

## THE ICE TRADE

*Note.*—For information regarding the scope of the Census, instructions given to firms 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

This trade comprises firms that were engaged in the manufacture of ice for sale.

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons :—

Particulars	Unit	1930	1924
Value of goods made (Gross output) ... ..	£'000	1,123	1,376
Cost of materials used ... ..	,,	267	342
Net output ... ..	,,	856	1,034
Average number of persons employed ... ..	No.	1,933	2,254
Net output per person employed ... ..	£	443	459
Power available* :—			
Prime movers ... ..	H.P.	12,817	16,385
Electric motors driven by purchased electricity	,,	20,747	13,250
Number of returns ... ..	No.	65	75
Number of establishments ... ..	,,	104	†

\* See page 163.

† Not available.

**Deficiencies in 1930 aggregates.**—The aggregate number of persons employed in 1930 by firms that stated that they employed not more than ten persons on the average was 785, the corresponding figure for 1924 being 562\*. The value of the gross output of the small firms in 1924 was £281,000\*, and particulars of the classes of goods included in this figure are given below :—

	£'000
Ice made for sale ... ..	265
	(136,000 tons)
Ice cream ... ..	14
Other goods made ... ..	2
	—
TOTAL ... ..	281
	—

The quantity of ice made by the small firms in 1924 was between 10 and 11 per cent. of the total recorded production in that year.

\* These figures are inclusive of particulars regarding the few firms in Northern Ireland, for which separate information is not available for publication.



In addition, 7 firms to which schedules were sent at the 1930 Census and an equal number at that of 1924 furnished no information; these firms either had small businesses or had ceased productive operations before the end of the censal year.

**Size of firms.**—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 firm (average numbers employed)	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24 ... ..	43	356	268	669	400
25-49 ... ..	12	234	182	419	436
50-199 ... ..	10	533	406	845	481
TOTAL ... ..	65	1,123	856	1,933	443

**Regional distribution.**—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the principal areas\* of Great Britain in which firms in this trade are situated:—

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	219	181	255	710
	1924	11	390	314	493	637
2 ...	1930	5	123	93	185	501
	1924	7	145	109	213	512
3 ...	1930	5	121	89	186	481
	1924	4	30	20	89	225
5 ...	1930	4	26	20	62	314
	1924	4	44	33	86	384
6 ...	1930	26	381	284	827	343
	1924	26	463	339	912	372
4, 7 and 8	1930	8	103	77	154	503
	1924	12	135	98	219	447
9 and 10	1930	9	150	112	264	426
	1924	11	169	121	242	500
TOTAL	1930	65	1,123	856	1,933	443
	1924	75	1,376	1,034	2,254	459

\* For particulars see page xviii.

**Northern Ireland.**—Owing to the risk of disclosing particulars relating to individual firms, separate details of the production of ice in Northern Ireland were not published either for 1930 or for 1924.

### Production

**Principal products.**—The following table shows the quantity and value of ice made in 1930 and 1924 for sale. Except for 1,000 tons, valued at £1,000 (5 entries) included in the figures for unclassified ice, the whole of the output shown for 1930 was returned on schedules for the Ice Trade.

Ice made for sale	1930			1924	
	Quantity	Value	Entries	Quantity	Value
	Th. tons	£'000	No.	Th. tons	£'000
For fishing ... ..	872	516	25	1,149	1,382
For retail and domestic purposes	201	363	45		
For other purposes ... ..	43	66	11		
Not separately distinguished	100	177	11		
TOTAL—PRINCIPAL PRODUCTS	1,216	1,122	...	1,149	1,382

Firms that made ice for their own use, e.g., for cold storage or fish preserving, were instructed to exclude all ice so used from their statements of output. Ice purchased and re-sold in the same condition as received, or merely cut into blocks, was also excluded.

**Prices.**—The average selling values of ice in 1930 and 1924, as calculated from the Census returns, are shown in the following table:—

Kind of ice	Average value		1930 as a percentage of 1924
	1930	1924	
	s. per ton	s. per ton	Per cent.
For fishing ... ..	11·8	24·0	77·1
For retail and domestic purposes	36·0		
For other purposes ... ..	31·0		
Not separately distinguished ... ..	35·5		

**Volume of production in 1930 and 1924.**—The following table compares the volume of production of ice in 1930 and 1924:—



Kind of ice	Total production			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	Per cent.
For fishing ... ..	£'000 516	} 1,382	1,066	105
For retail and domestic purposes ...	363			
For other purposes ... ..	66			
Not separately distinguished ...	177			
<b>TOTAL</b> ... ..	1,122	1,382	1,066	105

**Exports and retained imports.**—The retained imports of ice in 1930 amounted to 4,200 tons and in 1924 to 10,400 tons. The domestic exports are not separately distinguished in the trade returns of the United Kingdom.

**Other products.**—In addition to the output shown in the table of principal products on page 161, firms that made their returns on schedules for the Ice Trade recorded an output of ice cream valued at £2,000 in 1930 and £8,000 in 1924. This product is dealt with in the report on the Bread and Biscuit Trades (page 53), in which trade the principal output was recorded.

### Employment and Wages

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

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
	<b>1930</b>					
Operatives (average for the year)	15	1,644	—	2	15	1,646
Administrative, technical and clerical staff (as at 18th October) ... ..	12	222	5	65	17	287
<b>TOTAL</b> ... ..	27	1,866	5	67	32	1,933
<b>1924</b>						
Operatives (average for the year)	50	1,942	—	4	50	1,946
Administrative, technical and clerical staff (as at 18th October) ... ..	16	244	8	64	24	308
<b>TOTAL</b> ... ..	66	2,186	8	68	74	2,254

**Wages.**—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 18 and 19.

### 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
<b>PRIME MOVERS</b>						
Reciprocating steam engines ... ..	H.P. 6,801	H.P. 1,162	H.P. 7,963	H.P. 8,505	H.P. 1,239	H.P. 9,744
Internal combustion engines:—						
Gas ... ..	2,927	850	3,777	5,551	787	6,338
Petrol, kerosene, or other light oils ...	—	—	—	13	8	21
Heavy oils ... ..	663	37	700	232	—	232
Water engines ... ..	127	—	127	—	—	—
Other prime movers...	250	—	250	—	—	—
<b>TOTAL</b> ... ..	10,768	2,049	12,817	14,351	2,034	16,385
<b>ELECTRIC GENERATORS</b>						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ... ..	604	89	693	1,280	104	1,384
Internal combustion engines:—						
Gas ... ..	342	120	462	528	85	613
Heavy oils ... ..	112	—	112	10	—	10
<b>TOTAL</b> ... ..	1,058	209	1,267	1,818	189	2,007
<b>ELECTRIC MOTORS</b>						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works ...	1,701	74	1,775	1,286	102	1,388
Purchased electricity	18,025	2,722	20,747	11,520	1,730	13,250
<b>TOTAL</b> ... ..	19,726	2,796	22,522	12,806	1,832	14,638

The particulars for both years include the power capacity required by certain ice manufacturers for their own cold storage purposes and are therefore in excess of the power used or available for the manufacture of ice for sale. It is not possible to determine what proportion of the power recorded was required only for the production of ice for sale in either year.



## Consumption of fuel

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

Kind of fuel used	For power (driving engines)	For other purposes (so far as recorded)
	Tons	Tons
Coal... ..	48,907	458*
Coke ... ..	—	275*
		B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes:—		
Generated in same works ... ..		2,038
Purchased ... ..		39,448
TOTAL—Electricity ... ..		41,486

\* These figures were recorded by firms representing 73·7 per cent. of the net output of the whole trade.

## TABLES

## I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of goods made (Gross output) ...	£'000	973	150	1,123
Cost of materials used ... ..	"	229	38	267
Net output ... ..	"	744	112	856
Average number of persons employed...	No.	1,669	264	1,933
Net output per person employed ...	£	446	426	443
Power available:—				
Prime movers ... ..	H.P.	11,643	1,174	12,817
Electric motors driven by purchased electricity ... ..	"	17,213	3,534	20,747

## II. Production

Kind of goods made	Unit	England and Wales	Scotland	Great Britain
Ice made for sale:—				
For fishing ... ..	<i>Th. tons</i>	727	145	872
	£'000	431	85	516
For retail and domestic purposes ...	<i>Th. tons</i>	162	39	201
	£'000	301	62	363
For other purposes ... ..	<i>Th. tons</i>	43	—	43
	£'000	66	—	66
Not separately distinguished ...	<i>Th. tons</i>	96	3	99
	£'000	173	3	176
Ice cream ... ..	£'000	2	—	2
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT) ... ..	£'000	973	150	1,123



## III. Employment

## A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930

Persons employed	Males		Females		Males and females	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
<i>England and Wales—</i>						
Operatives ... ..	15	1,427	—	—	15	1,427
Administrative, etc.*	9	199	5	47	14	246
TOTAL ... ..	24	1,626	5	47	29	1,673
<i>Scotland—</i>						
Operatives ... ..	—	203	—	2	—	205
Administrative, etc.*	3	23	—	18	3	41
TOTAL ... ..	3	226	—	20	3	246
<i>Great Britain—</i>						
Operatives ... ..	15	1,630	—	2	15	1,632
Administrative, etc.*	12	222	5	65	17	287
TOTAL ... ..	27	1,852	5	67	32	1,919

\* 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 Britain
Jan. 18 ...	1,344	205	1,549	July 19 ...	1,520	257	1,777
Feb. 15 ...	1,338	203	1,541	Aug. 16 ...	1,526	250	1,776
March 15 ...	1,347	204	1,551	Sept. 13 ...	1,514	246	1,760
April 12 ...	1,360	208	1,568	Oct. 18 ...	1,427	205	1,632
May 17 ...	1,427	235	1,662	Nov. 15 ...	1,391	204	1,595
June 21 ...	1,508	252	1,760	Dec. 13 ...	1,375	203	1,578
AVERAGE FOR THE TWELVE MONTHS ...					1,423	223	1,646

## 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
<b>PRIME MOVERS</b>						
Reciprocating steam engines ... ..	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Internal combustion engines:—						
Gas ... ..	6,139	1,087	662	75	6,801	1,162
Heavy oils ... ..	2,927	790	—	60	2,927	850
Water engines ... ..	663	37	—	—	663	37
Other ... ..	—	—	127	—	127	—
TOTAL ... ..	9,729	1,914	1,039	135	10,768	2,049
TOTAL OF PRIME MOVERS INSTALLED	11,643		1,174		12,817	
<b>ELECTRIC GENERATORS</b>						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ... ..	572	89	32	—	604	89
Internal combustion engines:—						
Gas ... ..	342	120	—	—	342	120
Heavy oils ... ..	112	—	—	—	112	—
TOTAL ... ..	1,026	209	32	—	1,058	209
TOTAL OF ELECTRIC GENERATORS INSTALLED	1,235		32		1,267	
<b>ELECTRIC MOTORS</b>						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works ...	1,686	74	15	—	1,701	74
Purchased electricity	14,550	2,663	3,475	59	18,025	2,722
TOTAL ... ..	16,236	2,737	3,490	59	19,726	2,796
TOTAL OF ELECTRIC MOTORS INSTALLED	18,973		3,549		22,522	



## V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
Coal used for power ... ..	Tons 43,772	Tons 5,135	Tons 48,907
Electricity used for all purposes :—	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Generated in same works ... ..	2,035	3	2,038
Purchased ... ..	31,762	7,686	39,448
TOTAL—Electricity ... ..	33,797	7,689	41,486