1924 Census. The 1930 figures relate to undertakings that employed an average of more than *five* persons, while those for 1924 relate to all undertakings.

Particulars	Unit	1930	1924	
Cost of materials used Net output	lone for 	£'000 " No. £	$225 \\ 30 \\ 195 \\ 446 \\ 437$	226 18 208 429 485
Prime movers Electric motors driven by purchased ele	ctricity	H.P. "	228 90	616 180

* For particulars see page xviii.

The principal items included in the gross output values shown in the above table were as follows :----

Water supplied and work done for consumer	19	1924	
Water supplied and work done for consumers	Quantity	Value	Value
Water sold to other water undertakings	Mill. galls. 76	£'000 1	£'000 1
Water supplied for public purposes (street watering, public baths, etc.)	59	4	3
Water supplied for trade and domestic purposes	8,405	217	216
Water supplied for public and private purposes, not separately distinguished	_	_	5
TOTAL—Water supplied	8,540	222	225*
Laying and fixing pipes, fixing meters and fittings (exclusive of cost of pipes, meters and fittings)		3†	1†
TOTAL—Water supplied and work done for consumers	- 4	225	226

* Undertakings were not required to state compulsorily the quantities of water supplied in 1924, but for 97 per cent. of the total value of water the quantity was returned voluntarily as 8,713 million gallons.

† Amount charged.

The following table shows the value of constructional and repair work carried out by employees of water undertakings in Northern Ireland on reservoirs and other properties :—

Kind of work done	1930	1924
- The second	£'000	£'000
Construction, alteration, maintenance and repair of water- works, including hydraulic power works :		1 1
Reservoirs, wells, aqueducts, conduits, and trunk, dis- tributing and service mains	58	14
Buildings in connection with above :		tanging.
New construction	2	} 3
Machinery and plant in connection with above	1	5
Work not separately distinguished	· · · · · · · · · · · · · · · · · · ·	3
TOTAL	62	55

Production

Total quantity of water supplied.—The following table shows the quantities of water supplied in 1930 by undertakings covered by this report. This information was not compulsory and was not given by undertakings supplying about 3 per cent. of the total value of the output of water. Estimates in respect of this small deficiency are included in the table.

Water supplied	Companies	Local Authorities	Total
To other undertakings	Mill. galls. 1,560	Mill. galls. 21,619	Mill. galls. 23,179
For public purposes (e.g. street watering, public baths, etc.) For trade and domestic purposes (includ-	723	7,236	7,959
ing municipal trading departments)	67,404	344,400	411,804
For purposes not separately distinguished	4,106	32,873	36,979
Тотаl	73,793	406,128	479,921

In the Final Report on the Census for 1924 it was estimated that the total quantity of water supplied in that year by *all* undertakings, including those that employed ten or fewer persons and those in Northern Ireland, was about 490,000 million gallons. The total quantity supplied by the larger undertakings in Great Britain and Northern Ireland in 1930 was 488,461 million gallons; the quantity supplied by all undertakings may be estimated roughly at 530,000 million gallons.

The amounts shown in the above table as supplied "to other undertakings" represent sales for re-distribution and are therefore duplicated in the quantities shown under other headings, except in so far as the water was sold to undertakings employing not more than ten persons. At the 1924 Census it was estimated that inter-sales between water undertakings amounted to about 20,000 million gallons.

Value of water supplied and work done for consumers.—The following table shows the value of water supplied in 1930 and 1924, together with the work done for consumers for which a direct charge was made. The amount shown as the value of water supplied represents the net amount charged less discounts, whether the charge was levied by rate, or as rent, or in any other way. In cases where no separate water rate was levied, the value represents the estimated proportion of the total amount levied by rate which was attributable to the water supply. The figures are exclusive of meter rents and of any sums transferred from local rates in order to make good deficiencies in the income derived from the waterworks.

		1924					
Water supplied and work done for consumers	Companies		Local Authorities		Total		Total
Andres and an incertain	Value	Ent- ries	Value	Ent- ries	Value	Ent- ries	Value
l'l	£'000	No.	£'000	No.	£'000	No.	£'000
Water supplied : Water sold to other water undertakings Water supplied for public purposes (e.g.	54	31	789	103	843	134	748
street watering, public baths, etc.) Water supplied for trade and domestic	40	54	317	144	357	198	432
municipal trading departments)* Water supplied for	3,989	68	15,879	190	19,868	258	17,116
purposes not separ- ately distinguished	280	12	1,114	42	1,394	54	398
Total	4,363		18,099		22,462		18,694
Work done for con- sumers: Laying and fixing pipes, fixing meters and fittings (exclusive of	Amount charged £'000		Amount charged £'000		Amount charged £'000		Amount charged £'000
the cost of pipes, meters and fittings) Other work for which a direct charge was	69	70	208	190	277	260	257
made to consumers	12	19	24	35	36	54	†
TOTAL VALUE—Water supplied and work done for consumers	4,444		18,331	10000000000000000000000000000000000000	22,775	na sin na sin	18,951

* The words "including municipal trading departments" did not form part of this heading at the 1924 Census. Water supplied to such departments in 1924 may have been in part recorded as for public purposes.

† Not recorded separately.

Average value of water supplied.—The average revenue per million gallons supplied to consumers in 1930 by undertakings employing more than ten persons was $\pounds 46.8$, compared with nearly $\pounds 42$ in 1924, indicating an increase of about 11 per cent. in the later year. Water was supplied by Local Authorities at an average of $\pounds 44.3$ per million gallons in 1930, and that supplied by Companies averaged $\pounds 59.1$ per million gallons. The average value at

WATER UNDERTAKINGS

which water was sold in 1930 for the various purposes specified was as under :--

	By	By Local
	Companies	Authorities
	£ per	£ per
	mill. galls.	mill. galls.
Water sold to other undertakings	$34 \cdot 6$	$36 \cdot 4$
Water supplied for public purposes	$55 \cdot 5$	$43 \cdot 8$
Water supplied for trade and domestic		
purposes	$59 \cdot 2$	$46 \cdot 1$

Volume of production in 1930 and 1924.—As stated in the preceding paragraph, the average amount charged for water supplied in 1930 was higher by about 11 per cent. than in 1924. The total value of water supplied in the earlier year (£18,694,000) would be equivalent to a sum of about £20,750,000 in terms of 1930 prices, and with the addition of the small amount charged for work done for consumers (£257,000), the total value of the output of water undertakings in 1924 may be estimated at about £21,000,000. The total of £22,775,000 for 1930 represents an increase of about 8 per cent.

Work of construction, maintenance and repair by employees of water undertakings.—The following table shows the value of the chief kinds of constructional, maintenance and repair work carried out in 1930 and 1924 by employees of water undertakings. The amounts shown are made up of the wages of the employees engaged in the work, the cost of materials used and such proportion of the general establishment charges as was estimated to be applicable to the work; interest, sinking fund and other loan charges were excluded.

Kind of work done	Companies		Local Authorities		Total	
Kind of work done	1930	1924	1930	1924	1930	1924
Work of construction, alteration,	£'000	£'000	£'000	£'000	£'000	£'000
maintenance and repair on : Reservoirs, wells, aqueducts, conduits, and trunk, distri- buting and service mains Buildings in connection with above : New construction (includ- ing enlargement of ex-	970	764	3,655	3,878	4,625	4,642
isting buildings) Repairs and renewals Machinery and plant in con-	23 54	} 71	67 91	} 117	90 145	} 188
nection with above	97	120	416	360	513	480
Other work	55	*	40	*	95	*
Unclassified work	29	43	114	390	143	433
TOTAL	1,228	998	4,383	4,745	5,611	5,743

* Not recorded separately.

513

Employment

The following table shows the average numbers of persons employed in 1930 and 1924:—

Persons employed	Males		Females		Total	
Tersons employed	Under 18	All ages	Under 18	All ages	Under 18	All ages
1930 Operatives (average for the year) Administrative, technical and clerical staff (as at 18th	271	25,012	2	190	273	25,202
October)	154	4,398	26	450	180	4,848
Total	425	29,410	28	640	453	30,050
1924 Operatives (average for the year) Administrative, technical and	383	24,669	3	222	386	24,891
clerical staff (as at 18th October)	147	3,987	16	371	163	4,358
Total	530	28,656	19	593	549	29,249

Power

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :---

Power		1930		1924			
equipment	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total	
PRIME MOVERS	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	
Reciprocating steam engines	92,414	35,045	127,459	96,662	31,923	128,585	
Steam turbines	5,708	1,894	7,602	457	1,278	1,735	
Internal combustion engines :—	;						
Gas Petrol, kerosene, or	8,860	3,936	12,796	9,367	4,893	14,260	
other light oils	2,046	1,361	3,407	1,381	406	1,787	
Heavy oils	22,599	7,954	30,553	8,075	1,729	9,804	
Water engines	2,829	508	3,337	2,702	206	2,908	
Other prime movers	5		5				
TOTAL	134,461	50,698	185,159	118,644	40,435	159,079	

	D		1930
e	Power equipment	Ordinarily	In

Dorrow	1					and a second second second
Power equipment	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
ELECTRIC GENERATORS Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam						
engines	1,604	1,387	2,991	755	224	979
Steam turbines	324	4	328	4		4
Internal combustion engines :—					(4244)	(Theyard T
Gas	26	4	30	508	69	577
Petrol, kerosene, or other light	and the second			an keepintiet	A a sectore	
oils	116	80	196	44	4	48
Heavy oils	1,782	401	2,183	406	85	49]
Water engines	530	311	841	452		455
TOTAL	4,382	2,187	6,569	2,169	382	2,55
ELECTRIC MOTORS	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by	I was a state	State of the				
Electricity generated			departs at	1 States States		
in same works	4,061	1,709	5,770	3,737	667	4,404
Purchased electricity	27,593	14,084	41,677	9,541	8,615	18,15
TOTAL	31,654	15,793	47,447	13,278	9,282	22,56

WATER UNDERTAKINGS

Consumption of fuel

The following table shows the quantities of coal, coke and electricity recorded as used in 1930 :---

Kind of fuel used		r powe ng engi		For other purposes (so far as recorded)*
Colto	 50	Tons)1,893 18,544		Tons 19,884 6,304
Electricity used for all purposes :— Generated in same works Purchased†	 		 	B.T.U. (Kwhrs.) '000 6,380 49,924
TOTAL-Electricity	 ·····		••••	56,304

* These figures were recorded in respect of $86 \cdot 2$ per cent. of the net output of all water undertakings, the proportion for Companies being $69 \cdot 7$ per cent. and for Local Authorities $90 \cdot 1$ per cent.

[†] Including current supplied by an electricity undertaking operated by the Company or Local Authority.

1924

TABLES

COMPANIES

Note.--No water supplied or work done by Companies was recorded for Scotland.

I. Summary of results

Particulars	Unit	England and Wales	
Value of water supplied and work done for consum	ners	01000	
$(Gross output) \dots \dots \dots \dots \dots$		£'000	4,444
Cost of materials used		,,	907
Net output		,,	3,537
Average number of persons employed		No.	5,917
Net output per person employed		£	598
Power available :			
Prime movers		H.P.	73,117
Electric motors driven by purchased electricity		,,	11,851

II. Production A.—TOTAL QUANTITY OF WATER SUPPLIED

Water supplied					
To other undertakings For public purposes (e.g., street watering, public baths, etc.) For trade and domestic purposes (including municipal trading	$1,560 \\ 723$				
departments)	67,404				
For purposes not separately distinguished	4,106				
TOTAL	73,793				

B.-VALUE OF WATER SUPPLIED AND WORK DONE FOR CONSUMERS

Water supplied and work done for consumers	Value
Water supplied :	£'000
To other water undertakings	54
For public purposes (e.g., street watering, public baths, etc.) For trade and domestic purposes (including municipal trading	40
departments)	3,989
For purposes not separately distinguished	280
TOTAL	4,363
	Amount charged
Work done for consumers :	AND A REAL PROPERTY AND
Laying and fixing pipes, fixing meters and fittings (exclusive of cost of pipes, meters and fittings)	69
Other work for which a direct charge was made to consumers	12
TOTAL	81
TOTAL VALUE OF WATER SUPPLIED AND WORK DONE FOR CONSUMERS (GROSS OUTPUT)	4,444

C.-VALUE OF CONSTRUCTION AND REPAIR WORK CARRIED OUT BY EMPLOYEES OF WATER UNDERTAKINGS ON WATERWORKS, BUILDINGS, ETC.

Kind of work done	VIII C	Value
and the second se		£'000
Construction, alteration, maintenance and repair of wate	rworks,	
including hydraulic power works :	-	
Reservoirs, wells, aqueducts, conduits, and trunk, distribut	ing and	PERMIT ADMIN
service mains		970
Buildings in connection with the above :	a ten south and	ind inter
New construction (including enlargement of existing build	lings)	23
Repairs and renewals		54
Machinery and plant in connection with above		97
Other work		55
Unclassified work		29
Тотац		1,228

III. Employment

A.-Numbers employed in week ended 18th October, 1930

	Males		Fen	nales	Males and females		
Persons employed	Under 18	All ages	Under 18	All ages	Under 18	All ages	
Operatives Administrative, technical and clerical staff	65 48	4,710 1,083		3 0 125	65 56	4,740 1,208	
Clerical staff Total	113	5,793	. 8	155	121	5,948	

B.—Operatives employed in one week in each month of 1930

July 19	4,854
August 16 September 13 October 18 November 15 December 13	$\begin{array}{r} 4,747\\ 4,774\\ 4,774\\ 4,740\\ 4,871\\ 4,804\end{array}$
	October 18 November 15

IV. Power

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS

and the second			
Power equipment		Ordinarily in use	In reserve or idle
PRIME MOVERS		H.P.	H.P.
Reciprocating steam engines		24,695	17,323
Steam turbines		3,305	1,184
Internal combustion engines :		manager a labor	A Section of the section of
Gas		4,141	1,530
Petrol, kerosene, or other light oils		342	702
Heavy oils		14,189	5,280
Water engines		414	12
Тотац		47,086	26,031
TOTAL OF PRIME MOVERS INSTALLED		73	,117
ELECTRIC GENERATORS		Kw.	Kw.
Driven by		and the second second second	and the second
Reciprocating steam engines		308	205
Steam turbines		320	4
Internal combustion engines :			and the second
Gas		14	4
Petrol, kerosene, or other light oils		4	72
Heavy oils	••••	716	386
Water engines		23	9
TOTAL		1,385	680
TOTAL OF ELECTRIC GENERATORS INSTALLED		2,0)65
ELECTRIC MOTORS		H.P.	H.P.
Driven by		1 000	000
Electricity generated in same works	•••	1,838	609
Purchased electricity		7,088	4,763
TOTAL		8,926	5,372
TOTAL OF ELECTRIC MOTORS INSTALLED		14,2	000

V. Consumption of fuel

	Ki	nd of t	fuel use	ed			Quantity
BER I.			Sec. and		- 27.1	1	Tons
Coal used for power						 	138,581
Coke used for power			1012 · · ·)	۰		 	9,746
						-	B.T.U.
							(Kwhrs.)
Electricity used for al	l purp	oses :-	<u> </u>				, ,000
Generated in same						 	3,733
Purchased						 	15,158
	r	FOTAL	-Elect	tricity		-	18,891

LOCAL AUTHORITIES

I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of water supplied and work done for consumers (Gross output)	£'000	16,793	1,538	18,331
Cost of materials used	"	3,360	236	3,596
Net output	,,	13,433	1,302	14,735
Average number of persons employed	No.	22,181	1,952	24,133
Net output per person employed	£	606	669	611
Power available :			TRENETS IN A	en sa Vista
Prime movers	H.P.	109,613	2,429	112,042
Electric motors driven by purchased electricity	"	28,191	1,635	29,826

II. Production

A.—TOTAL QUANTITY OF WATER SUPPLIED

Water supplied	England and Wales	Scotland	Great Britain
	. 1	fillion galle	ons
To other undertakings	20,133	1,486	21,619
For public purposes (e.g. street watering, public baths, etc.)	5,398	1,838	7,236
For trade and domestic purposes (including muni- cipal trading departments)	288,497	55,903	344,400
For purposes not separately distinguished	21,247	11,626	32,873
Тотац	335,275	70,853	406,128

B.-VALUE OF WATER SUPPLIED AND WORK DONE FOR CONSUMERS

Water supplied and work done for consumers	England and Wales	Scotland	Great Britain	
	£'000	£'000	£'000	
Water supplied :	754	35	789	
For public purposes (e.g. street watering, public baths, etc.)	270	47	317	
For trade and domestic purposes (including municipal trading departments)For purposes not separately distinguished	14,642 909	$1,237 \\ 205$	$15,879 \\ 1,114$	
Тотаг	16,575	1,524	18,099	
Work done for consumers :—	Amount charged			
Laying and fixing pipes, fixing meters, and fittings (exclusive of cost of pipes, meters and fittings)	195	13	208	
Other work for which a direct charge was made to consumers	23	1	24	
Тотац	218	14	232	
TOTAL VALUE OF WATER SUPPLIED AND WORK DONE FOR CONSUMERS (GROSS OUTPUT)	16,793	1,538	18,331	

C.-VALUE OF CONSTRUCTION AND REPAIR WORK CARRIED OUT BY EMPLOYEES OF WATER UNDERTAKINGS ON WATERWORKS, BUILDINGS, ETC.

Kind of work done	England and Wales	Scotland	Great Britain
The second s	£'000	£'000	£'000
Construction, alteration, maintenance, and repair of waterworks, including hydraulic power works :			
Reservoirs, wells, aqueducts, conduits, and trunk, distributing and service mains Buildings in connection with the above :	3,242	413	3,655
New construction (including enlargement of existing buildings)	66	1	67
Repairs and renewals	90	en ann i ann	91
Machinery and plant in connection with above	398	18	416
Other work	40		40
Unclassified work	107	7	114
Тотац	3,943	440	4,383

WATER UNDERTAKINGS (LOCAL AUTHORITIES)

III. Employment

A.—Numbers employed in week ended 18th October, 1930

Powong omployed	Males		Females		Males and females	
Persons employed	Under 18	All ages	Under 18	All ages	Under 18	All ages
England and Wales :	1494 10	-		ų.		
Operatives	206	19,150	2	151	208	19,301
Administrative, etc.*	99	3,059	16	293	115	3,352
Total	305	22,209	18	444	323	22,653
Scotland :			No. of Concession, Name		Service of the	
Operatives	5	1,670		13	5	1,683
Administrative, etc.*	7	256	2	32	9	288
Тотац	12	1,926	2	45	14	1,971
Great Britain :	1 1 1 1 1					
Operatives	211	20,820	2	164	213	20,984
Administrative, etc.*	106	3,315	18	325	124	3,640
TOTAL	317	24,135	20	489	337	24,624

* Administrative, technical and clerical staff.

B.—Operatives employed in one week in each month of 1930

Week	Male	s and fem	nales	Wash	Males and females			
ended	England and Wales	Scotland	Great Britain	Week ended	England and Wales	Scotland	Great Britain	
Jan. 18	18,422	1,571	19,993	July 19	19,037	1,673	20,710	
Feb. 15	18,232	1,643	19,875	Aug. 16	19,129	1,653	20,782	
Mar. 15	18,415	1,724	20,139	Sept. 13	19,270	1,770	21,040	
April 12	18,505	1,637	20,142	Oct. 18	19,301	1,683	20,984	
May 17	18,824	1,601	20,425	Nov. 15	19,164	1,654	20,818	
June 21	18,787	1,742	20,529	Dec. 13	18,860	1,616	20,476	
Averagi	E FOR THI	TWELVE	MONTHS	10 <u>1.</u> 0 <u>1.</u>	18,829	1,664	20,493	

IV. Power

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS

Telephini (England and Wales		Scotland		Great Britain	
Power equipment	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle
PRIME MOVERS	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Reciprocating steam	66 700	16 059	930	770	67,719	17,722
engines Steam turbines	66,789 2,388	16,952 710	950 15	110	2,403	710
Internal combustion engines :—	2,000	,10	10	·	-,100	
Gas Petrol, kerosene, or	4,649	2,406	70		4,719	2,406
other light oils	1,641	649	63	10	1,704	659
Heavy oils	8,356	2,532	54	142	8,410	2,674
Water engines	2,141	395	274	101	2,415	496
Other	5	1 412 1			0	
TOTAL	85,969	23,644	1,406	1,023	87,375	24,667
TOTAL OF PRIME MOVERS INSTALLED	109,	613	2,4	.29	112,042	
ELECTRIC GENERATORS Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam	1 000	1 100	and the second s		1 000	1 100
engines	1,296	1,182			1,296	1,182
Steam turbines Internal combustion engines :—	4				Ŧ	
Gas Petrol, kerosene,	12	—	Carrier - Carrier		12	
or other light oils	109	8	3		112	8_
Heavy oils	1,066	15			1,066	15
Water engines	419	224	88	78	507	302
TOTAL	2,906	1,429	91	78	2,997	1,507
TOTAL OF ELECTRIC GENERATORS INSTALLED	4,3	35	169		4,504	
ELECTRIC MOTORS Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated	de la la la		13.0% 2M	alers in	0.000	7.700
in same works Purchased electricity	2,218 19,772	$1,092 \\ 8,419$	5 733	8 902	$2,223 \\ 20,505$	$1,100 \\ 9,321$
TOTAL	21,990	9,511	738	910	22,728	10,421
TOTAL OF ELECTRIC MOTORS INSTALLED	31,5	01	1,648		33,149	

WATER UNDERTAKINGS (LOCAL AUTHORITIES)

V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
Coal used for power Coke used for power	Tons 356,442 6,604	Tons 6,870 2,194	Tons 363,312 8,798
Electricity used for all purposes :—	B.T.U. (Kwhrs.) '000	B.T.U. (Kwhrs.) '000	B.T.U. (Kwhrs.) '000
Generated in same works Purchased	2,252 32,760	395 2,006	2,647 34,766
TOTAL—Electricity	35,012	2,401	37,413