## 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.

| Particulars | Unit | 1930 |  |  | 1924 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Companies | Local <br> Authorities | Total | Companies | Local Authorities | Total |
| Value of water supplied and work done for consumers (Gross output) ... | £'000 | 4,444 | 18,331 | 22,775 | 3,779 | 15,172 | 18,951 |
| Cost of materials used | „ | 907 | 3,596 | 4,503 | 885 | 2,899 | 3,784 |
| Net output.... ... | ", | 3,537 | 14,735 | 18,272 | 2,894 | 12,273 | 15,167 |
| Average number of persons employed | No. | 5,917 | 24,133 | 30,050 | 5,420 | 23,829 | 29,249 |
| Net output per person employed | £ | 598 | 611 | 608 | 534 | 515 | 519 |
| Power available :Prime movers ... | H.P. | 73,117 | 112,042 | 185,159 | 58,581 | 100,498 | 159,079 |
| Electric motors driven by purchased electricity |  | 11,851 | 12,012 29,826 | 41,677 | 6,844 | 11,312 | 18,156 |
| Number of returns... | No. | 80 | 233 | 313 | 82 | 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

508 PUBLIC UTILITY SERVICES AND GOVERNMENT DEPARTMENTS 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 $£ 1,667,000$, of which those owned by Local Authorities recorded $£ 1,364,000$. The value of the work of construction, etc., done by these small undertakings on their own properties was $£ 294,000$.

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 undertaking (average numbers employed) | Number of | $\begin{aligned} & \text { Gross } \\ & \text { output } \end{aligned}$ | $\begin{gathered} \text { Net } \\ \text { output } \end{gathered}$ |  | Net output per person employed |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | $£^{\prime} 000$ | £'000 | No. | $£$ |
| 11-24 $\ldots$ | 136 75 | 1,652 2,036 | 1,207 | 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 |

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 | $\begin{aligned} & \text { Net } \\ & \text { output } \end{aligned}$ | Average number of persons employed | Net output per person employed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1930 | No. | $£^{\prime} 0000$ | £ ${ }^{\prime} 000$ | No. | £ |
| $1 . . .\left\{\begin{array}{l}1924\end{array}\right.$ | 26 | 5,668 | 4,499 | 6,835 | 658 |
| 2 1930 | 47 | 3,744 | 3,182 | 5,732 | 555 |
| $2 \cdots 1924$ | 45 | 3,243 | 2,575 | 5,188 | 496 |
| 3 ... 1930 | 28 | 2,359 | 1,746 | 3,224 | 542 |
| $3 \quad \cdots 1924$ | 24 | 2,221 | 1,715 | 4,359 | 393 |
| $\{1930$ | 10 | 1,144 | 997 | 1,248 | 799 |
| \{ 1924 | 9 | 861 | 685 | 1,143 | 599 |
| 5 ... 19300 | 18 | 1,817 | 1,123 | 2,673 | 420 |
| $5 \quad \cdots\{1924$ | 21 | 1,573 | 1,308 | 2,030 | 644 |
| $6 \quad \ldots\left\{\begin{array}{l} 1930 \\ 1924 \end{array}\right.$ | 143 | 5,602 3,393 | 4,241 , 273 | 7,863 5,517 | ${ }_{4} 595$ |
| $\cdots \cdots \begin{aligned} & 1924 \\ & 7930\end{aligned}$ | 121 | 3,393 897 | 2,733 689 | 5,517 1,165 | 495 591 |
| . $\{1924$ | 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 |
| $9 . . .\{1924$ | 10 | 847 | 729 | 1,336 | 546 |
| $10 \quad \ldots\left\{\begin{array}{l} 1930 \\ 1924 \end{array}\right.$ | $\begin{aligned} & 21 \\ & 14 \end{aligned}$ | $\begin{aligned} & 675 \\ & 447 \end{aligned}$ | $\begin{aligned} & 562 \\ & 374 \end{aligned}$ | $\begin{aligned} & 959 \\ & 716 \end{aligned}$ | $\begin{aligned} & 586 \\ & 522 \end{aligned}$ |
| Total $\{1930$ | 313 | 22,775 | 18,272 | 30,050 | 608 |
| Total $\{1924$ | 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 |
| :---: | :---: | :---: | :---: |
| Value of water supplied and work done for consumers (Gross output) | £'000 | 225 | 226 |
| Cost-of materials used ... ... ... ... | ,, | 30 | 18 |
| Net output ... ... ... |  | 195 | 208 |
| Average number of persons employed | No. | 446 | 429 |
| Net output per person employed ... | £ | 437 | 485 |
| Power available :- |  |  |  |
| Prime movers ... ... ... ... ... | H.P. | 228 | 616 |
| Electric motors driven by purchased electricity | " | 90 | 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 consumers | 1930 |  | 1924 |
| :---: | :---: | :---: | :---: |
|  | Quantity | Value | Value |
| Water sold to other water undertakings ... | $\begin{array}{\|c\|} \hline \text { Mill. galls. } \\ 76 \end{array}$ | $\begin{array}{r} £^{\prime} 000 \\ 1 \end{array}$ | $\begin{array}{r} £^{\prime} 000 \\ 1 \end{array}$ |
| 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) | - | $3 \dagger$ | $1 \dagger$ |
| Total-Water supplied and work done for consumers | - | 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.
$\dagger$ 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 |
| :---: | :---: | :---: |
|  | £'000 | £'000 |
| Construction, alteration, maintenance and repair of waterworks, including hydraulic power works :- |  |  |
| Reservoirs, wells, aqueducts, conduits, and trunk, distributing and service mains | 58 | 44 |
| Buildings in connection with above :- |  |  |
| New construction      <br> Repairs and renewals $\ldots$ $\ldots$ $\ldots$ $\ldots$ $\ldots$ | 2 | 3 |
| Repairs and renewals $\ldots$.... $\ldots$... Machinery and plant in connection with above $\ldots$... | 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 | $\begin{gathered} \text { Mill. galls. } \\ 1,560 \end{gathered}$ | $\begin{gathered} \text { Mill. galls. } \\ 21,619 \end{gathered}$ | $\begin{gathered} \text { Mill. galls. } \\ 23,179 \end{gathered}$ |
| For public purposes (e.g. street watering, public baths, etc.) | 723 | 7,236 | 7,959 |
| For trade and domestic purposes (including municipal trading departments).. For purposes not separately distinguished | $\begin{array}{r} 67,404 \\ 4106 \end{array}$ | $\begin{array}{r} 344,400 \\ 32,873 \end{array}$ | $\begin{array}{r} 411,804 \\ 36,979 \end{array}$ |
| For purposes not separately distinguishe |  |  |  |
| Total | 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.

| Water supplied and work done for consumers | 1930 |  |  |  |  |  | 1924 <br> Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Companies |  | Local Authorities |  | Total |  |  |
|  | Value | Entries | Value | Entries | Value | Entries | Value |
| Water supplied :- | $£^{\prime} 000$ | No. | £'000 | No. | £'000 | No. | £'000 |
| Water sold to other water undertakings | 54 | 31 | 789 | 103 | 843 | 134 | 748 |
| Water supplied for public purposes (e.g. street watering, public baths, etc.) ... | 40 | 54 | 317 | 144 | 357 | 198 | 432 |
| Water supplied for trade and domestic purposes (including municipal trading departments)* | 3,989 | 68 | 15,879 | 190 | 19,868 | 258 | 17,116 |
| Water supplied for purposes not separately distinguished... | 280 | 12 | $1,114$ | 42 | $1,394$ | 54 | 398 |
| Total | 4,363 | ... | 18,099 | $\ldots$ | 22,462 | $\ldots$ | 18,694 |
| Work done for consumers :- | Amount charged £'000 |  | Amount charged £'000 |  | Amount charged £'000 |  | Amount charged £'000 |
| Laying and fixing pipes, fixing meters and fittings (exclusive of the cost of pipes, meters and fittings) | 69 | 70 | 208 | 190 | 277 | 260 | 257 |
| Other work for which a direct charge was made to consumers... | 12 | 19 | 24 | 35 | $36$ | 54 | $\dagger$ |
| Total value-Water supplied and work done for consumers... | 4,444 | $\ldots$ | 18,331 | $\cdots$ | 22,775 | $\cdots$ | 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.
$\dagger$ 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 $£ 46 \cdot 8$, compared with nearly $£ 42$ in 1924, indicating an increase of about 11 per cent. in the later year. Water was supplied by Local Authorities at an average of $£ 44 \cdot 3$ per million gallons in 1930, and that supplied by Companies averaged $£ 59 \cdot 1$ per million gallons. The average value at
which water was sold in 1930 for the various purposes specified was as under:-

|  |  | By <br> Companies <br> Eper | By Local <br> Authorities <br> £ per |
| :--- | :--- | :--- | :---: | :---: |
| mill. |  |  |  |

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 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1930 | 1924 | 1930 | 1924 | 1930 | 1924 |
| Work of construction, alteration, maintenance and repair on : Reservoirs, wells, aqueducts, conduits, and trunk, distributing and service mains... | £'000 | £'000 | £'000 | £'000 | £'000 | $£^{\prime} 000$ |
|  | 970 | 764 | 3,655 | 3,878 | 4,625 | 4,642 |
|  |  |  |  |  |  |  |
| Buildings in connection with above :- |  |  |  |  |  |  |
| New construction (including enlargement of existing buildings)... |  |  |  |  |  |  |
| Repairs and renewals | $\begin{aligned} & 23 \\ & 54 \end{aligned}$ | \} 71 | 67 91 | $\} 117$ | 145 | \} 188 |
| Machinery and plant in connection with above |  |  |  |  |  |  |
| 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 |

[^0]
## Employment

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

| Persons employed | Males |  | Females |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 18 | $\begin{aligned} & \text { All } \\ & \text { ages } \end{aligned}$ | $\begin{gathered} \text { Under } \\ 18 \end{gathered}$ | $\begin{aligned} & \text { All } \\ & \text { ages } \end{aligned}$ | Under 18 | All <br> ages |
| 1930 Operatives (average for the year) | 271 | 25,012 | 2 | 190 | 273 | 25,202 |
| Administrative, technical and |  |  |  |  |  |  |
| clerical staff (as at 18th October) ... ... ... | 154 | 4,398 | 26 | 450 | 180 | 4,848 |
| Total | 425 | 29,410 | 28 | 640 | 453 | 30,050 |
| 1924 Operatives (average for the year) | 383 | 24,669 | 3 | 222 | 386 | 24,891 |
| Administrative, technical and 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 equipment | 1930 |  |  | 1924 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 ... ... ... | 8,860 | 3,936 | 12,796 | 9,367 | 4,893 | 14,260 |
| Petrol, kerosene, or 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 |


| Power equipment | 1930 |  |  | 1924 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 :Gas | 26 | 4 | 30 | 508 | 69 | 577 |
| Petrol, kerosene, or other light oils $\qquad$ | 116 | 80 | 196 | 44 | 4 | 48 |
| Heavy oils ... | 1,782 | 401 | 2,183 | 406 | 85 | 491 |
| Water engines ... | 530 | 311 | 841 |  | - |  |
| Total ... | 4,382 | 2,187 | 6,569 | 2,169 | 382 | 2,551 |
| Electric motors | H.P. | H.P. | H.P. | H.P. | H.P. | H.P. |
| Electricity generated 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 | 18,156 |
| Total .. | 31,654 | 15,793 | 47,447 | 13,278 | 9,282 | 22,560 |

## Consumption of fuel

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


* 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.
$\dagger$ Including current supplied by an electricity undertaking operated by the Company or Loca! Authority.


## 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 consumers (Gross output) | $£^{\prime} 000$ | 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 | Million gallons |
| :---: | :---: |
| To other undertakings | 1,560 |
| For public purposes (e.g., street watering, public baths, etc.) | 723 |
| For trade and domestic purposes (including municipal trading 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:- <br> To other water undertakings ... <br> For public purposes (e.g., street watering, public baths, etc.) For trade and domestic purposes (including municipal trading departments) ... <br> For purposes not separately distinguished ... | £'000 |
|  | 54 |
|  | 40 |
|  | 3,989 |
|  | 280 |
| Total | 4,363 |
|  | Amount charged |
| Work done for consumers :- <br> Laying and fixing pipes, fixing meters and fittings (exclusive of cost of pipes, meters and fittings) ... <br> Other work for which a direct charge was made to consumers ... |  |
|  | 69 |
|  | 12 |
| Тота⿱ <br> Total value of water supplied and work done for consumers (Gross output) ... | 81 |
|  | 4,444 |

C.-VALUE OF CONSTRUCTION AND REPATR WORK CARRIED OUT BY employees of Water Undertakings on waterworks, buILdings, ETc.

| Kind of work done |  |  |  |  |  |  |  |  |  | Value |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |

## III. Employment

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

| Persons employed | Males |  | Females |  | Males and females |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Under } \\ & 18 \end{aligned}$ | $\begin{gathered} \text { All } \\ \text { ages } \end{gathered}$ | $\begin{array}{\|c} \text { Under } \\ 18 \end{array}$ | $\begin{aligned} & \text { All } \\ & \text { ages } \end{aligned}$ | $\begin{aligned} & \text { Under } \\ & 18 \end{aligned}$ | $\begin{aligned} & \text { All } \\ & \text { ages } \end{aligned}$ |
| Operatives ... | 65 | 4,710 | - | 30 | 65 | 4,740 |
| Administrative, technical and clerical staff | 48 | 1,083 | 8 | 125 | 56 | 1,208 |
| Total .. | 113 | 5,793 | 8 | 155 | 121 | 5,948 |

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

| Week ended |  | Males and females | Week ende |  | Males and females |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 18 | $\ldots$ | 4,574 | July 19 . | $\cdots$ | 4,854 |
| February 15 | $\ldots$ | 4,503 | August 16 ... | $\ldots$ | 4,747 |
| March 15 ... | $\ldots$ | 4,501 | September 13 | $\ldots$ | 4,774 |
| April 12 ... | $\ldots$ | 4,611 | October $18 \ldots$ | $\ldots$ | $4,740$ |
| May 17 ... | $\ldots$ | 4,670 | November 15 | $\ldots$ | $\begin{aligned} & 4,871 \\ & 4,804 \end{aligned}$ |
| June 21 .. | ... | 4,855 |  | $\ldots$ |  |
| Average for the twelve months |  |  | - | $\ldots$ | 4,709 |

## IV. Power

Particulars of Prime movers, electric generators and ELECTRIC MOTORS

V. Consumption of fuel

| Kind of fuel used |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

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) | 14,642 | 1,237 | 15,879 |
| For purposes not separately distinguished ... | 909 | 205 | 1,114 |
| Total | 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 |
| Total ... | 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 | $\begin{aligned} & \text { England } \\ & \text { and } \\ & \text { Wales } \end{aligned}$ | Scotland | Great Britain |
| :---: | :---: | :---: | :---: |
|  | £'000 | £'000 | £'000 |
| Construction, alteration, maintenance, and repair of waterworks, including hydraulic power works :- |  |  |  |
| Reservoirs, wells, aqueducts, conduits, and trunk, distributing and service mains | 3,242 | 413 | 3,655 |
| Buildings in connection with the above :- |  |  |  |
| New construction (including enlargement of existing buildings) |  |  |  |
| Repairs and renewals ... ... ... ... | 90 | 18 | 91 |
| Machinery and plant in connection with above ... | 398 | 18 | 416 |
| Other work ... ... ... ... ... | 40 |  | 40 |
| Unclassified work ... | 107 | 7 | 114 |
| Total ... ... | 3,943 | 440 | 4,383 |

## III. Employment

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

| Persons employed | Males |  | Females |  | Males and females |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Under } \\ & 18 \end{aligned}$ | $\begin{aligned} & \text { All } \\ & \text { ages } \end{aligned}$ | $\begin{aligned} & \text { Under } \\ & 18 \end{aligned}$ | $\begin{gathered} \text { All } \\ \text { ages } \end{gathered}$ | $\begin{aligned} & \text { Under } \\ & 18 \end{aligned}$ | $\begin{gathered} \text { All } \\ \text { ages } \end{gathered}$ |
| England and Wales :Operatives Administrative, etc.* | $\begin{array}{r} 206 \\ 99 \end{array}$ | $\begin{array}{r} 19,150 \\ 3,059 \end{array}$ | 2 16 | $\begin{aligned} & 151 \\ & 293 \end{aligned}$ | $\begin{aligned} & 208 \\ & 115 \end{aligned}$ | $\begin{array}{r} 19,301 \\ 3,352 \end{array}$ |
| Total | 305 | 22,209 | 18 | 444 | 323 | 22,653 |
| Scotland:Operatives Administrative, etc.* | $\begin{aligned} & 5 \\ & 7 \end{aligned}$ | $\begin{array}{r} 1,670 \\ 256 \end{array}$ | - 2 | $\begin{aligned} & 13 \\ & 32 \end{aligned}$ | $\begin{aligned} & 5 \\ & 9 \end{aligned}$ | $\begin{array}{r} 1,683 \\ 288 \end{array}$ |
| Total .. | 12 | 1,926 | 2 | 45 | 14 | 1,971 |
| Great Britain :Operatives ... Administrative, etc.* | $\begin{aligned} & 211 \\ & 106 \end{aligned}$ | $\begin{array}{r} 20,820 \\ 3,315 \end{array}$ | 2 18 | $\begin{aligned} & 164 \\ & 325 \end{aligned}$ | $\begin{aligned} & 213 \\ & 124 \end{aligned}$ | $\begin{gathered} 20,984 \\ 3,640 \end{gathered}$ |
| 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 ended | Males and females |  |  | Week ended | Males and females |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | England and Wales | Scotland | Great Britain |  | England and Wales | Scotland | Great <br> 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 |
| Average for the twelve months |  |  |  | ... ... | 18,829 | 1,664 | 20,493 |

## IV. Power

Particulars of prime movers, electric generators and ELECTRIC MOTORS

| Power equipment | England and Wales |  | Scotland |  | Great Britain |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 engines | 66,789 | 16,952 | 930 | 770 | 67,719 | 17,722 |
| Steam turbines ... | 2,388 | 710 | 15 | - | 2,403 | 710 |
| Internal combustion engines :Gas .. | 4,649 | 2,406 | 70 | - | 4,719 | 2,406 |
| Petrol, kerosene, or 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 | - | - | - | 5 | - |
| Total . | 85,969 | 23,644 | 1,406 | 1,023 | 87,375 | 24,667 |
| Total of prime movers installed | 109,613 |  | 2,429 |  | 112,042 |  |
| Electric generators Driven by | Kw. | Kw. | Kw. | Kw. | Kw. | Kw. |
| Reciprocating steam engines ... ... | 1,296 | 1,182 | - | - | 1,296 | 1,182 |
| Steam turbines | 4 | - | - | - | 4 | - |
| Internal combustion engines :- <br> Gas | 12 | - | - | - | 12 | - |
| Petrol, kerosene, or other light oils | 109 | 8 | 3 | - | 112 | 8 |
| Heary oils $\ldots$ | 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 | 4,335 |  | 169 |  | 4,504 |  |
| Electric motors Driven by | H.P. | H.P. | H.P. | H.P. |  | H.P. |
| Electricity generated in same works ... | 2,218 | 1,092 | 5 | 8 | 2,223 | 1,100 |
| Purchased electricity | 19,772 | 8,419 | 733 | 902 | 20,505 | 9,321 |
| Total ... | 21,990 | 9,511 | 738 | 910 | 22,728 | 10,421 |
| Total of electric MOTORS INSTALLED | 31,501 |  | 1,648 |  | 33,149 |  |

## V. Consumption of fuel

| Kind of fuel used | England and Wales | Scotland | Great Britain |
| :---: | :---: | :---: | :---: |
| $\begin{array}{llll}\text { Coal used for power } & \text {... ... } \\ \text { Coke used for power } & \text {... }\end{array}$ | $\begin{array}{r} \text { Tons } \\ 356,442 \\ 6,604 \end{array}$ | $\begin{gathered} \text { Tons } \\ 6,870 \\ 2,194 \end{gathered}$ | $\begin{array}{r} \text { Tons } \\ 363,312 \\ 8,798 \end{array}$ |
| Electricity used for all purposes :Generated in same works Purchased | B.T.U. $\begin{gathered} \text { (Kw.-hrs.) } \\ \text { '000 } \\ 2,252 \\ 32,760 \end{gathered}$ | $\begin{gathered} \text { B.T.U. } \\ \text { (Kw.-hrs.) } \\ \text { '000 } \\ 395 \\ 2,006 \end{gathered}$ | $\begin{gathered} \text { B.T.U. } \\ \text { (Kw.-hrs.) } \\ \text { '000 } \\ 2,647 \\ 34,766 \end{gathered}$ |
| Total-Electricity ... ... ... | 35,012 | 2,401 | 37,413 |


[^0]:    * Not recorded separately.

