## BOARD OF TRADE

## The Report on the Census of Production for 1954

## Volume 1: Industry K

ABRASIVES

Presented by the Board of ofradêMo Pazliament in pursuance of the Statistics of Trade Act, $19 \mathrm{Kon}_{18}$ ge11 Geo. 6 Ch. 39, Sec. 7)

## LONDON: HER MAJESTY'S STATIONERY OFFICE

## The Report on the Census of Production for 1954

## VOLUME 1 , INDUSTRY K

## ABRASIVES

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

This industry corresponds to minimum list heading $29(1)$ in the Standard Industrial Classification Any establishments in this industry in Northern Ireland in 1948 and 1951 are excluded.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

The following notes describe terms in general use
in the tobbes of the report. More detailede explona-
tions of the terms used and a description of the scope tions of the terms used and a description of the scope
and method of taking the census are qiven in the sear-
ate booklet entitled

net).
Industrial Classification: Establishments are classif-
ied to induatries according to the nature of their out-
 Standard Industrial Classification. Certain products
are identified as the principal products of individul
induatries the princial industries. the princinal products for a qiven industry
ineing of a similar nature or commonly associated in pro-
 industry if its output of the principal products of that
industry accounted for a greater proportion of the value
of its output than did its output of the principal proof its output than did its
ducts of any other industry.
Specialist producers normally comprise those establish
ments 50 per cent. or more of whose total output ments 50 per cent. or more of whose total output by
value s acconted for by the characteristic products o the specialist group.
Intermediate products: For some industries figures are
given showing the total
quantities made during the year go intermediate products, is e. products which may be
of
further processed in the estabis shments in which the further processed in the establishments in which the
are produced. Larger establishments: The information given in the re-
port relates mainly to 'Iarger establishments. port relates mainly to 'iarger establishments ', i.e.
establishments of firms employ ing on the average more than 10 persons. In Thost cases an es tablishment com-
prises the whole of the premises under the same ownership or management at a particular address (e.g.o. a mine
or fact ory)
Offices. other ancillary places of business situated apart from
the producing works are not reagrded as separate estabSmall firms are those employing on the average 10 . Small firms
fever persons.
Table 1 are normally obtained by increasing given in lems shown in the same proportion as total employment. Gross output (procuction) is the total value of goods
made and other work done during the year: it it is obtained by adjusting the value of sales and work done during
the year for changes in the value of stocks of product on hand for sale and work in progress.
Net output is the amount left after deducting from the
value of gross output the aggregate of the cost of mat
erials and

 mages. salaries, rents, rates and taxes. advertising and
other selling expenses and all other similiar charges
have to be met. as well as depreciation and profits. Sales means sales during the year of goods made in the
estabilizhent covered by the return or made on conniss. ion for it, whether produced in the year or no. Th
value of soles is the net selling value, i.e. the
amount


Materials end fuel. The total cost of materials and
fuet purchased inciudes all purchases during the year
of materials for use in productiona, and of fuel (includfuel purchased includes all purchases during the year
ing oil, gas and electricity) for all purposes: packing



 obtained by adius ing purchases for changes during the Stocks: Firms were required to give stocks of materials
and fuet. products on hand for sale. and work in proress. at income tax values.
Customs and Excise Duty paid on materials purchased is
normally included in the cost of materials. Finished goods are similarly valued as they mere sold. Runtr-paid
or duty-free. ducted in arriving at net output.
 and operatives. but excludes outworkers, canteen employ-
ees and persons engaged in merchanting or any other ac-
tivity not covered by a firm s return, who are tho tive and persons engaged in merchanting or any other ac-
tivity not covered by ofirms return. Who are shown
 suns on che pay-rds we he hel
sull-time or part-time.
horking proprietors are proprietors of businesses other
 familiies who worked in the bus iness without rece iving
fixed wages or salaries. Any persons working less than fixed wages or salaries. Any persons. working Les than
hal the normal hours are excluded.
Ireland diner Northern
directors of limited companies (other than those Ireland directors of 1 imi ted companid.
paid by fee only) are also included.
Administrative, teccnical and clerical employees include
directors, other than those paid by fee only (except in directors, other than those pald fy fee only (except in
Northern Ireland): managers. superintendents and works foremen: research, experimental, developenens. technical
and design employees (other than operatives ) : draugh tsand
and and tracerse travellers; and office (including
mork office) employees. Operatives include all other classes
broadly speaking, all manual workers. Outworkers are persons employed by the firm who work on Wages and salaries include all overtime payments, bonus-
 Capital expenditure includes expenditure on new building work, and on plant. machiner expand vehicles. charged to to
capital account during the year. including any transport
 ture in respect of establishments in Great Britain which
had not bequn prouction be fore the end of the year
(which has not previously been included in the Census of (hinch has not proviously been included in the
(roduction reports for individual industries) Symbols used:
for nil or negligible (less than half the final
here figures are rounded, e.g.. given to the nearest $£$ thousand. there may be apparent slight discrepan-
cies between the sums of constituent items and the totals shown. In some cases, figures have been combined "ith others of a similar nature where publication of
separate de tails iight disclose information relating to
an individual undertaking.

| Industry summary: Estimates for the industry as a whole |
| :--- |
| TABLE 1 |

(a) Owing to the risk of disclosure of information relating to individual firms particulars for Wales can
be given seartely,
(b) Capital expenditure on new building work, plant. .achinery and vehicles. (including (except in 1948 )

Capital expendi ture on new building work. plant, machinery and vehicles. (including (except in 1948 )
that incurred for establishments not yet in production). less amounts received for plant. machinery
and vehicles disposed of.

| Summary of returns received |
| :--- |
| TABLE 2 |

(a) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold.
For subsequent years gross output includes payments to other firms and undertakings and to firms own
(b) Payments to ther firms and undertakings and to firms. sinn separate transport organisations. For the
b) Payments to other firms and undertaking and to firms' onn separate transport organisations. For the
year 1948 payments cover only transport outwards of finished goods sold For subsequent years they
cone
cover payments for trangport of both finished goods
(c) Number in week ender September 25 , 194.
(d) Excluding outworkers and including working proprietors
(c) Number in week ended September
(d) Excluding outworke and including working proprietors.
(e) Excluding expenditure for establishents not yet in production
(50229)

| Average number employed (a) | $\begin{array}{\|l} \hline \begin{array}{l} \text { Estab- } \\ \text { lish- } \\ \text { ments } \end{array} \\ \hline \end{array}$ | $\begin{gathered} \text { Gross } \\ \text { output } \end{gathered}$ | $\begin{gathered} \mathrm{Net} \\ \text { مutput } \end{gathered}$ | Employees |  | Wages and salaries |  | Capitalexpenditure(b) | Net output <br> per person <br> employed <br> (a) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Operatives | Others | Operatives | Others |  |  |
|  | Number | £ 000 | £. 000 | Number | Number | £. 000 | £. 000 | \&. 000 | £ |
| 11-24 | 6 | 739 | 196 | 89 | 23 | 45 | 17 | 29 | 1.750 |
| 25-49 | 8 | 1.242 | 568 | 244 | 50 | 103 | 44 | 13 | 1.932 |
| 50-99 | 12 | 1.593 | 865 | 581 | 209 | 262 | 161 | 283 | 1.095 |
| 100-199 | 9 | 2.484 | 1.233 | 861 | 344 | 379 | 240 | 42 | 1.023 |
| 200 and over | 7 | 11.458 | 5.983 | 3.472 | 1.641 | 1.734 | 1.023 | 554 | 1,170 |
| Total | 42 | 17.516 | 8.846 | 5. 247 | 2.267 | 2.522 | 1.484 | 922 | 1.177 |

Analysis according to specialisation within the industry, 1954
Larger establishments in the United Kingdom

|  | Unit | Specialist producers of |  | $\begin{aligned} & \text { Remainder } \\ & \text { of the the } \\ & \text { industry } \end{aligned}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Abrasive wheels <br> discs, segments sharpening other shapes or forms |  |  |  |
| Number of establi shments Total value of sales and work done | £. ${ }^{\text {No }}$ O ${ }^{\circ}$ | 10.680 | ${ }^{13}$ |  |  |
| Total value of sales and work done |  | 10.680 8.670 |  | 1.497 | 17.194 |
|  | ". | 861 $+\quad 247$ | 5. $+\quad 666$ $+\quad 68$ | $\begin{array}{r}1.450 \\ +\quad 150 \\ \hline\end{array}$ | + 1.677 |
| Gross output (production) ${ }^{\text {and }}$ mothange during year | " | a $+\quad 247$ +1.927 | $+\quad 61$ +5.079 | $\begin{array}{r} \\ +\quad 13 \\ \hline 1.510 \\ \hline\end{array}$ |  |
| Purchases of materials and fuel |  | 4.744 | 2.794 |  | 17.443 |
| Stocks of materials and fuel $\quad\left\{\begin{array}{l}\text { at beginning of year } \\ \text { change during year }\end{array}\right.$ | ". | - 1.600 | 5.89 $+\quad 855$ $+\quad 141$ | 159 $+\quad 49$ | $\begin{array}{r}17.443 \\ +\quad 2.504 \\ \hline\end{array}$ |
| Cost of materials and fuel used change during year | ". | - $\begin{array}{r}60 \\ \hline 804\end{array}$ | $\begin{array}{r} \\ +\quad 141 \\ \hline 2.652\end{array}$ | + ${ }^{69}{ }^{6}$ | $\begin{array}{r}\text { a } \\ +\quad 87 \\ \hline 856\end{array}$ |
| Payment for work done on materials given out | .. |  | 2.652 |  | 8,356 |
| Payment for transport |  | 140 | 76 | 91 | 308 |
| Net output |  | 5.981 | 2.347 | 519 | 8.846 |
| Average number of employees | N.. | 3.643 1.714 | 1.425 | $\begin{array}{r}179 \\ 37 \\ \hline 1\end{array}$ | 5. 247 |
| Total employment (a) lothers |  | 5.357 | 1, 1.942 1 | 37 216 | 2.267 7.515 |
| Net output per person employed (a) |  |  |  |  |  |
| Wages and salaries operatives | $\chi^{\prime} 000$ | 1.834 | ${ }^{603}$ | ${ }^{2} 8$ | ${ }_{2}^{1.522}$ |
| Lof others |  | 1.107 | 352 | 25 | 1.484 |
| Capital expenditure (b) New building work (b) |  |  |  |  |  |
| Plant and machinery $\quad \begin{aligned} & \text { acquisitions (b) } \\ & \text { di isposals }\end{aligned}$ | . | 436 | 100 | 26 | 562 |
| Vehicles ${ }_{\text {asem }}$ |  | 69 | 17 | 1 | ${ }_{86}^{8}$ |
| Vehicles disposals $^{\text {d }}$ | . | 20 | 5 |  | 25 |

(a) Excluding outworkers and including working proprietors.
(b) Excluding expenditure for establishments not yet in production.

|  | Quantity | Cost |
| :---: | :---: | :---: |
|  | Th.tons | \&. 000 |
| Materials |  |  |
| Abrasives, crude, ground or graded |  |  |
|  | 5.5 | 79 |
| Emery | 0.7 | 60 |
| Garnet ${ }_{\text {Diamond boart or powder }}$ | .. | 720 |
| Other natural abrasives | 1.0 | 14 |
| Artificial |  |  |
| Aluminium oxide | 4.5 | 440 |
| Crude, unground |  | 369 |
| Ground or graded | 9.2 | 882 |
| Silicon carbide | 7.4 | ${ }_{208}$ |
| Other artificial abrasives | 3.0 | 122 |
|  |  |  |
| Paper of all kinds (excluding packing materials) | $2.580$ | 488 |
|  | Th. 1 b . |  |
| Cotton piece goods | 2.443 .2 | 632 216 |
|  | 672.0 | 113 |
| Vulcanised fibre |  | 27 |
| Bonding materials and adhesives | Tons |  |
| Glue | 1.225 | ${ }_{74}$ |
| Other bonding agents | ... | 573 |
|  | Th. tons |  |
| Scrap metal | 51.2 | 279 |
| Packing materials | $\cdots$ | 1.043 |
| All other purchased materials |  |  |
| Fuel and electricity | 26.0 | 97 |
| Coal | 10.3 | 69 |
| Coke |  |  |
| Liquid fuels (including creosote/pitch mi For use in internal combustion engines | Th.gal. |  |
| Motor spirit (petrol) for use in road vehicles and derv. fuel | 154.0 | ${ }^{30}$ |
| Other | 2.247 .0 | 102 |
| For burning in furnaces, boilers, kilns, etc. | Th.therms |  |
| Gas purchased | 1.876.2 | 98 |
| From Gas Boards <br> From other sources, including other departments of the same firms | Th. k - ${ }^{\text {enh }}$ | - |
| Electricity purchased | Th.kWh. 30.480 | 139 |
| From Electricity Boards From other sources, including other departments of the | So. | . |
| ${ }_{\text {firms }}$ |  | 8.443 |
| Total cost |  |  |

[^0](50229)

| 1951 (b) | 1954 |
| :---: | :---: |
| Number | Number |
| $\begin{aligned} & 5.690 \\ & 2.010 \end{aligned}$ | $\begin{aligned} & 5.247 \\ & 2.267 \end{aligned}$ |
| 7.700 | 7.514 |
| $\varepsilon^{\prime} 000$ | £. 000 |
| $\begin{aligned} & 2.260 \\ & 1.144 \end{aligned}$ | $\begin{aligned} & 2.522 \\ & 1.484 \end{aligned}$ |
| 3. 404 | 4.006 |
| $\varepsilon$ | $\varepsilon$ |
| $\begin{aligned} & 397 \\ & 569 \end{aligned}$ | $\begin{array}{r} 481 \\ \text { 8. } 655 \\ \text { ع } 000 \end{array}$ |
|  | $\begin{aligned} & 104 \\ & \text { Number } \\ & 2.923 \\ & \varepsilon_{2} .000 \end{aligned}$ |
| .. | 22 |

(a) The following persons. not included above, were also employed by larger establishments in this industry
('other workers includes. for example, employees engaged in merchanting).

$$
\begin{array}{ll}
\text { Canteen workers } & 100 \\
\text { Other workers } & \\
\hline 26
\end{array}
$$

(b) Great Britain only.
(c) The figures given relate to larger establishments in Great Britain only

Employment in a specified week (a)
Larger establishments in the United Kingdom

| TABLE 11 |  |  |  | 1954 Numb |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1951 (b) |  |  |  |  |  |
|  | Males | Females | Total | Males | Females | Total |
| Working proprietors | - | - | - | 1 | - | 1 |
| Operatives | 4.760 | 1.145 | 5.905 | 4.479 | 989 | 5.468 |
| Administrative, technical and clerical employees | 1.205 | 824 | 2.029 | 1.411 | 871 | 2.282 |
| Total employees | 5.965 | 1.969 | 7.934 | 5.890 | 1.860 | 7.750 |

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[^0]:    (a) The total quantity

