

THE EXPLOSIVES AND FIREWORKS TRADE

INTRODUCTORY

This trade comprises firms that were engaged wholly or mainly in the manufacture of explosives and fireworks.

Particulars of the production of explosives and ammunition at Government Ordnance Factories will be dealt with in Part IV of the Report and are not included in this report.

Table I A.—General summary

Particulars	1935	1934	1933	1930	1924
	£'000	£'000	£'000	£'000	£'000
Value of products (Gross output)...	5,566	4,920	4,870	4,998	5,306
Cost of materials, fuel and electricity used	2,236	2,011	1,978	2,151	2,503
Amount paid for work given out...	19	—	—	—	—
Net output	3,311	2,909	2,892	2,847	2,803
Average number of persons employed	9,870	8,990	8,966	8,697	8,553
	£	£	£	£	£
Net output per person employed...	335	324	323	327	328
	No.	No.	No.	No.	No.
Number of returns	41	}	*	44	41
Number of establishments...	45	}	*	48	}

* Not available.

Table I B.—Firms employing not more than ten persons on the average

Particulars	1935	1930	1924
	No.	No.	No.
Number of returns received	10	7	10
Average number of persons employed :—			
Males	24	9	39
Females	28	30	44
TOTAL	52	39	83
Number of firms not making returns	—	3	5

In 1924 the value of the gross output of the small firms making returns was 0.4 per cent. of the total.

Table II.—Size of establishments in 1935

Size of establishment (average number employed)	Number of establishments	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	10	90	51	185	277
25-49	6	52	30	198	149
50-99	10	348	181	740	245
100-199... ..	10	790	402	1,352	297
200 and over	9	4,286	2,647	7,395	358
TOTAL	45	5,566	3,311	9,870	335

Table III.—Particulars of output, etc., in each of the principal areas of the United Kingdom

Area*	Number of establishments†	Gross output	Net output	Number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
I and 8 ... 1935	14	472	266	1,215	219
2, 4 and II ... 1935	8	465	222	574	386
3... 1935	9	402	243	1,011	240
6 and 10 ... 1935	4	197	102	370	277
Other areas ... 1935	10	4,030	2,478	6,700	370
TOTAL ...	{ 1935	5,566	3,311	9,870	335
	{ 1930	4,998	2,847	8,697	327

* For particulars see page xviii.

† Number of returns for 1930.

Table IV.—No sub-divisions of this trade have been distinguished.**PRODUCTION****Table V.—Output of principal products**

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
High explosives and propellant powders ...	Th. cwts. 386.0	£'000 1,770	No. 10	Th. cwts. 372.5	£'000 1,701
Blasting powder ...	152.0	391	8	131.5	343
Small arms ammunition for military or sporting purposes (including empty cartridge cases):—					
Returned by number ...	Thous. 333,872	993	18	Thous. 291,680	859
Returned by weight ...	Th. cwts. 65.7	65	7	Th. cwts. 68.5	62
Fuses and blasting accessories (including detonators, cables, etc.) ...	119.4	1,345	15	93.8	1,192
Explosives and ammunition, not elsewhere specified ...	...	1,159	16	...	812*
Rockets and other pyrotechnic products ...	...	330	14	...	238
Work done for the trade† ...	...	9‡	1	...	...
TOTAL — PRINCIPAL PRODUCTS ...	...	6,062	...	...	5,207

* Corrected figure.

† So far as recorded separately.

‡ Amount received.

The figures shown in the preceding table include the following output recorded by firms whose returns were made on schedules for other trades and are not, therefore, included in Table I A.

Kind of output	1935			1934	
	Quantity	Value	Entries	Quantity	Value
	Th. cwts.	£'000	No.	Th. cwts.	£'000
High explosives and propellant powders ...	0.7	5	1	0.6	4
Small arms ammunition for military or sporting purposes (including empty cartridge cases) ...	Thous. 22,327	145	15	Thous. 16,436	105
Fuses and blasting accessories (including detonators, cables, etc.) ...	Th. cwts. 62.9	62	5	Th. cwts. 65.0	58
Explosives and ammunition, not elsewhere specified ...	2.8	125	5	3.4	171
TOTAL ...	...	678	5	...	474
TOTAL ...	...	1,015	...	...	812

Table VI.—Average values of goods produced, exported and imported

Kind of goods	Production (at factory)			Exports (f.o.b.)		Imports (c.i.f.)	
	Average value		1935 as a percentage of 1934	Average value		Average value	
	1935	1934		1935	1934	1935	1934
High explosives and propellant powders ...	£ per cwt. 4.59	£ per cwt. 4.57	Per cent. 100.5	£ per cwt. 5.73	£ per cwt. 5.86	£ per cwt. 7.87	£ per cwt. 4.66
Blasting powder ...	2.57	2.61	98.6	3.18	3.13	2.03	1.94
Safety fuses ...	7.06	7.13	98.9	5.79	6.03	6.79	7.04
Small arms ammunition:—							
Military ammunition:—							
Loaded cartridges...	£ per thous. 5.75	£ per thous. 5.98	96.1	£ per thous. 3.31	£ per thous. 4.45	...	...
Sporting ammunition:—							
Loaded cartridges...	2.69	2.68	100.4	2.17	2.34	0.77	0.77
Empty cartridge cases ...	1.77	1.90	93.6	1.69	1.70	1.12	1.27

Table VII.—Volume of Production, 1924-1935

Kind of output	Total production			Production index (1935 = 100)			
	1935 as returned	1934		1924	1930	1933	1934
		As returned	At 1935 average values				
High explosives and propellant powders ...	£'000	£'000	£'000	Per cent.	Per cent.	Per cent.	Per cent.
Small arms ammunition (including empty cartridge cases) ...	2,161	2,044	2,057	76	96	86	95
Fuses and blasting accessories (including detonators, cables, etc.) ...	1,058	921	935		69	107	88
Explosives and ammunition, not elsewhere specified ...	1,345	1,192	1,131	76	104	89	84
Rockets and other pyrotechnic products ...	1,159	812	851		74	86	73
Work done for the trade	330	238	237	...	70	72	72
TOTAL ...	9	...	...	...	...	...	...
TOTAL ...	6,062	5,207	5,211	76	87	89	86

Table VIII.—Production in relation to Exports and Imports

Kind of goods	Production	Exports	Proportion of production exported	Retained imports	Available for use in the United Kingdom	Share of home market held by British goods	
							Th. cwts.
High explosives and propellant powders ...	1935	386.0	129.4	33.5	1.4	258.0	99.5
	1934	372.5	108.6	29.2	4.0	267.9	98.5
Blasting powder...	1935	152.0	14.4	9.5	5.9	143.5	95.9
	1934	131.5	9.5	7.2	4.3	126.3	96.6
Small arms ammunition (including empty cartridge cases)—	Value (at factory)	Value (f.o.b.)		Value (c.i.f.)			
	£'000	£'000	£'000				
Fuses and blasting accessories (including detonators, cables, etc.)—	1935	1,058	389	...	44	...	...
	1934	921	393	...	39	...	...
Rockets and other pyrotechnic products—	1935	1,345	595	...	5	...	...
	1934	1,192	489	...	7	...	...
	1935	330	20	...	1	...	...
	1934	238	14	...	1	...	...

Table IX.—Other output of the Explosives and Fireworks Trade

The value of the gross output of the firms whose returns were made on schedules for the Explosives and Fireworks Trade was £5,566,000 in 1935 and £4,920,000 in 1934, of which £5,047,000 in 1935 and £4,395,000 in 1934 consisted of products included in Table V. Particulars of the remaining items are shown below.

Kind of output	1935	1934
Sulphuric and other acids ...	£'000	£'000
Industrial nitro-cellulose and other chemical products ...	60	80
Other goods ...	431	429
	28	16
TOTAL ...	519	525

MATERIALS AND FUEL

Table X A.—Materials, fuel and electricity purchased and used

Kind of materials, etc.	1935		1934	
	Quantity	Cost	Quantity	Cost
Nitrate of ammonia ...	Th. cwts.	£'000	Th. cwts.	£'000
Nitrate of soda ...	114.1	103	67.5	66
Metallic powders (bronze, aluminium, etc.)	139.6	54	}	}
	2.1	13		
Mercury ...	Th. lbs.	14		
Fuel and electricity used for all purposes:—				
Coal ...	Th. tons	75	}	}
Coke ...	103.1	3		
Heavy fuel oil ...	Th. galls.	1		
Purchased electricity ...	Th. B.T.U. (Kw.-hrs.)	28		
All other purchased materials and fuel	13,191	1,945		
TOTAL ...	...	2,236	...	2,011

Table X B.—Consumption of coal, coke and electricity in 1935 and 1930

Kind of fuel	1935	1930
Coal ...	Th. tons	Th. tons
Coke ...	103.1	57.4
	2.2	1.0
Electricity:—	Th. B.T.U. (Kw.-hrs.)	Th. B.T.U. (Kw.-hrs.)
Generated in same works...	2,508	10,974
Purchased ...	13,191	1,188
Total electricity consumed ...	15,699	12,162

EMPLOYMENT

Table XI A.—Average numbers employed in 1935 and 1934

Persons employed	Males		Females		Total		
	Under 18	All ages	Under 18	All ages	Under 18	All ages	
Operatives (average for the year) ...	1935	272	4,554	748	3,866	1,020	8,420
	1934	233	3,756	707	3,853	940	7,609
	1935	26	975	43	475	69	1,450
Administrative, technical and clerical staff* ...	1934	23	939	36	442	59	1,381
	1935	298	5,529	791	4,341	1,089	9,870
TOTAL ...	1934	256	4,695	743	4,295	999	8,990

* As at 12th October, 1935, and 13th October, 1934.

Table XI B.—Operatives employed in one week in each month of 1934 and 1935 by firms furnishing returns in respect of the twelve months ended December

Mid week of*	Operatives employed		Monthly index†		
	1934	1935	1933	1934	1935
January ...	7,060	7,496	87.6	90.4	95.5
February ...	6,999	7,597	90.4	89.6	96.8
March ...	7,026	7,690	91.2	90.0	98.0
April ...	7,077	7,515	91.5	90.6	95.8
May ...	7,248	7,284	92.2	92.8	92.8
June ...	7,014	7,352	90.7	89.8	93.7
July ...	6,979	7,475	88.3	89.4	95.3
August ...	7,027	7,569	89.1	90.0	96.5
September ...	6,958	7,852	88.4	89.1	100.1
October ...	7,010	8,459	88.5	89.8	107.8
November ...	7,162	8,842	91.8	91.7	112.7
December ...	7,128	9,020	90.2	91.3	115.0
Average for the twelve months	7,057	7,846	90.0	90.4	100.0
Proportion of total operatives represented ...	92.75	93.18	...	...	...

* For the ending date of each week see page xiv.

† Based on the estimated average for the year 1935.

Table XI C.—Average numbers employed 1924-1935

Year	Operatives	Administrative, technical and clerical staff	Total
1924 ...	7,618	935	8,553
1930 ...	7,688	1,009	8,697
1933 ...	7,577	1,389	8,966
1934 ...	7,609	1,381	8,990
1935 ...	8,420	1,450	9,870

WAGES

Table XII.—Wages paid by firms furnishing returns of wages in 1935 and 1930

The aggregate amount of wages paid by firms furnishing returns of wages was £891,000 in 1935 representing 30.1 per cent. of the net output of these firms, the corresponding figures for 1930 being £643,000 and 28.3 per cent. The figures for these firms given below indicate the size of the sample and the extent to which it is representative.

Firms furnishing returns of wages	1935		1930	
	Aggregate	Proportion of trade	Aggregate	Proportion of trade
Gross output... ..	£'000	Per cent.	£'000	Per cent.
Net output	4,937	88.7	3,708	74.2
	2,965	89.5	2,270	75.6
Operative staff employed :—	No.		No.	
During mid-week of October :—				
Males	4,027	82.1	}	*
Females... ..	3,549	85.3		
Total	7,576	83.6	5,054	61.5
Average for the year	7,122	84.6	5,234	62.3
Administrative, technical and clerical staff	1,237	85.3	*	*
Number of establishments	29	64.4	...	...

* Not recorded separately.

COUNTRY TABLES (1935)

Note.—The figures given in the following tables relate only to firms whose returns were made on schedules for the Explosives and Fireworks Trade.

Owing to the possible disclosure of information relating to individual firms separate particulars for England and Wales and for Scotland cannot be given. No production was recorded for Northern Ireland.

Table I.—General summary (see page 403)

Table II.—Output

Kind of output	Quantity	Value
High explosives and propellant powders	Th. cwts. 385.3	£'000 1,765
Blasting powder	152.0	391
Small arms ammunition for military or sporting purposes (including empty cartridge cases) :—	Thous. 311,545	848
<i>Returned by number</i>	Th. cwts. 2.8	3
<i>Returned by weight</i>	116.6	1,220
Fuses and blasting accessories (including detonators, cables, etc.) ... ..	...	481
Explosives and ammunition, not elsewhere specified ... ..	...	330
Rockets and other pyrotechnic products ... ..	...	60
Sulphuric and other acids ... ..	...	431
Industrial nitro-cellulose and other chemical products ... ..	...	28
Other goods ... ..	...	9*
Work done for the trade ... ..	...	...
TOTAL ... ..	...	5,566

* Amount received.

Table III A.—Materials, fuel and electricity used (see page 407)

Table III B.—Consumption of electricity (see page 407)

Table IV A.—Numbers employed in week ended 12th October, 1935

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
Operatives	293	4,904	805	4,163	1,098	9,067
Administrative, technical and clerical staff	26	975	43	475	69	1,450
TOTAL	319	5,879	848	4,638	1,167	10,517

Table IV B.—Operatives employed in one week in each month of 1935

Week ended	Males and females	Week ended	Males and females
January 19	8,055	July 13	8,055
February 16	8,131	August 17	8,265
March 16	8,230	September 14	8,450
April 13	8,004	October 12	9,067
May 18	7,824	November 16	9,429
June 15	7,877	December 14	9,591
Average for the twelve months			8,420

Table V.—Firms employing not more than ten persons on the average (see page 403)