

THE TINPLATE 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 wholly or mainly in the manufacture of tinned and terne plates and sheets. As the trade is confined to England and Wales, the summary table (I) and the tables showing details of power equipment (IV) and coal, coke and electricity used (V) are not appended to this report. The whole of this information is available in the tables given in the report itself.

The following table shows the main results of the Censuses of 1930 and 1924.* All firms in this trade employed more than ten persons in both years.

Particulars	Unit	1930	1924
Value of goods made (Gross output)	£'000	15,693	22,557
Cost of materials used	,,	10,605	16,185
Net output	,,	5,088	6,372
Average number of persons employed	No.	25,271	27,968
Net output per person employed	£	201	228
Power available :—			
Prime movers	H.P.	109,220	104,635
Electric motors driven by purchased electricity	,,	15,543	4,578
Number of returns	No.	68	84
Number of establishments	,,	77	†

† Not available.

* The figures for 1924 include returns made by certain firms manufacturing black plates but not tinned or terne plates, the value of their gross output being £915,000 and the average number of their employees about 1,170. These firms were assigned to the Iron and Steel (Smelting and Rolling) Trade at the Census of 1930.

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.	£
11-199 ...	19	1,701	542	2,928	185
200-299 ...	18	2,461	838	4,237	198
300-399 ...	9	1,926	639	3,103	206
400-499 ...	9	2,552	840	4,095	205
500-749 ...	8	3,392	1,126	5,258	214
750 and over ...	5	3,661	1,103	5,650	195
TOTAL ...	68	15,693	5,088	25,271	201

Regional distribution.—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the principal areas* of England and Wales 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.	£
7 ...	1930 59	14,288	4,604	22,856	201
	1924 69	19,776	5,468	24,484	223
1, 5, 6 and 8	1930 9	1,405	484	2,415	200
	1924 15	2,781	904	3,484	259
TOTAL	1930 68	15,693	5,088	25,271	201
	1924 84	22,557	6,372	27,968	228

Northern Ireland.—No output of tinned plates and sheets was returned by firms in Northern Ireland in 1930 or 1924.

Production

Total make of black plates.—Firms that made returns on schedules for the Tinplate Trade and the Iron and Steel (Smelting and Rolling) Trade were required to state for each of the years 1930 and 1924 the total quantity of *black plates*† rolled by them,

* For particulars see page xviii.

† Specified as "up to 54 inches by 28 inches".

whether subjected to further process in their works or not. The total quantity recorded for 1930 by firms in both trades was 798,500 tons, of which 720,900 tons were returned on schedules for the Tinplate Trade; the corresponding figures recorded at the 1924 Census were 821,700 tons and 784,300 tons respectively.

Exports and retained imports of black plates in 1930 and 1924 were as follows :—

	1930	1924
	Th. tons	Th. tons
Exports ...	22.3	44.4
Retained imports ...	11.9	6.7

The quantity of black plates available for use in the United Kingdom was thus 788,100 tons in 1930 and 784,000 tons in 1924.

Firms that made returns on schedules for the Tinplate Trade also recorded a total make of *black sheets* amounting to 35,300 tons for 1930 and 80,400 tons for 1924. The total production of black sheets is dealt with in the report on the Iron and Steel (Smelting and Rolling) Trade (see page 37).

Output sold or added to stock.—The following table shows the quantity and value of the principal products of the Tinplate Trade in 1930 and 1924. For both years the whole of the output of tinned and terne plates and sheets was returned on schedules for the Tinplate Trade. The figures for 1930 in respect of black plates include 69,400 tons, valued at £791,000 and, for 1924, 36,200 tons, valued at £378,000, returned on schedules for the Iron and Steel (Smelting and Rolling) Trade (see page 45).

Kind of goods	1930			1924	
	Quantity	Value	Entries	Quantity	Value
Black plates (up to 54 inches by 28 inches) ...	Th. tons	£'000	No.	Th. tons	£'000
	118.5	1,386	63	144.9	2,196
Tinned plates* ...	692.5	13,277	59	733.1	17,721
Tinned sheets ...	17.8	381	5	20.7	609
Terne sheets ...	6.0	102	5		
Terne plates ...	23.0	374	9	24.9	606
TOTAL—Tinned and terne plates and sheets ...	739.3	14,134	...	778.7	18,936
TOTAL—PRINCIPAL PRO- DUCTS ...	857.8	15,520	...	923.6	21,132

* Including for both years a small output of "Tinned plates, sheets and strips, shaped, decorated, printed, etc. for boxes and other containers".

Prices.—The average selling values of black plates and of tinned and terne plates and sheets in 1930 and 1924, as calculated from the Census returns, are shown in the following table:—

Kind of goods	Average value		1930 as a percentage of 1924
	1930	1924	
	£ per ton	£ per ton	Per cent.
Black plates	11.7	15.2	77.0
Tinned plates*	19.2	24.2	79.3
Tinned sheets	21.4	20.3	69.0
Terne sheets	17.1		
Terne plates	16.2	24.3	66.7

* See footnote to table on page 81.

Volume of production in 1930 and 1924.—The following table compares the volume of production of black plates and of tinned and terne plates and sheets in 1930 and 1924:—

Kind of goods	Total production			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	Per cent.
	£'000	£'000	£'000	
Black plates... ..	1,386	2,196	1,691	82
Tinned plates*	13,277	17,721	14,047	95
Tinned and terne sheets	483	609	421	115
Terne plates... ..	374	606	404	92
TOTAL	15,520	21,132	16,563	94

* See footnote to table on page 81.

Production, exports and imports.—The following table shows, in relation to production, the quantities of black plates and of tinned and terne plates and sheets exported from the United Kingdom in 1930 and 1924, together with the quantities imported and retained:—

Kind of goods	Production	Exports	Proportion of production exported	Retained imports	Available for use in the United Kingdom
					Th. tons
	Th. tons	Th. tons	Per cent.	Th. tons	Th. tons
Black plates, under $\frac{1}{8}$ in. thick ...	1930	22.3	2.8	11.9	788.1
	1924	44.4	5.4	6.7	784.0
Tinned plates	1930	496.3	71.7	0.1	196.3
	1924	540.1	73.7	0.9	193.9
Tinned sheets 1930	17.8	1.9	10.7	†	15.9
Terne sheets... 1930	6.0	0.5	8.3	—	5.5
Tinned and terne sheets	1930	2.4	10.1	†	21.4
	1924	4.9	23.7	†	15.8
Terne plates...	1930	9.5	41.3	—	13.5
	1924	10.3	41.4	†	14.6

* See footnote to table on page 81.

† Less than 50 tons.

Other products.—In addition to the output shown in the table of principal products on page 81, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Tinplate Trade. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods	1930		1924	
	Quantity	Value	Quantity	Value
	Th. tons	£'000	Th. tons	£'000
Black sheets (over 54 inches by 28 inches)	25.4	330	53.3	923
Other manufactures (including galvanised sheets) ... ..	...	19	...	185
	B.T.U. (kw.-hrs.) '000			
Electricity supplied	9,882	23	...	4
TOTAL ... ..	...	372	...	1,112

Waste products sold.—The following sales of manufacturers' scrap and other waste products were recorded for 1930 and 1924 :—

Kind of scrap	1930		1924	
	Quantity	Value	Quantity	Value
	Th. tons	£'000	Th. tons	£'000
Iron and steel scrap (shearings, etc.)	193·1	528	201·1	609
Tin dross, terne dross, etc. ...	1·7	62	...	82
Other metal scrap ... ..	...	2	—	—
TOTAL ... ..	...	592	...	691

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
1930						
Operatives (average for the year)	2,376	21,659	650	2,755	3,026	24,414
Administrative, technical and clerical staff (as at 18th October)	53	794	4	63	57	857
TOTAL	2,429	22,453	654	2,818	3,083	25,271
1924						
Operatives (average for the year)	3,778	23,313	1,260	3,785	5,038	27,098
Administrative, technical and clerical staff (as at 18th October)	88	796	5	74	93	870
TOTAL	3,866	24,109	1,265	3,859	5,131	27,968

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
PRIME MOVERS	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines	83,006	6,494	89,500	89,810	4,708	94,518
Steam turbines	11,266	6,333	17,599	6,066	2,666	8,732
Internal combustion engines :—						
Gas	36	45	81	45	—	45
Petrol, kerosene, or other light oils	18	—	18	55	15	70
Heavy oils	—	100	100	—	—	—
Water engines	1,810	100	1,910	1,170	100	1,270
Other prime movers ...	12	—	12	—	—	—
TOTAL	96,148	13,072	109,220	97,146	7,489	104,635
ELECTRIC GENERATORS	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by						
Reciprocating steam engines	4,980	3,501	8,481	4,375	1,347	5,722
Steam turbines	9,200	3,750	12,950	4,500	2,000	6,500
Internal combustion engines :—						
Gas	20	36	56	38	—	38
Petrol, kerosene, or other light oils	3	—	3	—	—	—
Heavy oils	—	75	75	—	—	—
Water engines	30	—	30	—	—	—
TOTAL	14,233	7,362	21,595	8,913	3,347	12,260
ELECTRIC MOTORS	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by						
Electricity generated in same works ...	17,408	1,025	18,433	10,218	1,059	11,277
Electricity generated in other works under same ownership	3,788	293	4,081	1,525	125	1,650
Purchased electricity	14,356	1,187	15,543	4,438	140	4,578
TOTAL	35,552	2,505	38,057	16,181	1,324	17,505

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
	Tons	Tons
Coal	382,734	352,312
Coke	—	66
		B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes:—		
Generated in same works		22,110
Generated in other works under same ownership		9,920
Purchased		15,994
TOTAL—Electricity		48,024

TABLES

Note.—The following particulars relate to England and Wales, there being no production in Scotland.

I. Summary of results (see page 79)

II. Production

A.—TOTAL MAKE OF BLACK PLATES AND BLACK SHEETS, AS RETURNED ON SCHEDULES FOR THE TINPLATE TRADE

	Tons
Black plates (up to 54 ins. by 28 ins.)	720,900
Black sheets (over 54 ins. by 28 ins.)	35,300

B.—OUTPUT SOLD OR ADDED TO STOCK

Goods sold or added to stock	Quantity	Selling value
	Th. tons	£'000
Tinned plates*	692.5	13,277
Tinned sheets	17.8	381
Terne sheets	6.0	102
Terne plates	23.0	374
Total—Tinned and terne plates and sheets...	739.3	14,134
Black plates (up to 54 ins. by 28 ins.)	49.1	595
Black sheets (over 54 ins. by 28 ins.)	25.4	330
Iron and steel scrap (shearings, etc.)	193.1	528
Tin dross, terne dross, etc.	1.7	62
Other metal scrap ... ..	...	2
Other manufactures (including galvanised sheets) ... ..	...	19
	B.T.U. (Kw.-hrs.) '000	
Electricity supplied	9,882	23
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT)	...	15,693

* See footnote to table on page 81.

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
Operatives	2,351	21,432	643	2,726	2,994	24,158
Administrative, technical and clerical staff	53	794	4	63	57	857
TOTAL	2,404	22,226	647	2,789	3,051	25,015

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1930

Week ended	Males and females	Week ended	Males and females
January 18 ...	24,968	July 19	25,178
February 15 ...	23,974	August 16	22,146
March 15	24,731	September 13 ...	22,795
April 12	27,205	October 18	24,158
May 17	26,579	November 15 ...	21,163
June 21	26,098	December 13 ...	23,979
AVERAGE FOR THE 12 MONTHS			24,414

IV. Power (see page 85)

V. Consumption of fuel (see page 86)