

[HA 251]

BOARD OF TRADE

THE REPORT on the CENSUS OF PRODUCTION FOR 1951

Volume 1

Trade K

ABRASEXES

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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	* Not applicable to this trade

THIS REPORT on the Abrasives Trade relates to establishments engaged wholly or mainly in manufacturing artificial abrasives whether in the form of powder, paste, stone or coated paper and cloth, and in shaping natural abrasives into grindstones, etc.

Classification.

trade.

(89197/1)

ABRASIVES TRADE.

This trade corresponds to minimum list heading 29 (1) in the Standard Industrial

There were no larger establishments in Northern Ireland in the register for this

IMPORTANT NOTES and definitions appear on the inside of the back cover of this report. In interpreting the data in the following tables, it is essential to bear these in mind. 1/K/2

TREATMENT OF NON-METALLIFEROUS MINING PRODUCTS OTHER THAN COAL

ABRASIVES TRADE

Summary

Larger establishments (a)

TABLE 1

		Great Britain					
	1951	1950	1949	1948	1937	1935	
	£*000	£*000	£* 000	£*000	£'000	£*000	
Gross output (production) (b)	16,851	13, 186	10,666	10,259	3,202	2, 57 2	
Cost of materials and fuel used (c) Payment for work done on materials	8,531	6,367	5,270	4,787	· 1,466	1,154	
given out Transport payments (d)	8 317	10	12	8	1	•	
Net output Wages and salaries of persons employed	7,996 3,404	6,809 2,863	5,383 2,598	5,464 2,424	1,735	1,418	
	No.	No.	No.	No.	No.	No.	
Average number of persons employed (e)	7,700	6,992	6,566	6,604	3,761	3,132	
Net output per person employed (e)	£ 1,038	£ 974	£ 820	£ 8 27	£ 461	£ 453	
	£'000	£'000	£'000	£. 000	£'000	£.000	
Stocks at end of year							
Products on hand for sale and work in progress Materials and fuel	1,770 2,978	1,344 2,166	1,111 1,690	1,028 1,419		•••	
	No.	No.	No.	No.	No.	No.	
Number of establishments	40	38	38	37		30	
The values of gross output and of mat	erials and fu	el used are	derived in t	he following	g way:-		
	£.000	£'000	£'000	£'000	£'000	£.000	
Output of firms in this trade (f)							
Principal products (g) Other output Changes in stocks and	15.926 540	13,143	10,747	9,791 367	3,062 140	2,479 93	
work in progress (h)	+ 385	+ 234	+ 84	+ 212		· · · · · · · · · · · · · · · · · · ·	
	16,851	13,377	10,831	10,370	1	0.67.0	
Less payment for transport outwards (d)	••	191	16 5	111	3,202	2, 57 2	
Gross output (production)	16,851	13, 186	10,666	10,259	3, 20 2	2, 57 2	
Materials and fuel used by firms in this trade							

(a) For small firms' summary see Table 2.
(b) Gross output for 1951 includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services. For other years payments for transport services outwards on finished goods sold are excluded.
(c) Amounts paid for delivery services are excluded for 1951 but included for other years.
(d) Payments to other firms and undertakings and to firms' own separate transport organisations. For 1951 they cover payments for transport of both goods sold and materials and fuel purchased. For other years payments cover only transport outwards of finished goods sold.
(e) Excluding outworkers but including working proprietors. For an estimate of the total numbers of persons employed in this trade see Table 3.
(f) Total value of sales (1951, 1950, 1949 and 1948) or production for sale (1937 and 1935).
(g) For details for 1951 see Table 21.

6,840

- 473

6,367

5, 520

- 249

5, 270

4,810

- 23

4,787

1,466

1,466

1,154

1,154

9.251

8,531

ABLE 2		
1941 ME 1817		
Number of returns		
Average number of p	ersons employ	yed (b)
Males Females		
Total	()	the gue
(a) Small firms (b) Including wo	rking propri	etors.
		E
TABLE 3	104	
	1	5
As returned by firms	i fogol	
Employing on the c Employing on the c	iverage more	than ten
Employing on the t	iverage ten t	JI IEwei j
Estimated average en	mployment in	firms no
satisfactory return Estimated average en		all firm
(a) Including work(b) See Table 14.	ing propriet	ors.
(c) See Table 2.		
		Larg
TABLE 4		
and the second sec		- San Shell
Average number	Establish-	Gross
employed	ments ~	output
	No.	£,000
11 - 24	7	673
25 - 49	10	1,110
50 - 99	9	1,463
100 - 199 200 and over	7	2,184
Total	40	16,851
(a) Administrative		
(d) Administrative	, technical	und creft

(89197/1)

Purchases

Changes in stocks (h)

Materials and fuel used

Summary

Small firms (a)

	Great Britain							
	1951	1950	1949	1948				
the second	14	20	20	22				
	63 14	92 18	90 20	120 12				
	77	110	110	132				

rage ten or fewer persons) that made satisfactory returns.

stimated average employment (a)

All firms

	Great Britain							
	1951	1950	1949	1948				
en persons (b) r persous (c)	7.700	6.992 110	6.566 110	6.604 132				
	7.777	7.102	6,676	6,736				
not making	11	10	11 •	37				
rms	7,788	7,112	6,687	6,773				

Analysis by size, 1951

er establishments in Great Britain

			Remuneration					
put output	Net output	Persons employed	Operatives	Other employees (a)	Total	Net output per person employed		
000	£'000	No.	£'000	£'000	£'000	£		
573	272	134	43	32	74	2.029		
110	415	382	112	52	164	1,087		
163	649	633	194	127	320	1.025		
84	758	982	240	139	379	772		
121	5,902	5,569	1.671	795	2.467	1,060		
351	7,996	7,700	2,260	1,144	3,404	1,038		
and the second sec		and the second se						

.cal employees.

Number

TREATMENT OF NON-METALLIFEROUS MINING PRODUCTS OTHER THAN COAL

Analysis by standard region, 1951

Larger establishments in Great Britain

TABLE 5

			Net output			F	Net output		
Region	Estab- lish- ments	Gross output	Value	Percent- age of total	Persons employed	Operatives	Other employees .(a)	Total	per person employed
	No.	£'000	£'000		No.	£'000	£.000	£.000	£
England and Wales									And Dealer St.
Northern; and North Midland	4	373	161	2.0	119	32	18	49	1,351
East and West Ridings	4	553	264	3.3	172	72	62	134	1,536
Eastern: Southern: South Western: and Wales	6	3,271	1,499	18.8	1,002	263	204	468	1,496
London and South Eastern	8	2,138	724	9.1	827	268	117	385	876
Midland	5	5,087	2,584	32.3	2,527	682	331	1,013	1,023
North Western	. 9	5,063	2,650	33.1	2,930	899	401	1.300	904
Total England and Wales	36	16,485	7,882	98.6	7,577	2.216	1,134	3,349	1,040
Scotland	4	366	113	1.4	123	44	11	55	922
Great Britain	40	16,851	7,996	100.0	7.700	2,260	1,144	3,404	1.038

(a) Administrative, technical and clerical employees.

.

Analysis according to specialisation within the trade, 1951

Larger establishments in Great Britain

T	۸	DI	LE	6
1	n	DI	-1-	U

		lish-Gross chara ts output teris	Sales of	Salas of		Remuneration				
	Establish- ments		charac- teristic products	Net output	Persons employed	Operatives	Other employees (a)	Total	Net output per person employed	
Specialist producers of	No.	£,000	£,000	£'000	No.	£'000	£'000	£,000	£	
Abrasive wheels, discs, segments, sharpening stones and other shapes or forms	20	9,677	7,670	5.549	5,449	1,638	839	2,477	1,018	
Abrasive paper, cloth and other flexible abrasive materials, and articles made wholly or mainly										
therefrom	12	5,946	5,349	2,012	2.032	542	264	806	990	
Remainder of the trade	8	1,228		434	219	80	41	121	1,983	
Total	40	16,851		7,996	7,700	2,260	1,144	3.404	1,038	

(a) Administrative, technical and clerical employees.

TABLE 7 - Total make of intermediate products: Larger establishments in Great Britain

This table is not applicable to the trade.

	ABRASIVE		and and an	n Honga Stationart	1/K/
Sales of the principal produc products by establish	ts of the tra	ade, includi	ng sales r trades	of these	
Larger establi	soments in di	reat Diftain			
TABLE 8		1951		1948	3
		1931			
1 · · · · · · · · · · · · · · · · · · ·	Quantity	Value	Entries	Quantity	Value £'000
		£,000	No.	Tons	£ 000
Abrasive wheels, discs, segments, sharpening stones and other shapes or forms	and manufactures				
		5,300	18 {	8,719	1,572 1,803
Aluminium oxide (artificial)				2,193	524
Silicon carbide		1,716	17 {		448
Diamond impregnated		708	9	••	294(a) (b)
Other (including cut from natural rock)		144	11	1,570	83 61
			- 1	604	161
Unclassi fied	•	3	1	••	32
Total abrasive wheels, etc.		7,868	{	13,086	2,340 2,636
Abrasive paper, cloth and other flexible abrasive materials, and articles made wholly	Th.reams(c)			Th.reams(c)	
or mainly therefrom Aluminium oxide (artificial)	138	2,122	13	98	1,100
Enery	113	937	10	129	654
Garnet	82	593	11	66	328
Silicon carbide	148	1,226	12	128	871 527
Glass, flint, sand and other	235	551 91	15	275	5
			-]	52
Unclassified	716	5, 428	1	696	3,480
Total abrasive paper, etc.		91		ų	56
	Th.cwts.	Adre services	e name interi	Th.cwts.	
Metallic abrasives	836	868	8	501	490
Other abrasives, ground, pulverised, refined or otherwise prepared					
Natural	120	240	7	82	156(b)
Emery		494	7		249
Other Artificial		1,274	10		629.
Waste products	the set and controls	Lider - ver	-	••	2
Work done for the trade or on commission		1(d)			•
Total	- el 1990, 1984	16,265		a dependente i	10,038
Sales in other trades (see Table 9)		338			2 47
Principal products of this trade sold by establishments in the trade		15,926	39		9,791
 (a) Described as 'Diamond impregnated grinding w (b) So far as recorded separately. (c) Reams of 480 sheets. (d) Amount charged. 	heels, cutting	discs, perip	heral whe	els and the lik	e '.

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Sales of principal products of the trade by establishments classified to other trades

Larger establishments in Great Britain

TABLE 9

		1951		1948		
	Quantity	Value	Entries	Quantity	Value	
Abrasive wheels, discs, segments, sharpening stones and other shapes or forms		£'000	No.		£* 000	
Aluminium oxide (artificial)		42		-	and server - larger	
Silicon carbide		11		-	-	
Diamond impregnated		121			107 (a)	
Other (including cut from natural rock)		17		· · · ·	13(b)	
Unclassi fied	-	-	-		32	
brasive paper, cloth and other flexible abrasive materials, and articles made wholly or mainly therefrom						
Glass, flint, sand and other		91			6	
Unclassified	-	-	-		52	
letallic abrasives	Th.cwts. 12	12			(a)	
ther abrasives, ground, pulverised, refined or otherwise prepared						
Natural						
Emery	6	11			All and proved	
Other	-	-	-		37 (Ъ)	
Arti ficial		33		-	-	
Total		3 38			247	

(a) Metallic abrasivés are included in the figure shown for 'Abrasive wheels, discs, etc. - Diamond impregnated'.
(b) Abrasive wheels, etc. cut from natural rock are included in the figure shown for 'Other abrasives, ground, pulverised, refined or otherwise prepared - Natural'.

TABLE 10 - Sales in the trade of other than principal products

Larger establishments in Great Britain

The total values of the sales of other than principal products amounted to £540,000 in 1951 and £367,000 in 1948.

TABLE 11

Abrasive wheels, discs, segments, s stones and other shapes or forms

Aluminium oxide (artificial) (f)

Silicon carbide (f)

Other (including cut from natural and diamond impregnated)

Total abrasive wheels, etc:

Abrasive paper, cloth and other fle abrasive materials, and articles m wholly or mainly therefrom

Emery

Aluminium oxide (artificial)

Garnet

Silicon carbide

Glass, flint, sand and other

Total abrasive paper, etc. othe than emery

Total abrasive paper. etc.

Other abrasives, ground, pulverised refined or otherwise prepared (exc metallic abrasives)

- comparable.

- (e) Valued c.i.f.

- grinding wheels. (h) Including unclassified sales. (i) Including crude unground abrasives.

TABLE 12
Timber (other than re
packing case manufac woodwork and purchas
Woven cotton cloth

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ABRASIVES

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

		Production (b)(c)	Exports (d)	Retained imports (e)
sharpenin	g	£,000	£,000	£,000
	<pre>{1951 1948 1937</pre>	5,300 3,375 1,145	493 199 42	4 30
	$\begin{cases} 1951 \\ 1948 \\ 1937 \end{cases}$	1,716 972 275	681 183 88	 1 18
l rock,	$\begin{cases} 1951 \\ 1948 \\ 1937 \end{cases}$	852 437 194 (g)	645 335 176 (g)	 17 48(g)
	<pre>{1951 1948 1937</pre>	7.868 4.976(h) 1.614	1.818 716 305	27 22 96
exible nade	Etais and	serior laution la	teating and	
	<pre>{1951 1948 1937</pre>	937 654 317	448 439 115	 2 3
	{1951 1948	2,122 1,100	172 54	
	{1951 1948 (1951	593 328 1.226	166 72 151	••••••
	{1948 {1951 1948	871 642 531	98 380 336	
er	{1951 1948 1937	4.583 2.830 792	869 560 159	 50 46
	<pre>{1951 1948 1937</pre>	5.520 3.536(h) 1.109	1,317 999 274	75 52 49
d. cept	<pre>{1951 1948 1937</pre>	2.008 1.034 268	337(i) 204(i) 107	1.671(i) 652(i) 279

(a) Figures of production (or sales) refer only to larger establishments. All recorded exports from and imports into the United Kingdom are given in the table. The figures, therefore, are not strictly

(b) Sales in 1951 and 1948, and production for sale in 1937.
(c) Including production (or sales) by establishments classified to other trades.
(d) Valued f.o.b.

(f) The figures for 1937 relate to grinding wheels only.
 (g) Oil stones, rubbing blocks and sharpening stones, of all abrasive materials, and grindstones and other

Usage of certain specified purchased materials, 1951

Larger establishments in Great Britain

Materials used	Quantity
claimed), including that used for packing or ture but excluding joinery, other fabricated ed packing cases	Th.cu.ft. 47
	Th.sq.yds. ,6,381

TREATMENT OF NON-METALLIFEROUS MINING PRODUCTS OTHER THAN COAL

TABLE 13 (i) Operatives			in September lishments (a)							
		Great Britain								
	1951(b)	1950(b)	1949(h)	1948(c)	1937 (c)	1935(c)				
Males Under 18 All ages Females Under 18 All ages	108 4,760 47 1,145	69 4, 27 4 36 848	73 4,023 32 748	74 4,005 33 820	150 2, 530 54 329	148 2,148 33 245				
Total Under 18 All ages	155 5,905	105 5,122	105 4.771	107 4,825	204 2,859	18 1 2, 39 3				
(ii) Administrati	ve, technical and	clerical emp	loyees (d)	erations being		Numb				

	Great Britain						
	1951	1950	1949	1948	1937	1935	
Males		and the second					
Under 18	50 1,205	39 1,034	26	41	55	85	
All ages	1,205	1,034	26 1.045	1,065	58 4	481	
Females							
Under 18	122	88	78	98	87	46	
All ages	824	772	690	714	318	258	
Total							
Under 18	17 2	127	104	100			
All ages	2,029(e)	1,806(e)	1,735(e)	139	142	131	
		1,000/01	1,/ SS(e)	1,779(e)	902	7 39	

(iii) Total employees

	100	Great Britain					
	1951	1950	1949	1948	1937	1935	
Males			Contraction of the second				
Under 18	158	108	99	115	00.5	-	
All ages	5,965	5,308	5,068	5,070	205	233	
Females		0,000	5,000	5,070	3,114	2,629	
Under 18	169	124	110	131	A CONTRACTOR OF A CONTRACTOR A	an and a second	
All ages	1,969	1,620	1,438	1, 534	141	79	
		-7010	1,400	1, 334	6 47	503	
Fotal				A REAL PROPERTY AND A REAL PROPERTY AND	and the second second second	A State of the second	
Under 18	327	232	209	246	0.40	Constant Providence	
All ages	7,934(e)	6,928(e)	6,506(e)	6,604(e)	346	312	
			0,000(6)	0,004(e)	3,761	3,132	

(a) Excluded employees. The following persons were employed at the larger establishments in this trade in 1951 but are not included in the above tables or in any other Census of Production report (e.g., employees engaged in merchanting):-

Canteen workers 8 Males 81 Females Other workers 37 Males 24 Females

(b) In week ended September 22, 1951, September 30, 1950 and September 24, 1949.

(c) In week ended September 22, 1951, September 30, 1950 and September 24, 1949.
(c) Average for the year.
(d) In week ended September 22, 1951, September 30, 1950, September 24, 1949, September 25, 1948, October 16, 1937, and October 12, 1935.
(e) No working proprietors were recorded for 1951, 1950, 1949 and 1948. The 1937 and 1935 figures include any working proprietors.

	Great Britain							
	1951	1950	1949	1948	1937	1935		
Operatives Administrative, technical and clerical employees Total	5,690	5,101	4.852	4.825	2,859	2,393		
	2,010	1,891	1,714	1.779(b)	902(b)	739(b)		
	7,700	6,992	6,566	6,604	3.761	3,132		

any working proprietors.

Outworkers. In addition to the employees shown above the firms in this trade employed 3 female outworkers in 1950 and 10 female outworkers in 1948. No outworkers were recorded for other years.

TABLE 15

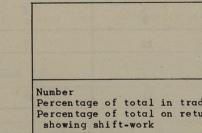
ber

er

Number

Continuous 3 shift systems per 24 hou averaging 8 hours per shift Continuous 4 shift systems per 24 hou averaging 6 hours per shift All 2 shift systems Other shift systems

Total



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Average employment

Larger establishments (a)

Shift working, 1951 (a)

Larger establishments in Great Britain

	Total number of man-shifts worked in the week	Total number of shift-hours worked in the week	Number of returns showing the systems stated
ours		The second states and	
	1,020	8,308	4
ours	and the second		ASCING AND
	2.510	23,715	4
		-	· · · · · · · · · · · · · · · · · · ·
	3,530	32,023	(Ъ)

(a) Shift working during week ended September 22, 1951.
(b) The number and percentage of returns showing shift working and of operatives on shift-work were as follows:-

	Ret	turns	Operatives				
	Total in trade	Showing shift-work	Total in trade	Total on returns showing shift-work	Number employed on shift- work		
ıde	39 100.0	5 12.8	5,905 100.0	3.753 63.6	687 11.6		
urns	and the second second			100.0	18.3		

1/K/9

Wages and salaries and employers' National Insurance contributions paid during the year

Larger establishments

	£°00 Great Britain						
	1951	1950	1949	1948			
ages and salaries (a) of							
Operatives Administrative, technical and	2,260	1,847	1,676	1, 57 5			
clerical employees	1,144	1,016	922	848			
Total	3, 40 4	2,863	2, 598	2, 424			
Employers' contributions to all National Insurance Schemes	76	68	64	52			

(a) Including bonus and commission payments but excluding small payments to outworkers in 1950 and 1948. No outworkers were recorded for 1951 or 1949.

Plant, machinery and vehicles - acquisitions and disposals, and capital expenditure on new building work

Tannan antah 1: -h

TABLE 17	ablishments		£*00			
	Great Britain					
	1951	1949	1948			
Plant, machinery and vehicles Acquisitions Plant and machinery						
New	335	208	195			
Second-hand	5	2	9			
Vehicles						
New	51	25	36			
Second-hand	10	8	3			
Total acquisitions	401	244	243			
Disposals		- Marine State				
Plant and machinery	6	5	2.			
Vehicles	11	8	2.7			
Total disposals	17	12	9			
New building work Capital expenditure on new building and other						
constructional work of a capital nature (excluding site values and development charges)	169	31	40			

TABLE 18

Gross output (production)

Cost of materials and fuel used Payment for work done on materials gi Transport payments

Net output Wages and salaries of persons employe

Average number of persons employed

Net output per person employed

Stocks at end of year Products on hand for sale and work in progress Materials and fuel

Number of establishments

The values of gross output and o

Output of firms in this trade

Total value of sales (see Table 20) Changes in stocks and work in progress (see Table 21)

Gross output (production)

Materials and fuel used by firms in this trade

Purchases

Changes in stocks (see Table 21)

Materials and fuel used

(a) Owing to the risk of disclosure of information relating to individual firms, particulars for Wales cannot be given separately and have been included with those for England.

TABLE 19

Number of returns

Average number of persons employed Males Females

Total

(a) Small firms (employing on the average ten or fewer persons) that made satisfactory returns. (b) Including working proprietors.

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(89197/1)

ABRASIVES COUNTRY TABLES

1951

Summary

Larger establishments

	England (a)	Wales (a)	Scotland	Great Britain
Tana and Barriston and a	£'000	£'000	£.000	£*-000
	16,485		366	16,851
	8,320		210	8,531
ven out	8 27 5	•••	42	8 317
d	7,882 3,349	::	113 55	7,996 3,404
	No.	No.	No.	No.
	7,577		. 123	7.700
•	£	£	£	£
and the second	1,040	and and water and	9 2 2	1,038
	£.000	£*000	£*000	£,000
				and the second
	1,748 2,954		22 24	1,770 2,978
	No.	No.	No.	No.
	36		4	40

f	materials	and	fuel	used	are	derived	in	the	following	way:-	
---	-----------	-----	------	------	-----	---------	----	-----	-----------	-------	--

	£*000	£,000	£.000	£'000
))	16,099		368	16,467
	+ 387	••	- 2	+ 385
	16 , 48 5		366	16,851
	and the second se			
	9,038 - 718	••	213 - 3	9,251 - 720
	8,320	••	210	8,531
	and the second	and the second s	Contraction of the second s	

Summary

Small firms (a)

	England	Wales	Scotland	Great Britain
	14	-		14
d (b)	63 14	-	-	63 14
	77			77

TREATMENT OF NON-METALLIFEROUS MINING PRODUCTS OTHER THAN COAL COUNTRY TABLES

Sales in the trade

Larger establishments

	England	and Wales	Scot	tland	Great	Britain
	Quantity	Value	Quantity	Value	Quantity	Value
Principal products		£,000		£'000		£.000
Abrasive wheels, discs, segments, sharpening stones and other shapes or forms			a state and	CALCULATION OF	ar son a fine or	and alles
Aluminium oxide (artificial)		5,259	1000			5,259
Silicon carbide		1,705		an same	a the second second	1,705
Diamond impregnated		587	-			587
Other (including cut from natural rock)	1	(a)		(a)	- Sauge - States	127
Abrasive paper, cloth and other flexible abrasive materials, and articles made wholly or mainly therefrom	Th.reams (b)			i Servertani	Th.reams (b)	1 der Suite
Aluminium oxide (artificial)	138	2,122	-	100 - 100 T	138	2,122
Emery	113	937	-		113	937
Garnet	82	593	-	- 1000 and 1	82	593
Silicon carbide	148	1,226	-	-	148	1,226
Glass, flint, sand and other	235	551		-	235	- 51
	Th.cwts.				Th.cwts.	a the stand
Metallic abrasives		(α)		(a)	824	8 56
Other abrasives, ground, pulverised, refined or otherwise prepared				A STREET	ingo, Tic Sola	in nadi
Natural						
Emery	114	228	-	-maile	114	228
Other		49 4	- 10%	and the second	neitry	494
Artificial		1,241	-		••	1,241
Work done for the trade or on commission (c)		1	and the second second	-		1
Total principal products	And all	15, 558		368	values "reduc	15,926
ther output		540	-	entra in the		540
Total		16,099		368		16,467

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.
(b) Reams of 480 sheets.
(c) Amount charged.

Stocks of products on hand for sale and work in progress, and stocks of materials and fuel

Larger establishments

		England and Wales	Scotland	Great Britain
Products on hand for sale	at beginning of year	853	4	857
	(ar end of year	1,167	3	1,172
Work in progress	fat beginning of year	508	20	528
in progress	lat end of year	582	17	599
Total products on hand for	fat beginning of year	1.362	24	1,386
sale and work in progress	(at end of year	1.748	22	1,770
Materials and fuel	fat beginning of year	2,236	21	2,257
	at end of year	2,954	24	2,978

(89197/1)

(i) Operatives	England and Wales	Scotland	Great Britain
	Lugrana ana «ares		
ules Under 18	(c) 4,670	(c) 90	108 4,760
All ages males		(c)	47
Under 18 All ages	(c) 1,120	25	1,145
tal	(c)	(c)	155
Under 18 All ages	5,790	115	5,905
(ii) Administrative, technical	and clerical employees		Numb
	England and Wales	Scotland	Great Britain
les Under 18	50		50
All ages	1,198	7	1,205
males Under 18	119 814	3 10	122 824
All ages			
Under 18 All ages (d)	169 2,012	3 17	17 2 2, 0 29
iii) Total employees			Num
111) Iotal employees	England and Wales	Scotland	Great Britain
ales			150
ales Under 18 All ages	(c) 5,868	(c) 97	158 5,965
Under 18 All ages	(c) 5,868 (c)	97 (c)	5,965
Under 18 All ages emales	(c) 5,868	97	5,965
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables o merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below.	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables o merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were reco	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below. led September 22, 1951. e of information relating to i	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e	5,965 169 1,969 327 7,934 In this trade but not employees engaged in cate particulars cannot be
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables o merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure aiven.	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below. led September 22, 1951. e of information relating to i	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were reco (iv) Excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 r in any other Census of Prod e 22(iv) below. led September 22, 1951. of information relating to i corded in this trade. England and Wales	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in cate particulars cannot be Num Great Britain
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were reco (iv) Excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below. led September 22, 1951. of information relating to in corded in this trade.	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not imployees engaged in cote particulars cannot be
Under 18 All ages emales Under 18 All ages otal Under 18 All ages otal (under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employeed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees Canteen workers Males	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below. led September 22, 1951. of information relating to i corded in this trade. England and Wales 8	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not imployees engaged in cate particulars cannot be Num Great Britain 8
Under 18 All ages emales Under 18 All ages otal Under 18 All ages otal (under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees Canteen workers Males Females Total	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below. ted September 22, 1951. of information relating to i corded in this trade. England and Wales 8 81 89	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in rate particulars cannot be Num Great Britain 8 81 89
Under 18 All ages emales Under 18 All ages otal Under 18 All ages otal (under 18 All ages (d) a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employeed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were reco (iv) Excluded employees canteen workers Males Females Total	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 r in any other Census of Prod e 22(iv) below. led September 22, 1951. of information relating to i corded in this trade. England and Wales 8 81	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not performed but not souther particulars cannot be Num Great Britain 8 81
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employees in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees Canteen workers Males Females Total Other workers Males	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prode e 22(iv) below. led September 22, 1951. of information relating to it corded in this trade. England and Wales 8 81 89 37	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not employees engaged in rate particulars cannot be Num Great Britain 8 81 89 37
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employeed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees (iv) Excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prod e 22(iv) below. led September 22, 1951. of information relating to i corded in this trade. England and Wales 8 81 89 37 24	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan	5,965 169 1,969 327 7,934 In this trade but not imployees engaged in cate particulars cannot be Num Great Britain 8 81 89 37 24
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) (a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees Canteen workers Males Females Total Other workers Males Females Total Total excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prode e 22(iv) below. ted September 22, 1951. of information relating to i corded in this trade. England and Wales 8 81 37 24 61 150	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan Scotland - - - - - -	5,965 169 1,969 327 7,934 In this trade but not performed but not mployees engaged in Forte particulars cannot be Num Great Britain 8 81 89 37 24 61
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees canteen workers Males Females Total ther workers Males Females Total Total excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 or in any other Census of Prode e 22(iv) below. ted September 22, 1951. of information relating to i corded in this trade. England and Wales 8 81 89 37 24 61 150	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan Scotland - - - - - - - - - - -	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in rate particulars cannot be Num Great Britain 8 81 89 37 24 61 150 Num
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees anteen workers Males Females Total ther workers Males Females Total Total excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the 1 r in any other Census of Prode e 22(iv) below. ed September 22, 1951. e of information relating to is corded in this trade. England and Wales 8 81 89 37 24 61 150 age employment: Larger es England and	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan Scotland - - - - tablishments (a) Wales Scotland	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in rate particulars cannot be Num Great Britain 8 81 89 37 24 61 150 Num d Great Britain
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees (iv) Excluded employees canteen workers Males Females Total ther workers Males Females Total Total excluded employees	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the l r in any other Census of Prode e 22(iv) below. ed September 22, 1951. e of information relating to is corded in this trade. England and Wales 8 81 89 37 24 61 150 age employment: Larger es England and 5,584	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan Scotland - - - - - tablishments (a) Wales Scotland 106	5,965 169 1,969 327 7,934 In this trade but not Imployees engaged in cate particulars cannot be Num Great Britain 8 81 89 37 24 61 150 Num Great Britain
Under 18 All ages emales Under 18 All ages otal Under 18 All ages (d) a) Excluded employees. The number included in the above tables of merchanting) are shown in Tabl (b) Number employed in the week end (c) Owing to the risk of disclosure given. (d) No working proprietors were rec (iv) Excluded employees (iv) Excluded employees anteen workers Males Females Total ther workers Males Females Total Total excluded employees Aver TABLE 23	(c) 5,868 (c) 1,934 (c) 7,802 of persons employed at the l r in any other Census of Prode e 22(iv) below. ed September 22, 1951. e of information relating to is corded in this trade. England and Wales 8 81 89 37 24 61 150 age employment: Larger es England and 5,584	97 (c) 35 (c) 132 arger establishments i uction report (e.g., e ndividual firms, sepan Scotland - - - - tablishments (a) Wales Scotland	5,965 169 1,969 327 7,934 In this trade but not mployees engaged in rate particulars cannot be Num Great Britain 8 81 89 37 24 61 150 Num d Great Britain

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TABLE 20

ABRASIVES COUNTRY TABLES

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TREATMENT OF NON-METALLIFEROUS MINING PRODUCTS OTHER THAN COAL COUNTRY TABLES

Wages and salaries and employers' National Insurance contributions paid during the year

Larger establishments

TABLE 24			£*
	England and Wales	Scotland	Great Britain
Wages and salaries (a) of		AND STRENGS	No. 1 SPREN 148 2 No. 4
Operatives Administrative, technical and clerical	2.216	44	2,260
employees	1,134	11	1,144
Total	3,349	55	3.404
Employers' contributions to all National Insurance Schemes	75	1	76

(a) Including bonus and commission payments.

Plant, machinery and vehicles - acquisitions and disposals,

and capital expenditure on new building work

Larger establishments

	England and Wales	Scotland	Great Britain
Plant, machinery and vehicles	C. HERE		engol 115
Acquisitions			and a state of the second
Plant and machinery New			The second
Second-hand	316	19	335
Vehicles	5	i de casa de la composición de la compo	5
New	h		1
Second-hand	57 (α)	4(a)	51 10
	P	The second s	10
Total acquisitions	378	23	401
Disposals	9.0	and the second	A REAL PROPERTY OF THE REAL PR
Plant and machinery			The restant that the
Vehicles	6 10	and a stand - is and a	6
	10		11
Total disposals	16		12
			17
ew building work			
Capital expenditure on new building and	and the second		an annih in a fair anna ha anni
other constructional work of a capital			ANT THE MAN AND AND AND AND AND AND AND AND AND A
nature (excluding site values and development charges)			
deveropment churges/	(a)	(a)	169

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

Payments for transport services for finished goods sold and materials and fuel purchased

Larger establishments

TABLE 20	The second s	all the second s	£'000
	England and Wales	Scotland	Great Britain
Amounts paid to other firms and undertakings Amount paid or credited to firms' own separate transport organisations	} 27 5(α)	42(a)	317 (a)
Total	27 5	42	317

(a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot

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their own work people included in the return: and consumable tools and parts for machinery purchased as replacement. Materials, components, etc. which were purchased and re-sold in the same state (that is, merchanted or factored goods) were excluded. For 1951 firms in many trades were required to state The following brief notes refer to Great Britain and, unless otherwise stated, to the census of produc-tion for 1951. Reference should be made to the sep-arate booklet in this series entitled 'The Report on the Census of Production for 1951: Introductory Notes' (price 1s.6d. net) for particulars of the minor differences in the Northern Ireland censuses the quantities of certain purchased materials used. and other details about the census of production. Stocks and work in progress: Firms were instructed Trade classification: Establishments are classified to to give these at income tax value. trades according to the nature of their output. Certain products, called principal products, are identified as characteristic of the production of individual trades. Output: Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the the principal products for a given trade being of a year or not. For all post-war censuses the value similar nature or commonly associated in production. An establishment is classified to a trade if its output of principal products of that trade accounted for a grea-ter proportion of the value of its output than did its of sales was the net selling value, that is, the amount charged to customers, whether on an exworks or delivered basis, and net of any trade discounts, agents' commissions, allowances for reoutput of principal products of any other trade. turnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms The establishment: The basic unit for the collection were required to give the f.o.b. value. of information is generally the establishment which in most cases comprises the whole of the premises Gross output of a trade is the total value of goods under the same ownership or management at a parti-cular address (e.g., a factory). Offices, ware-houses and other ancillary places of business sit-uated apart from the producing works are included made and other work done during the year; this means the value of sales and work done during the year adjusted for changes in the values of stocks. Net output is the amount left after deducting from the

in the return for the works. value of gross output the aggregate of the cost of materials and fuel used and the amount paid for work Larger establishments and small firms: Larger establishments are those which employed more than 10 per-sons on the average during the year; small firms are those employing on the average 10 or fewer persons. given out and, for 1951, any transport payments included in firms' returns. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, Working proprietors are proprietors of businesses rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met as well as depreciation and profits.

other than limited companies, and include members of their families who work in the business without receiving fixed wages or salaries. Any persons work-ing less than half the normal hours are excluded.

Persons employed: Administrative employees include directors other than those paid by fee only, managers, superintendents and works foremen; research, experi-mental, development, technical and design employees (other than operatives); draughtsmen and tracers; and travellers and office (including works office) employees. Operatives include all other classes of employees, that is, broadly speaking, all manual workers.

All these figures exclude canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return who are shown separa-tely as excluded employees.

Figures for employees include only persons on pay-roll (that is whose National Insurance cards were held by the firm), whether full-time or parttime employees.

Outworkers, who are shown separately. are persons employed by the firm who work on materials supplied by the firm, but do not work on the premises; operatives directly employed who work out of doors (e.g., maintenance workers) and sub-contractors are not included as outworkers.

Wages and salaries include all overtime payments, Table 6: Specialist producers refer to those estabbonuses, and commissions, without any deduction for income tax, insurance, contributory pensions, etc. lishments 50 per cent. or more of whose total output by value is accounted for by the groups of products They exclude payments to working proprietors. specified.

Capital expenditure: Expenditure on plant, machinery and vehicles relates to expenditure charged to capital account during the year of return, including transport and installation costs involved. Expenditure on new building work is similarly that charged to capital account during the year.

Materials and fuel: The cost of materials and fuel pur-chased includes all purchases during the year of mater-ials for use in production and of fuel (including oil, gas. and electricity for all purposes. including heat-Table 10 shows the sales by establishments in the trade of products other than those regarded as principal products of the trade. Table 20 (or 20(i)) shows sales by establishments in gas, and lighting); all packing materials, including the full cost of returnable containers when first purchased: workshop materials; office materials; water charges; materials for repairs to firms' own build-ings, plant and vehicles when carried out by the trade of products, whether principal products or not, and broadly the aggregates here are equal to the corresponding figures in Table 8 (or 8(i)) less those in Table 9, plus those in Table 10.

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Customs and Excise Duty paid on materials purchased is included in the cost of materials, but where it is especially important separate figures are shown.

Later reports: Reports will be published later summarising the main census results and giving in-formation about power equipment and fuel consumption.

Disclosure of information: The report has been prepared in conformity with the disclosure provisions of the Statistics of Trade Act, 1947. Figures have been combined with others of a similar nature in certain cases where publication of separate details might disclose the operations of an individual firm. ymbols used: '...' for 'Not available', '-' for 'Nil or negligible (less than half the final digit shown)'

The figures in the tables have been rounded off to the nearest final digit, and there may be an apparent slight discrepancy between the sums of the constituent items and the totals shown.

Tables 1 to 17 show figures for the United Kingdom (or Great Britain).

Tables 18 to 26 are country tables and give, where practicable, separate details for England and Wales, Scotland and Northern Ireland.

Table 8 (or 8(i)) shows the total sales of principal products of the trade, and includes therefore the sales of these products returned by establishments whether classified to the trade or to other trades. Those produced by establishments in other trades are shown in Table 9.

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