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BOARD OF TRADE

FINAL REPORT
on the
CENSUS OF PRODUCTION
FOR 1948

Volume 2

Trade N

MINERAL OIL REFINING

*Presented by the Board of Trade to Parliament
in pursuance of the Statistics of Trade Act, 1947
(10 & 11 Geo. 6, Ch. 39, Sec. 7).*

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In interpreting the data in the following tables, it is essential to bear in mind not only the qualifications mentioned in this report but also the general explanations and qualifications contained in the separate booklet published in this series by H.M. Stationery Office entitled "Final Reports of the Census of Production for 1948: Introductory Notes", price 2s Od. NET

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* Not applicable to this trade

MINERAL OIL REFINING TRADE

THIS REPORT on the Mineral Oil Refining Trade relates to establishments engaged wholly or mainly in the refining and distillation of petroleum and shale oil, the hydrogenation of creosote and mineral oils, and the production of medicinal paraffin, paraffin wax, petroleum jelly, etc.

The figures for 1948 have been compiled from returns made to the Ministry of Fuel and Power.

This trade corresponds to minimum list heading 36 in the Standard Industrial Classification.

Any establishments in Northern Ireland are excluded in 1948; no production was recorded there in this trade for 1935.

CHEMICALS AND ALLIED TRADES
MINERAL OIL REFINING TRADE

Summary
Larger establishments

TABLE 1

	1948	1935
	£'000	£'000
Gross output (production)	42,496	7,769
Cost of materials and fuel used (see Table 13)	34,978	4,731
Customs and Excise duty (see Table 8)	341	
Net output	7,178	3,038
Wages and salaries of persons employed	2,953	..
Average number of persons employed	No. 7,773(a)	No. 3,387
Net output per person employed	£ 923	£ 897
Stocks at end of year	£'000	£'000
Finished products and unfinished materials	3,022	..
Materials and fuel	3,228	..
Number of establishments	No. 16	No. 20

(a) For the total number of persons employed in this trade see Table 3.

The value of gross output is derived in the following way:-

	1948	1935
	£'000	£'000
Output of firms in this trade		
Total value of sales (1948) or production (1935)		
Principal products (see Table 8)	38,573	7,611
Other output (see Table 10)	1,979	158
Adjustment for changes in stocks (see Table 14)	+ 1,945	
Gross output (production)	42,496	7,769

Summary, 1948

Small firms in Great Britain

TABLE 2

	(a)
Number of returns	
Average number of persons employed	
Males	9
Females	-
Total	9

(a) Owing to the risk of disclosure of information relating to individual firms this figure cannot be given.

Estimated average employment, 1948

All firms in Great Britain

TABLE 3

As returned by firms	
Employing on average more than ten persons (a)	7,773
Employing on average ten persons or less (b)	9
Estimated average employment in firms not making satisfactory returns	-
Average employment in all firms	7,782

(a) See Tables 1 and 15.

(b) See Table 2.

Analysis by size, 1948

Larger establishments in Great Britain

TABLE 4

Average number employed	Establishments	Gross output	Net output	Persons employed	Remuneration			Net output per person employed
					Wages	Salaries	Total	
	No.	£'000	£'000	No.	£'000	£'000	£'000	£
11-199	7	9,248	1,478	574	159	60	219	2,575
200-499	3	6,249	731	1,058	253	117	370	691
500 and over	6	28,998	4,968	6,141	1,753	611	2,364	809
Total	16	42,496	7,178	7,773	2,165	788	2,953	923

Analysis by standard region, 1948
Larger establishments in Great Britain

TABLE 5

Region	Establishments	Gross output	Net output		Persons employed	Remuneration		
			Value	Percentage of total		Wages	Salaries	Total
	No.	£'000	£'000		No.	£'000	£'000	£'000
London and South Eastern	3	1,092	329	4.6	433	94	54	148
North Western	5	16,992	4,301	59.9	2,617	736	300	1,036
Eastern; Southern; Wales; and Scotland	8	24,413	2,547	35.5	4,723	1,335	434	1,769
Great Britain	16	42,496	7,178	100.0	7,773	2,165	788	2,953

TABLE 6 - Analysis according to specialisation within the trade, 1948

Larger establishments in Great Britain

No specialisation within this trade was distinguished.

Total make of certain petroleum products (a)

Larger establishments

TABLE 7

	Returned in this trade			
	1948		1935	
	Quantity	Entries	Quantity	
	Th. tons	No.	Th. galls.	Th. tons (b)
Aviation and motor spirit	641	13	161,155 (c) (d)	520
Industrial and white spirits	87	6	20,250	72
Kerosine	121	8	35,375	128
Gas/diesel oils (including marine diesel oil)	890	14	214,140 (e) (f)	860
Fuel oil	1,714	14		
Lubricating oil (all grades)	368	9	25,066	100
Bitumen	533	9	(g)	..

(a) There is duplication of output in this table to the extent that production which takes place in stages in more than one refinery is included at each stage.

(b) Calculated from the approximate weight equivalents of units of measure in Vol. 1 of the appropriate Annual Statement of the Trade of the United Kingdom with British Countries and Foreign Countries.

(c) Including hydrogenated coal spirit.

(d) Including 22,322,000 gallons (approximately 72,000 tons) returned on schedules for other trades.

(e) Including 805,000 gallons (approximately 3,000 tons) returned on schedules for other trades.

(f) Recorded as:-

Gas oil	Th. galls. 46,066
Fuel oil	168,074

(g) Not recorded.

Sales (or production) of the principal products of the trade,
including sales (or production) of these products by establishments
classified to other trades

Larger establishments

TABLE 8

	1948 (a) Sales			1935 Production		Value
	Quantity	Value	Entries	Quantity	Value	
	Th. tons	£'000	No.	Th. galls.	Th. tons (b)	£'000
Aviation and motor spirit	601	7,133	13	145,385	469	4,374 (c)
Industrial and white spirits	73	1,134	6	14,441	52	762
Kerosine	110	1,090	8	32,037	116	482
Gas/diesel oils (including marine diesel oil)	822	7,844	14	175,484	704	1,821 (d)
Fuel oil	1,212	7,639	11			
Lubricating oils (all grades) (e)	359	7,988	9	11,871	47	298
Bitumen	533	4,193	9	..	..	976
Mineral jelly	Th. cwts. 27	76	25			
Other finished petroleum products and unfinished materials	..	1,553	..	..	..	..
Petroleum refining on commission	..	-	..	..	..	..
Total		38,649	..			8,713
Less sales (or production) in other trades (see Table 9)		77	..			1,102
Total principal products of this trade sold or made by establishments in the trade		38,572	16			7,611

(a) The selling values shown in this table are inclusive of duty if the products are sold duty paid, and exclusive of duty if the products are sold in bond or exported. The total amount of duty included in the net selling values is £341,000; similar information is not available for 1935.

(b) Estimated tonnage.

(c) Including hydrogenated coal spirit.

(d) Recorded as:-

	Th. galls.	£'000
Gas oil	44,559	652
Fuel oil	130,925	1,169

(e) Output of establishments classified to this trade only, for the output of other establishments see the Oils and Greases Trade (Volume 2, Trade 0).

Sales (or production) of principal products of the trade by establishments classified to other trades

Larger establishments

TABLE 9

	1948 Sales			1935 Production	
	Quantity	Value	Entries	Quantity	Value
	Th.cwts.	£'000	No.		£'000
Mineral jelly	27	76	25	..	1,102
All other principal products of the trade	..	1	..		
Total		77	..		1,102

Sales (or production) in the trade of other than principal products

Larger establishments

TABLE 10

	1948 Sales	1935 Production
	£'000	£'000
Goods sold	1,818	158
Work done	161 (a)	-
Total	1,979	158

(a) Amount charged.

Analysis of sales, 1948

Larger establishments in Great Britain

TABLE 11

	Sales	Percentage of total sales
	£'000	
Sales (or transfers) to other organisations under the same control		
Refineries, other than those covered by this return, and separate blending establishments	383	0.9
Export sales organisations (including branches abroad), other wholesale or selling organisations and retailers	35,283	87.4
Total sales (or transfers) to other organisations under the same control	35,666	88.3
Sales to independent buyers		
Bunkers	378	0.9
Exports invoiced directly overseas and to Crown Agents and agents of foreign firms and governments	161	0.4
Wholesalers, merchants and agents for resale	1,948	4.8
His Majesty's Government and Local Authorities (other than productive establishments)	1,272	3.1
Manufacturers, repairers, builders, mines, public utilities, and transport and other productive undertakings	473	1.2
Other consumers (including retailers, institutions, farmers, N.A.A.F.I., etc.)	366	0.9
Unclassified	128	0.3
Total sales to independent buyers	4,725	11.7
Total	40,391	100.0

CHEMICALS AND ALLIED TRADES

Production, exports and imports
of certain principal products (a)

TABLE 12

		Production (b)	Exports	Retained imports
		Th. tons (c)	Th. tons (c)	Th. tons (c)
Aviation and motor spirit	1948	641(d)	21	3,899
	1935	520	257	3,879
Industrial and white spirits	1948	87	2	105
	1935	72	6	57
Kerosine	1948	121	2	1,480
	1935	128	30	679
Gas/diesel oils (including marine diesel oil)	1948	890	16	2,087
Fuel oil	1948	1,714	23	5,113
Total gas/diesel oils (including marine diesel oil) and fuel oil	1948	2,605	39	7,200
	1935	860	161	3,035
Lubricating oil (all grades) (e)	1948	674	115	347
	1935	350	51	389
Mineral jelly		Th. cwts.	Th. cwts.	Th. cwts.
	1948	27(f)	2	194

- (a) Figures of sales (or production) refer only to larger establishments in the relevant years. All recorded exports from and imports into the United Kingdom are given in the table. The figures, therefore, are not strictly comparable.
- (b) Including sales (or production) by establishments classified to other trades.
- (c) Estimated tonnage of production in 1935 (see Table 7), and estimated tonnage of exports and retained imports in both years.
- (d) Excluding hydrogenated coal spirit.
- (e) The production figures include the output of lubricating oils consisting solely of mineral oils (including white oils), 308,000 tons (partly estimated) in 1948 and 250,000 tons (partly estimated) in 1935, by establishments classified to other trades (see the Oils and Greases Trade (Volume 2, Trade O)). The overseas trade figures relate to refined petroleum lubricating oil.
- (f) Sales.

Usage of purchased materials and fuel

Larger establishments

TABLE 13

	1948		1935	
	Quantity	Cost	Quantity	Cost
	Th. tons	£'000	Th. tons	£'000
Materials				
Crude and process oils				
Imported, full crude and topped	4,214	27,538		
Indigenous; and distillates and other plant feedstocks	352	4,102		
Petroleum products and creosote used for blending	39	789		
Tetra ethyl lead fluid	Th. galls. 68	85		
Other chemicals	Th. tons			
Acids	38	240		
Alkalis	12	85		
Earths	9	203		
Other	10	228	..	4,412(a)
Water	..	56		
Packing materials				
New oil drums of a capacity	Thous.			
Not exceeding 10 gallons	270	40		
Exceeding 10 gallons	163	162		
Other packing materials, including materials for the manufacture and reconditioning of drums, cans, etc.	..	85		
All other purchased materials	..	628		
Fuel and electricity	Th. tons		Th. tons	
Coal	77.6	171	116.9	77
Coke	0.8	3	4.8	6
	Th. B. T. U. (kW. hrs.)		Th. B. T. U. (kW. hrs.)	
Electricity purchased and electricity obtained from other works under the same ownership (b)	57,212	210	14,037	31

TABLE 13 (contd.)

	1948		1935	
	Quantity	Cost	Quantity	Cost
Fuel and electricity (contd.)	Th.galls.	£'000	Th.galls.	£'000
Motor spirit (petrol) and deriv. fuel				
Used for road vehicles	81	7	..	(c)
Used for other power purposes	11	1		
Other oil fuel (including creosote/pitch mixtures)	3,440	73	33,384	205(d)
Gas purchased and gas obtained from other works under the same ownership	Th.therms 56	2	..	(c)
All other purchased fuel	..	70		
Total		34,978		4,731
Customs and Excise duty		341		

- (a) Including duty paid, less drawbacks. The figure also includes fuel not specified separately.
- (b) The total quantity of electricity consumed in 1948 was 85,607,000 B.T. units including 28,395,000 generated in the same works.
- (c) Not recorded separately.
- (d) Described as "Heavy fuel oil".

Stocks of finished products and unfinished materials and stocks of materials and fuel, 1948

Larger establishments in Great Britain

TABLE 14

	At beginning of year'	At end of year
	£'000	£'000
Products		
Finished products	584	2,167
Unfinished materials	494	855
Total finished products and unfinished materials	1,077	3,022
Materials and fuel		
Crude and process oils	1,194	2,496
All other materials and fuel	507	733
Total materials and fuel	1,701	3,228

Employment and remuneration (a)
Larger establishments

TABLE 15

	Average number of operatives		Administrative, technical and clerical employees (b)		Total	
	1948	1935	1948	1935	1948	1935
Males						
Under 18	147	100	35	26	182	126
All ages	5,814	2,788	1,447	524	7,261	3,310
Females						
Under 18	7	1	53	1	60	2
All ages	76	17	436	60	512	77
Total						
Under 18	154	101	88	27	242	128
All ages	5,890	2,803	1,883(c)	584	7,773 (c)(d)(e)	3,387
Total remuneration	£'000 2,165	..	£'000 788	..	£'000 2,953	..

(a) Excluded employees. The following numbers were employed at establishments in this trade but are not included in the table or in any other report (e.g., employees in a separate selling or transport organisation for which separate accounts are kept):-

Canteen workers	64 males	203 females
Other workers	2,840 males	371 females

(b) Number at September 25, 1948, and October 12, 1935.

(c) No working proprietors were recorded in 1948.

(d) The employers' share of contributions to all National Insurance Schemes payable during the year in respect of these workers amounted to £70,000.

(e) The following persons (included in this total) were employed on special work by establishments employing 100 or more persons:-

	Operatives	Administrative, technical and clerical employees
Transport of goods outside the premises	24	
Maintenance and repair of firms' buildings, but not plant	17	
Research work not directly connected with current production however charged	5	26

Wages and salaries paid, 1948 (a)(b)
Larger establishments in Great Britain

TABLE 16

	Amount paid	Percentage of annual remuneration paid in				
		First quarter	Second quarter	Third quarter	Fourth quarter	Year
Wages and salaries of	£'000					
Operatives	2,165	22.9	24.9	25.8	26.4	100.0
Administrative, technical and clerical employees	788	23.5	24.5	25.8	26.2	100.0
Total	2,953	23.0	24.8	25.8	26.4	100.0

(a) Including bonus and commission payments.

(b) All larger establishments in this trade made returns for the year ended December 31, 1948.

TABLE 17 - Payments for work done on materials given out, 1948

Larger establishments in Great Britain

This table is not applicable to the trade.

Payments for certain services, 1948

Larger establishments in Great Britain

TABLE 18

	Amount paid
	£'000
Repair and maintenance of buildings, plant, machinery and vehicles	160
Hire of plant, machinery and vehicles	55
Advertising and market research	13
Payments made for research work	
To research associations	3
To universities, institutions, academic bodies and similar agencies; and to other commercial concerns	9
Postage, telephone, telegrams and cables	22
Commercial insurance premiums	80
Rates (excluding water rates) payable in the year	38

CHEMICALS AND ALLIED TRADES

Plant, machinery and vehicles acquired and disposed of, 1948

Larger establishments in Great Britain

TABLE 19

	Acquisitions		Disposals
	New	Second-hand	
	£'000	£'000	£'000
Plant and machinery	3,478	1,525	20
Vehicles	51	29	1
Total	3,529	1,553	21

Capital expenditure on building work and changes in occupation of buildings and land, 1948

Larger establishments in Great Britain

TABLE 20

	£'000	£'000
1. Capital expenditure on building work (a)		852
2. Existing buildings and land acquired (b)		681
Total of headings 1 and 2		1,533
3. Existing buildings and land relinquished (c)		
(i) Selling value of freeholds sold	4	
(ii) Estimated value of other properties relinquished	-	
Total of heading 3		4
4. Headings 1 and 2 less heading 3		1,529

(a) Excluding site value which, where appropriate, is included in heading 2.

(b) The figures do not reflect changes in ownership of previously occupied land and buildings.

(c) Including property destroyed or abandoned.

MINERAL OIL REFINING COUNTRY TABLES

1948

Note - Owing to the risk of disclosure of information relating to individual firms separate particulars for larger establishments in England, Wales and Scotland cannot be given.

TABLE 21 - Summary: Larger establishments

See Table 1.

TABLE 22 - Summary: Small firms

See Table 2. There were no small firms in Wales or Scotland in the register for this trade.

Sales in the trade

Larger establishments

TABLE 23

	Great Britain	
	Quantity	Value
	Th. tons	£'000
Principal products		
Aviation and motor spirit	601	7,133
Industrial and white spirits	73	1,134
Kerosine	110	1,090
Gas/diesel oils (including marine diesel oil)	822	7,844
Fuel oil	1,212	7,639
Lubricating oils (all grades)	359	7,988
Bitumen	533	4,193
Other finished petroleum products and unfinished materials	..	1,552
Total principal products		38,573
Other output		
Goods sold	..	1,818
Work done		161(a)
Total		40,552

(a) Amount charged.

TABLE 24 - Purchased materials and fuel: Larger establishments

See Table 13.
 NOTE - Owing to the small number of establishments in this trade, separate particulars for larger establishments in England, Wales and Scotland are given.

TABLE 25 - Employment and remuneration: Larger establishments

See Table 15.

Monthly index of employment of operatives: Larger establishments
 (average employment in 1948 = 100)

TABLE 26

Month	Monthly index (a)	Month	Monthly index (a)
	Great Britain		Great Britain
1948		1948	
January	93.8	August	101.9
February	94.8	September	102.0
March	97.5	October	102.5
April	97.5	November	104.0
May	99.0	December	104.9
June	100.7	Percentage employ- ment in this trade covered by the index	100.0
July	101.3		

(a) The index numbers are calculated from the number of operatives employed in one week in each month.

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