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BOARD OF TRADE

# THE REPORT ON THE CENSUS OF PRODUCTION FOR 1958

Part 43  
METAL-WORKING MACHINE TOOLS

*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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## NOTES

These notes give only the main information which is needed for interpreting the census figures. Fuller explanations are given in a separate booklet of Introductory Notes (Part 1 of the Report on the Census of Production for 1958).

### CHANGES IN THE 1958 CENSUS

Some changes were introduced in the 1958 census, which affect the comparability between 1954 and 1958 figures.

Returns in full detail were required only from firms employing 25 or more persons, instead of, as previously, from firms employing 11 or more persons.

The coverage of firms' returns for 1958 was in many cases rather wider than for 1954. In both years the census was based on the establishment, comprising in most cases the whole of the premises under the same ownership or management at a particular address (e.g. a factory or mine); but offices, warehouses, laboratories, etc. at addresses separate from the works were treated as part of the establishment. For 1958, but not for 1954, firms were asked to include also, in all sections of their returns, particulars relating to merchanting or factoring, canteens operated by them, and other ancillary activities, such as bottling, packing, and the manufacture of containers for packing their own products, whether or not these activities were carried on at the same address as the works, unless

they were conducted by a separate company, or by a separate department with a separate set of accounts; building and engineering maintenance departments were treated similarly. Selling and transport departments were treated in this way both for 1954 and 1958. While the effect of including these further ancillary activities was generally to produce higher figures for employment etc., the reporting of separate figures for merchant goods led to the exclusion of some firms who proved to be merchants with only minor productive activities.

Changes made for 1958 in the instructions governing the making of returns for two or more establishments operated by the same firm permitted combined returns to be made more freely than in previous censuses. Combined returns were accepted covering establishments in the same census industry, and situated in the same country (i.e. England, Scotland or Wales).

The 1954 figures have been re-tabulated to correspond as closely as possible to those for 1958, but because of the changes described above the correspondence is not always exact.

### TERMS USED IN THE CENSUS REPORTS

#### CAPITAL EXPENDITURE

The expenditure on new building work shown excludes the cost of land and existing buildings purchased; for plant, machinery and vehicles both new and second-hand items are included. The value is that charged to capital account during the year, including any transport and installation cost involved. Capital expenditure in respect of establishments in Great Britain where production had not started before the end of the year is included in Table 1.

CHARACTERISTIC PRODUCTS (See the description of the method of classification before List of Tables)

#### EMPLOYMENT

##### (i) Working proprietors

These include all persons regarded as 'self-employed' for National Insurance purposes, and members of their families who worked in the business without receiving fixed wages or salaries; but persons working less than half the normal hours are excluded.

##### (ii) Employees

Employees are classified under the two main headings of (a) administrative, technical and clerical employees and (b) operatives. The figures relate to persons on the pay-roll (i.e. whose National Insurance cards were held by employers), whether full-time or part-time employees. The figures for 1958 include, but those for 1954 exclude, persons engaged in merchanting or factoring, and canteen workers.

Administrative, technical and clerical employees include managers, superintendents, and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work, stores, warehouses and, for 1958, canteens; inspectors, viewers and similar workers; maintenance workers; and cleaners. Operatives engaged in outside work of erection, fitting etc. are also included, but outworkers (i.e. persons employed by the firm who worked on materials

supplied by the firm in their own homes, etc.) are excluded.

##### (iii) Total employment

This is the sum of the average number of employees and the number of working proprietors; outworkers are excluded.

#### ENTERPRISE

The term enterprise is used in this report to mean one or more firms under common ownership or control as defined in the Companies Act, 1948. An enterprise normally consists either of a single firm, or of a holding company together with its subsidiary companies.

#### ENTRIES

The number of entries shown in Tables 4, 5 and 7 is the number of returns on which figures against a particular output or production heading were recorded. The number of entries is less than the corresponding number of establishments to the extent that combined returns were made covering more than one of the establishments concerned.

#### ESTABLISHMENT

In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g. a factory or mine). Offices, warehouses, laboratories and other ancillary places of business at a separate address from the works were treated as part of the establishment.

#### INTERMEDIATE PRODUCTS

For some industries figures are given showing the total quantities made during the year of important intermediate products, i.e. products which may be further processed in the establishments in which they are produced, whether or not they are also sometimes sold. They include also goods produced from materials supplied by other firms.

#### MATERIALS AND FUEL

The totals shown include the cost of all purchases of materials and components for use in production, and of fuel (including oil, gas and electricity) for all purposes including heating, lighting and transport (where carried out by firms' own staff included in the return); all packing

materials, including the full cost of returnable cases and containers when first purchased; workshop materials; office materials; water charges; materials for repairs to firms' own buildings, plant and vehicles when carried out by their own work-people included in the return; consumable tools; and parts for machinery purchased during the year as replacements. Purchases of goods for merchandising or factoring, and canteen supplies, are included for 1958 but not for 1954. Materials supplied by customers for processing are excluded for both years.

The values shown include any duty paid (less rebate, etc.) but exclude trade discounts allowed. The cost of transport was included only if included in the cost of materials as invoiced; amounts paid to transport organisations, including firms' own separate transport organisations, for delivery of materials and fuel are therefore excluded. Materials purchased overseas were entered at their c.i.f. cost plus any duty if the cost of transport from the docks was not included in the invoiced price, and at their full delivered cost if invoiced 'carriage paid home'.

#### NET OUTPUT

The net output of an industry represents the value added to materials by the process of production and includes for 1958 the gross margin on any merchanted or factored goods sold; it constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses, and all other similar charges have to be met, as well as depreciation and profits. There is no appreciable duplication in net output.

Net output was normally obtained by taking the total value of sales and work done (including, for 1958, the value of merchanted goods sold and canteen takings); adding the value of stocks at the end of the year and deducting their value at the beginning of the year; and deducting also the cost of materials and fuel purchased (including, for 1958, the value of goods purchased for merchandising and canteen supplies), payments for work given out to other firms, and payments for transport. The net amount of duty paid was deducted, and the net amount of subsidy received added.

#### NET OUTPUT PER PERSON EMPLOYED

The figures for net output per person employed are derived by dividing net output by total employment (see above).

PRINCIPAL PRODUCTS (See the description of the method of classification before List of Tables)

#### SALES

Sales include goods made by the business covered by the return, those made for it by out-workers or by other firms from materials given out to them (sometimes described as goods made on commission), and waste products sold. Any machinery or other capital items produced for use in the business covered by the return are also included, the value being that adopted in the firm's capital account for income tax purposes. Goods sold without being subjected to any manufacturing process (merchanted or factored) and canteen takings are included for 1958 but not for 1954; where the total sales of merchanted or factored goods were less than £5,000, firms were permitted to include them with the figures for sales of goods of their own production.

The value shown for sales is the net selling

#### SYMBOLS USED

The following symbols are used throughout the reports:

- .. for not available
- for nil or negligible (less than half the final digit shown)

value, defined as the amount charged to customers whether on an ex-works or delivered basis, net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packing materials is included. Goods charged on a delivered basis to customers overseas, are included at the f.o.b. value. For work done on commission or for the trade, the value shown is the net amount charged. With a few exceptions, receipts for business and other services are not included.

To the extent that the finished products of one establishment constitute the materials purchased by another, total figures of the value of sales (and of materials and fuel purchased) include an element of duplication.

#### STOCKS AND WORK IN PROGRESS

The values shown are the income tax values of stocks of products on hand for sale, and of materials and fuel, at the beginning and end of the year of return. For 1958, but not for 1954, they include any stocks of goods held for merchandising or factoring. The value of work in progress at the two dates is also usually shown. This excludes any progress payments made to subcontractors, and no deduction is made on account of progress payments received.

#### TRANSPORT PAYMENTS

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payments to other firms, and to any separate transport organisation of the same firm, not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, that is railways, road haulage, canals, coast-wise shipping, air, etc. Payments made for sea freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded.

#### WAGES AND SALARIES

These are the amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. is excluded.

Figures are also shown for average salaries etc. paid per head for the week ended 25th October, 1958. For staff paid monthly, the figures are based on payments made in October, 1958. Where payments related to periods other than a week or month, an appropriate proportion was returned. Only those bonuses and commissions actually paid in the period are included.

#### WORK GIVEN OUT

The figures shown represent the total amount paid for work done by other firms on materials supplied to them, and also by firms' own establishments for which separate returns were made. They do not include payments to individual outworkers or payments for business and other services.

#### ROUNDING OF FIGURES

The figures in the tables have, where necessary, been rounded to the nearest final digit. There may, therefore, be apparent slight discrepancies between the sums of the constituent items and the totals shown.

# The Report on the Census of Production for 1958

## Part 43. METAL-WORKING MACHINE TOOLS

This report on the Metal-working Machine Tools Industry relates to establishments engaged in the manufacture of metal-working machine tools, including forging machines and hammers, extrusion and other presses, wire-drawing machines and sheet metal working machines; all types of electric and gas welding and cutting machinery and equipment (except tube-welding machines) and welding electrodes and rods. Metal manufacturing plant, rolling mills, wire rope making machines and portable power tools are excluded. The industry corresponds to minimum list heading 332 of the second (1958) edition of the Standard Industrial Classification, which has been used for the first time in the 1958 Census.

This industry corresponds to part of Industry 4C (Machine Tools) in the reports on the last detailed Census of Production, for 1954; automatic wire-working machinery, formerly reported on in Industry 4I (Mechanical Engineering (General)), is now included in this industry. The items excluded from this report are classified and reported on as follows:- metal manufacturing plant to minimum list heading 341 (Industrial Plant and Steelwork Report, Part 51); rolling mills, wire rope making machines, tube-welding machines and portable power tools to minimum list heading 339 (Miscellaneous (Non-electrical) Machinery Report, Part 50).

For 1958, returns in full detail were required only from firms employing twenty-five or more persons and most of the tables in this report relate only to these larger firms. This is an important change from previous censuses when returns in full detail were required from firms employing eleven or more persons on productive work. Estimates for the industry as a whole are given in Table 1.

This report includes an additional table (Table 4 Supplement) derived from short period information which supplements the broader figures for sales given in Table 4.

The figures given for 1954 correspond as closely as possible to those collected for 1958 but the correspondence is not exact, especially in respect of the small firms who gave only limited information. Some other changes introduced in the 1958 Census also affect the comparability between 1954 and 1958 figures; these are explained in the notes prefacing this report.

There were no establishments in this industry in Northern Ireland in 1954 or in 1958.

#### TREATMENT OF PARTS

In the 1958 census reports for this and other mechanical engineering industries, a distinction is made between parts sold in association with the sale of complete machines, and other parts sold. The only parts shown in Table 4 are those included on returns (whether classified to this or to other industries) which also showed sales of metal-working machine tools; where the return was classified to another industry, these parts are also shown, together with the complete machines, in Table 5.

Parts of metal-working machine tools included on returns which showed no sales of the complete tools are treated as principal products of General Mechanical Engineering (Part 53) whether made by general engineering firms or by specialist manufacturers of other types of machinery.

Sales of all parts of metal-working machine tools (i.e. whether or not sold in association with the sale of the complete tools) are brought together in Table 9 at the end of this report.

This industry is defined in terms of its principal products' which are those shown in Table 4. A census return was classified to this industry if the sales of the principal products of this industry (excluding parts, etc. as mentioned below) accounted for a greater proportion of its output than the principal products of any other industry (with corresponding exclusions). Where, however, the application of this rule would have resulted in a change of classification between 1954 (on the revised basis) and 1958, the return was classified to the same industry as for 1954 unless the output of principal products in the new industry was one third more than in the old; this modification of the general rule was designed to avoid discontinuities as the result of marginal changes of output between the two censuses. Sales of machinery parts, and work done (other than structural work), including repair work, were not taken into account in classifying returns except in cases where they exceeded 80 per cent. of the total output of the return (in which case the return was classified to the General Mechanical Engineering Industry (Part 53)) or where the return would otherwise have been classified outside the mechanical engineering group of industries. Sales of merchantable products and of non-specific items such as waste products and canteen takings were also not taken into account in classifying returns.

A similar procedure was followed in classifying to the sub-divisions of the industry shown in Table 2, the sub-divisions being defined in terms of their 'characteristic products'. The numbers shown in the left hand column of Table 4 identify the sub-division of which the item is a characteristic product. The total value of sales of characteristic products shown in Table 2 includes, besides the sales of complete machine tools which were taken into account in determining the classification of the return, sales of parts of machine tools and the value of installation work reported on returns classified to the sub-division; but these items were not taken into account in determining the classification to sub-divisions.

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## Industry summary: United Kingdom

TABLE 1  
Estimates for all firms (a)

|   | Unit                                     | 1954   | 1958   |
|---|--|--------|--------|
| Number of enterprises                         | No.                                      | ..     | 334    |
| Number of establishments                      | "  | ..     | 418    |
| Sales   | { goods produced and work done           | £'000  | 92,618 |
|   | { merchantable goods and canteen takings | "      | ..     |
| Purchases of materials and fuel (b)           | "  | 34,952 | 65,768 |
| Products on hand for sale (b)                 | { change during year                     | "      | - 282  |
|   | { at end of year                         | "      | 6,280  |
| Work in progress                              | { change during year                     | "      | + 176  |
|   | { at end of year                         | "      | 14,890 |
| Stocks of materials and fuel (b)              | { change during year                     | "      | - 905  |
|   | { at end of year                         | "      | 9,546  |
| Payments for work done on materials given out | "  | 2,561  | 2,751  |
| Payments for transport                        | "  | 810    | 1,058  |
| Net output                                    | "  | 53,284 | 66,332 |
| Average number employed (c)                   | { operatives                             | Th.    | 45.1   |
|   | { other employees                        | "      | 12.6   |
|   | { total, including working proprietors   | "      | 57.7   |
| Wages and salaries                            | { of operatives                          | £'000  | 22,304 |
|   | { of other employees                     | "      | 8,119  |
| Capital expenditure (d)                       |  |        |        |
| New building work                             | "  | 788    | 1,044  |
| Plant and machinery                           | { acquisitions                           | "      | 2,285  |
|   | { disposals                              | "      | 207    |
| Vehicles                                      | { acquisitions                           | "      | 287    |
|   | { disposals                              | "      | 103    |

- (a) For 1958, estimates in respect of returns from small firms and unsatisfactory returns accounted for about 3 per cent. of the total figures in which they were incorporated. A summary of the detailed returns received is given in Table 2.
- (b) Goods for merchanting and canteen supplies are included for 1958 but excluded for 1954.
- (c) Persons engaged in merchanting or factoring and canteen workers are included for 1958 but excluded for 1954.
- (d) For 1958 including expenditure in Great Britain for establishments not yet in production, no expenditure was reported in 1954.

## Analysis by sub-divisions of the industry

TABLE 2

Firms employing 25 or more persons: United Kingdom (a)

|   | Unit  | Sub-divisions of the industry (b)   |        |                                     |        | Total  |         |
|---|-------|---|--------|-------------------------------------|--------|--------|---------|
|   |       | Metal-working machine tools<br>01   |        | Welding and cutting machinery<br>02 |        | 1954   | 1958    |
|   |       | 1954  | 1958   | 1954                                | 1958   |        |         |
| Number of enterprises (c)                     | No.   | 176   | 169    | 29                                  | 31     | 204    | 199     |
| Number of establishments                      | "     | 239   | 240    | 35                                  | 40     | 274    | 280     |
| Sales   | £'000 | 77,088  | 90,396 | 12,521                              | 18,978 | 89,610 | 109,374 |
|   |       | { goods produced and work done<br>{ merchantable goods and canteen takings  |        |                                     |        |        |         |
| Sales of characteristic products              | "     | 57,430  | 67,439 | 9,481                               | 14,243 |        |         |
|   |       | { complete machines<br>{ parts and installation work                        |        |                                     |        |        |         |
| Purchases of materials and fuel (d)           | "     | 27,105  | 51,023 | 6,711                               | 12,605 | 33,816 | 63,628  |
| Products on hand for sale (d)                 | "     | - 78  | +1,391 | - 195                               | + 269  | - 273  | + 1,660 |
|   |       | { change during year<br>{ at end of year                                    |        |                                     |        |        |         |
| Work in progress                              | "     | 4,938   | 6,992  | 1,139                               | 2,334  | 6,076  | 9,326   |
|   |       | { change during year<br>{ at end of year                                    |        |                                     |        |        |         |
| Stocks of materials and fuel (d)              | "     | - 78  | - 521  | - 148                               | + 23   | - 876  | - 498   |
|   |       | { change during year<br>{ at end of year                                    |        |                                     |        |        |         |
| Payments for work done on materials given out | "     | 2,176   | 2,005  | 302                                 | 657    | 2,477  | 2,661   |
| Payments for transport                        | "     | 580   | 688    | 204                                 | 336    | 784    | 1,023   |
| Net output                                    | "     | 46,343  | 55,404 | 5,210                               | 8,777  | 51,553 | 64,182  |
| Average number employed (e)                   | No.   | 39,726  | 40,218 | 3,946                               | 4,814  | 43,672 | 45,032  |
|   |       | { operatives<br>{ other employees<br>{ total, including working proprietors |        |                                     |        |        |         |
| Net output per person employed                | £     | 928   | 1,052  | 877                                 | 1,162  | 923    | 1,065   |
| Wages and salaries                            | £'000 | 19,846  | 24,559 | 1,755                               | 2,816  | 21,601 | 27,375  |
|   |       | { of operatives<br>{ of other employees                                     |        |                                     |        |        |         |
| Wages and salaries per head                   | £     | 500   | 611    | 445                                 | 585    | 495    | 608     |
|   |       | { operatives<br>{ other employees   |        |                                     |        |        |         |
| Capital expenditure (f)                       | £'000 | 621   | 767    | 141                                 | 116    | 762    | 883     |
| New building work                             | "     | 1,911   | 2,652  | 299                                 | 377    | 2,210  | 3,029   |
| Plant and machinery                           | "     | 176   | 164    | 24                                  | 13     | 200    | 177     |
|   |       | { acquisitions<br>{ disposals   |        |                                     |        |        |         |
| Vehicles                                      | "     | 226   | 327    | 52                                  | 114    | 278    | 441     |
|   |       | { acquisitions<br>{ disposals   |        |                                     |        |        |         |

(a) The following information relates to small firms (employing fewer than 25 persons) in this industry:

|  |       |
|--|-------|
|  | 1958  |
| Number of returns  | 102   |
| Average number of persons employed including working proprietors |       |
| Males  | 1,071 |
| Females  | 136   |

(b) The method of classifying returns to sub-divisions of the industry is explained at the beginning of this report; the characteristic products of each sub-division are identified in Table 4.

(c) The sum of the figures for the sub-divisions exceeds the total for the industry to the extent that enterprises made returns for more than one sub-division.

(d) Goods for merchanting and canteen supplies are included for 1958 but excluded for 1954.

(e) Persons engaged in merchanting or factoring and canteen workers are included for 1958 but excluded for 1954.

(f) Excluding expenditure at establishments not yet in production.

## Analysis by size of enterprise within the industry, 1958

TABLE 3

Firms employing 25 or more persons: United Kingdom

| Average number employed by the enterprise in this industry (a) | Enterprises | Establishments | Total sales (b) | Net output | Employees  |        | Wages and salaries |        | Capital expenditure (c) | Net output per person employed (a) |
|--|-------------|----------------|-----------------|------------|------------|--------|--------------------|--------|-------------------------|------------------------------------|
|  |             |                |                 |            | Operatives | Others | Operatives         | Others |                         |                                    |
|  |             |                |                 |            | Number     | Number | £'000              | £'000  |                         |                                    |
| 25 - 49  | 40          | 44             | 3,158           | 1,497      | 1,137      | 325    | 653                | 242    | 96                      | 1,024                              |
| 50 - 99  | 50          | 55             | 6,752           | 3,631      | 2,640      | 845    | 1,591              | 703    | 407                     | 1,041                              |
| 100 - 199  | 35          | 43             | 8,710           | 4,732      | 3,643      | 1,207  | 2,033              | 968    | 301                     | 976                                |
| 200 - 299  | 22          | 27             | 10,754          | 5,183      | 3,877      | 1,318  | 2,353              | 976    | 327                     | 998                                |
| 300 - 399  | 17          | 28             | 12,719          | 6,813      | 4,550      | 1,493  | 2,732              | 1,176  | 418                     | 1,127                              |
| 400 - 499  | 7           | 12             | 7,078           | 3,890      | 2,661      | 677    | 1,750              | 621    | 244                     | 1,165                              |
| 500 - 749  | 13          | 22             | 16,089          | 7,748      | 6,426      | 1,849  | 3,697              | 1,474  | 679                     | 936                                |
| 750 - 999  | 4           | 7              | 7,576           | 3,838      | 2,433      | 863    | 1,644              | 655    | 230                     | 1,164                              |
| 1,000 - 1,499  | 3           | 4              | 5,988           | 3,348      | 2,701      | 884    | 1,470              | 613    | 103                     | 934                                |
| 1,500 - 2,499  | 5           | 25             | 22,101          | 11,802     | 7,504      | 2,813  | 4,851              | 2,260  | 711                     | 1,144                              |
| 2,500 - 4,999  | 3           | 13             | 29,743          | 11,698     | 7,460      | 2,930  | 4,603              | 2,229  | 839                     | 1,126                              |
| Total  | 199         | 280            | 130,669         | 64,182     | 45,032     | 15,204 | 27,375             | 11,917 | 4,354                   | 1,065                              |

(a) Including working proprietors.

(b) Value of sales of goods (including merchantable goods), work done, and canteen takings.

(c) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles. Excluding expenditure for establishments not yet in production.

Sales of principal products of the industry by larger firms, including sales by establishments classified to other industries

TABLE 4 Firms employing 25 or more persons: United Kingdom

| Industry sub-division (a) | 1954   |        | 1958     |        | Enter-prises | Entries |
|---------------------------|--|--------|----------|--------|--------------|---------|
|                           | Quantity   | Value  | Quantity | Value  |              |         |
|                           | Number   | £'000  | Number   | £'000  | Number       | Number  |
|                           | COMPLETE MACHINES  |        |          |        |              |         |
|                           | Machine tools, metal-working (excluding die-casting machinery; portable power tools; and small tools for use in machine tools; but including hammers and forging machines; tin box and can making machinery; straightening rolls and other plate and sheet metal working machines; tube and section cold forming machines, extrusion presses and swaging machines for tubes; and wire-drawing, winding, and working machines, except insulated electrical cable making machines) |        |          |        |              |         |
| 01                        | New  | 63,927 | ..       | 77,154 | 309          | 347     |
| 01                        | Reconditioned  | 2,930  | ..       | 2,478  | 84           | 91      |
| 01                        | Unclassified machines and parts  | 370    | ..       | 972    | 13           | 13      |
|                           | Welding and cutting machinery and equipment, other than tube making  |        |          |        |              |         |
|                           | Electric   |        |          |        |              |         |
| 02                        | Arc welding  | 5,926  | 1,625    | 8,339  | 15           | 15      |
|                           | Resistance welding   |        |          |        |              |         |
| 02                        | Spot and projection  | 3,152  | 775      | 3,032  | 12           | 13      |
| 02                        | Other  | 4,226  | 1,017    | 2,794  | 15           | 16      |
|                           | Gas cutting and welding machines, including welding and cutting torches  |        |          |        |              |         |
| 02                        | Other descriptions   | ..     | 1,903    | ..     | 11           | 13      |
|                           | Other descriptions   |        |          |        |              |         |
| 02                        | Other descriptions   | ..     | 8,447    | ..     | 19           | 19      |
|                           | PARTS of metal working machine tools and welding and cutting machinery sold in association with the sale of complete machines (b)  |        |          |        |              |         |
| 02                        | WELDING ELECTRODES (other than carbon and graphite) and welding rods   | ..     | 5,737    | ..     | 25           | 25      |
|                           | OTHER PRODUCTS   |        |          |        |              |         |
|                           | WASTE PRODUCTS   |        |          |        |              |         |
|                           | Iron and steel scrap   |        |          |        |              |         |
|                           | Brass scrap  |        |          |        |              |         |
|                           | Copper scrap   |        |          |        |              |         |
|                           | Other scrap metal  |        |          |        |              |         |
|                           | Other waste products   |        |          |        |              |         |
|                           | WORK DONE  |        |          |        |              |         |
|                           | Research and development work done for customers   |        |          |        |              |         |
|                           | Other work done on commission  |        |          |        |              |         |
|                           | Total  | 87,670 | 109,034  | ..     | ..           | ..      |
|                           | Sales in other industries (see Table 5)  |        |          |        |              |         |
|                           | Principal products of this industry sold by establishments in the industry   |        |          |        |              |         |
|                           | Total  | 14,212 | 19,110   | ..     | ..           | ..      |
|                           | Total  | 73,458 | 89,924   | 199    | 227(c)       | ..      |

For footnotes to the table, see opposite page

Manufacturers' deliveries of metal-working machine tools (a)

TABLE 4 SUPPLEMENT All firms in the United Kingdom

|  | 1954   | 1958   |
|--|--------|--------|
|  | £'000  | £'000  |
| Automatics   | 5,007  | 5,180  |
| Boring   | 4,592  | 7,453  |
| Broaching  | 452    | 604    |
| Drilling   | 4,343  | 3,677  |
| Gear cutting   | 1,670  | 2,166  |
| Grinding, lapping and honing   | 6,975  | 8,091  |
| Capstan and turret   | 5,859  | 5,793  |
| Lathes   | 7,655  | 9,387  |
| Milling  | 7,371  | 7,792  |
| Planing  | 1,166  | 1,965  |
| Presses  | 8,538  | 12,763 |
| Sawing   | 696    | 854    |
| Shaping and slotting   | 1,121  | 1,007  |
| Shearing and plate and sheet metal working   | 1,858  | 4,312  |
| Screwing and threading   | 745    | 859    |
| Other, including transfer machines, complete, and unit heads for transfer machines | 7,547  | 12,012 |
| Total  | 65,596 | 83,915 |

(a) This table, which is derived from short period information, supplements the information collected in the 1958 Census and should be read in conjunction with Table 4. It refers to the calendar years 1954 and 1958; goods merchanted or factored (sold without being subjected to any further manufacturing process); reconditioned machines; and parts of machine tools are excluded.

Footnotes to Table 4

- (a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are total sales by larger firms, not merely sales by establishments classified to the sub-division.
- (b) For details of these parts see Table 9.
- (c) This figure represents the total number of returns made by larger firms in this industry, which is less than the total number of establishments shown in Table 2 on account of combined returns covering more than one establishment.

Sales of principal products of the industry by establishments  
classified to other industries

TABLE 5

Firms employing 25 or more persons: United Kingdom

|  | 1954     |        | 1958     |        |         |  |
|--|----------|--------|----------|--------|---------|--|
|  | Quantity | Value  | Quantity | Value  | Entries | Principal industries in which produced (a) |
|  | Number   | £'000  | Number   | £'000  | Number  |  |
| Machine tools, metal-working (excluding die-casting machinery; portable power tools; and small tools for use in machine tools; but including hammers and forging machines; tin box and can making machinery; straightening rolls and other plate and sheet metal working machines; tube and section cold forming machines, extrusion presses and swaging machines for tubes; and wire-drawing, winding and working machines, except insulated electrical cable making machines). |          |        |          |        |         |  |
| New  |          |        |          |        |         |  |
| Complete   | ..       | 9,335  | ..       | 12,980 | 166     | 44, 50, 52, 63                             |
| Parts (b)  | ..       | 1,690  | ..       | 1,906  | 99      | 44, 46, 50, 53                             |
| Unclassified   | ..       | 370    | ..       | 53     | 5       | 50, 75                                     |
| Reconditioned  | ..       | 772    | ..       | 532    | 32      | 50, 53, 56, 63                             |
| Welding and cutting machinery and equipment, other than tube making  |          |        |          |        |         |  |
| Electric   |          |        |          |        |         |  |
| Arc welding, complete machines and parts (b)   | ..       | 303    | ..       | 99     | 9       | 50, 53, 56                                 |
| Resistance welding   |          |        |          |        |         |  |
| Spot and projection  |          |        |          |        |         |  |
| Complete machines  | 365      | 113    | 295      | 101    | 5       | 56, 59                                     |
| Parts (b)  | ..       | 137    | ..       | 84     | 5       | 56, 59                                     |
| Other  |          |        |          |        |         |  |
| Complete machines  | 3,762    | 532    | 2,355    | 488    | 10      | 41, 56                                     |
| Parts (b)  | ..       | 62     | ..       | 72     | 6       | 56, 65                                     |
| Gas cutting and welding machines, including welding and cutting torches, complete and parts  | ..       | 16     | ..       | 144    | 7       | 50, 128                                    |
| Other descriptions, complete machines and parts  | -        | -      | ..       | 317    | 16      | 44, 50, 63                                 |
| Welding electrodes (other than carbon and graphite) and welding rods   | ..       | 881    | ..       | 2,215  | 15      | 53, 56, 59, 74                             |
| Total  |          | 14,212 |          | 19,110 | ..      |  |

(a) The references given are to the list of industries at the back of this report.

(b) Parts sold in association with the sale of complete machines characteristic of this industry.

## Sales of other than principal products by larger firms in the industry

TABLE 6

Firms employing 25 or more persons: United Kingdom

|  | 1954     |       | 1958     |       |
|--|----------|-------|----------|-------|
|  | Quantity | Value | Quantity | Value |
|  | Th. tons | £'000 | Th. tons | £'000 |
| Iron castings in the rough or machined other than rolls for rolling mills                    | 1.4      | 102   | 5.5      | 504   |
| Engineers' small tools and gauges  | ..       | 46    | ..       | 92    |
| Hard metal tipped tools, tips and inserts, dies and die pellets                              | ..       | 1,040 | ..       | 1,404 |
| Cutting tools other than milling cutters, lathe and planer tools, saws and saw blades        | ..       | 532   | ..       | 890   |
| Moulds and dies other than hard metal  | ..       | 107   | ..       | 242   |
| Lathe chucks   | ..       | 196   | ..       | 237   |
| Jigs and fixtures  | ..       | 811   | ..       | 317   |
| Other tool and work holders except drill chucks  | ..       | 277   | ..       | 953   |
| Milling cutters  | ..       |       | ..       | 256   |
| Lathe and planer tools   | ..       |       | ..       | 101   |
| Press tools  | ..       | 2,915 | ..       | 415   |
| Other engineers' small tools and gauges  | ..       |       | ..       | 2,885 |
| Textile machinery, complete and parts  | ..       | 104   | ..       | 152   |
| Mechanical handling equipment, complete and parts  | ..       | 200   | ..       | 39    |
| Miscellaneous (non-electrical) machinery   |          |       |          |       |
| Printing, book-binding, paper-working, etc., machines  | ..       | 233   | ..       | 293   |
| Parts of pumps, air compressors and exhausters, pneumatic appliances and hydraulic machinery | ..       | 272   | ..       | 134   |
| Complete air compressors and exhausters, pneumatic appliances and hydraulic machinery        | ..       | 81    | ..       | 205   |
| Pumps, complete  | ..       | 60    | ..       | 59    |
| Garage equipment and plant   | ..       | 44    | ..       | 80    |
| Woodworking machinery, complete  | ..       | 114   | ..       | 130   |
| Woodworking machinery, reconditioned   | ..       | 13    | -        | -     |
| Woodworking machinery, parts   | ..       | 14    | ..       | -     |
| Portable power tools   | ..       | 79    | ..       | -     |
| Testing machinery and equipment  | ..       | 56    | ..       | 2,499 |
| Other miscellaneous (non-electrical) machinery   | ..       |       | ..       | 62    |
| Space heating, ventilating and air-conditioning equipment                                    | ..       | 2,335 | ..       | 81    |
| Parts of steel and non-ferrous metal rolling mills, etc.                                     | ..       |       | ..       | 81    |
| Industrial plant and steelwork   | ..       | 1,759 | ..       | 497   |
| Bearings (other than ball and roller and parts thereof) and bushes                           | ..       | 7     | -        | -     |

Continued on next page

TABLE 6 (contd.)

|   | 1954     |       | 1958     |        |
|---|----------|-------|----------|--------|
|   | Quantity | Value | Quantity | Value  |
|   |          | £'000 |          | £'000  |
| Gears and gear wheels   | ..       | 159   | ..       | 153    |
| Parts of machinery sold other than in association with the sale of complete machines                    | ..       | 43    | ..       | 698    |
| Arms, ammunition and other naval, military and air force stores   | ..       | 385   | }        | 1,386  |
| Other mechanical engineering products   | ..       | 364   |          |        |
| Electrical machinery  | ..       | 246   | ..       | 140    |
| Other electrical products   | ..       | 323   | ..       | 336    |
| Motor vehicles, complete, parts and accessories   | ..       | 406   | ..       | 299    |
| Miscellaneous metal manufactures  | }        | 1,192 | ..       | 425    |
| Other products  |          |       | ..       | 1,302  |
| Work done   |          |       |          |        |
| Building work done and installation of air-conditioning, heating and ventilating plant                  | ..       | 98    | ..       | 62     |
| General mechanical engineering  |          |       |          |        |
| Repair and jobbing work   | ..       | 609   | ..       | 1,299  |
| Other work done on commission, etc.   | ..       | 927   | ..       | 821    |
| Total value of goods sold without being subjected to any manufacturing process (merchanted or factored) | ..       | ..    | ..       | 20,955 |
| Canteen takings   |          | ..    |          | 339    |
| <b>Total</b>  |          | ..    |          | 40,746 |

TABLE 7 - Total make of intermediate products, 1958

This table is not applicable to the industry.

Employment and salaries, etc. for the week ended October 25, 1958

TABLE 8 Firms employing 25 or more persons: United Kingdom

|   | Males         | Females      | Total         |
|---|---------------|--------------|---------------|
|   | Number        | Number       | Number        |
| Working proprietors   | 2             | -            | 2             |
| Operatives  | 40,989        | 2,560        | 43,549        |
| Administrative, technical and clerical employees  | 10,225        | 4,899        | 15,124        |
| <b>Total employees</b>  | <b>51,214</b> | <b>7,459</b> | <b>58,673</b> |
| Average salaries, etc. paid per head for the week to administrative, technical and clerical employees | £ 18.0        | £ 7.1        | £ 14.5        |



Sales of all parts of metal-working machine tools by larger firms, including sales by establishments classified to other industries

TABLE 9 Firms employing 25 or more persons: United Kingdom

| (i) Parts sold in association with the sale of complete machines characteristic of this industry (a)  | 1954         |            | 1958          |              |
|---|--------------|------------|---------------|--------------|
|   | (i)          | (ii)       | (i)           | (ii)         |
| (ii) Other parts sold (b)   | £'000        | £'000      | £'000         | £'000        |
| Machine tools, metal-working (excluding die-casting machinery; portable power tools; and small tools for use in machine tools; but including hammers and forging machines; tin box and can making machinery; straightening rolls and other plate and sheet metal working machines; tube and section cold forming machines, extrusion presses and swaging machines for tubes; and wire-drawing, winding and working machines, except insulated electrical cable making machines) | 7,727        | 811        | 8,175         | 919          |
| Welding and cutting machinery and equipment, other than tube making   |              |            |               |              |
| Electrical  |              |            |               |              |
| Arc welding   | 97           | (c)        | 297           | 91           |
| Spot and projection resistance welding  | 305          | 7          | 177           | -            |
| Gas cutting and welding machines, including welding and cutting torches   | 131          | 30         | 1,359         | 3            |
| Other descriptions  | 188          | 85         | 583           | 73           |
| <b>Total</b>  | <b>8,447</b> | <b>932</b> | <b>10,591</b> | <b>1,086</b> |

(a) Principal products of this industry.

(b) Principal products of General Mechanical Engineering.

(c) Included with 'Other descriptions'.

Part

- 1 Introductory Notes
- 2 Coal Mining
- 3 Stone and Slate Quarrying and Mining
- 4 Chalk, Clay, Sand and Gravel Extraction
- 5 Metalliferous Mining and Quarrying
- 6 Salt and Miscellaneous Non-metalliferous Mining and Quarrying
- 7 Grain Milling
- 8 Bread and Flour Confectionery
- 9 Biscuits
- 10 Bacon Curing, Meat and Fish Products
- 11 Milk Products
- 12 Sugar
- 13 Cocoa, Chocolate and Sugar Confectionery
- 14 Fruit and Vegetable Products
- 15 Animal and Poultry Foods
- 16 Margarine
- 17 Starch and Miscellaneous Food Industries
- 18 Brewing and Malting
- 19 Spirit Distilling and Compounding
- 20 Soft Drinks, British Wines, Cider and Perry
- 21 Tobacco
- 22 Coke Ovens and Manufactured Fuel
- 23 Mineral Oil Refining
- 24 Lubricating Oils and Greases
- 25 Dyestuffs
- 26 Fertilizers, and Chemicals for Pest Control
- 27 Coal-tar Products
- 28 Chemicals (General)
- 29 Pharmaceutical Preparations
- 30 Toilet Preparations
- 31 Explosives and Fireworks
- 32 Paint and Printing Ink
- 33 Vegetable and Animal Oils and Fats
- 34 Soap, Detergents, Candles and Glycerine
- 35 Synthetic Resins and Plastics Materials
- 36 Polishes
- 37 Gelatine, Adhesives, etc.
- 38 Iron and Steel (General)
- 39 Steel Tubes
- 40 Iron Castings, etc.
- 41 Non-ferrous Metals
- 42 Agricultural Machinery (except Tractors)
- 43 Metal-working Machine Tools
- 44 Engineers' Small Tools and Gauges
- 45 Industrial Engines
- 46 Textile Machinery and Accessories
- 47 Contractors' Plant and Quarrying Machinery
- 48 Mechanical Handling Equipment
- 49 Office Machinery
- 50 Miscellaneous (Non-electrical) Machinery
- 51 Industrial Plant and Steelwork
- 52 Ordnance and Small Arms
- 53 General Mechanical Engineering
- 54 Scientific, Surgical and Photographic Instruments, etc.
- 55 Watches and Clocks
- 56 Electrical Machinery
- 57 Insulated Wires and Cables
- 58 Telegraph and Telephone Apparatus
- 59 Radio and Other Electronic Apparatus
- 60 Domestic Electrical Appliances
- 61 Miscellaneous Electrical Goods
- 62 Shipbuilding and Marine Engineering
- 63 Motor Vehicle Manufacturing
- 64 Motor Cycle, Three-wheel Vehicle and Pedal Cycle Manufacturing
- 65 Aircraft Manufacturing and Repairing
- 66 Locomotives and Railway Track Equipment
- 67 Railway Carriages and Wagons and Trams
- 68 Perambulators, Hand-trucks, etc.
- 69 Tools and Implements

Part

- 70 Cutlery
- 71 Bolts, Nuts, Screws, Rivets, etc.
- 72 Wire and Wire Manufactures
- 73 Cans and Metal Boxes
- 74 Jewellery, Plate and Refining of Precious Metals
- 75 Miscellaneous Metal Manufactures
- 76 Production of Man-made Fibres
- 77 Spinning and Doubling of Cotton, Flax and Man-made Fibres
- 78 Weaving of Cotton, Linen and Man-made Fibres
- 79 Woollen and Worsted
- 80 Jute
- 81 Rope, Twine and Net
- 82 Hosiery and Other Knitted Goods
- 83 Lace
- 84 Carpets
- 85 Narrow Fabrics
- 86 Household Textiles and Handkerchiefs
- 87 Canvas Goods and Sacks
- 88 Textile Finishing
- 89 Asbestos
- 90 Miscellaneous Textile Industries
- 91 Textile Converting
- 92 Leather (Tanning and Dressing) and Fellmongery
- 93 Leather Goods
- 94 Fur
- 95 Weatherproof Outerwear
- 96 Men's and Boys' Tailored Outerwear
- 97 Women's and Girls' Tailored Outerwear
- 98 Overalls and Men's Shirts, Underwear, etc.
- 99 Dresses, Lingerie, Infants' Wear, etc.
- 100 Hats, Caps and Millinery
- 101 Corsets and Miscellaneous Dress Industries
- 102 Gloves
- 103 Footwear
- 104 Bricks, Fireclay and Refractory Goods
- 105 Pottery
- 106 Glass
- 107 Cement
- 108 Abrasives
- 109 Miscellaneous Building Materials, etc.
- 110 Timber
- 111 Furniture and Upholstery
- 112 Bedding, etc.
- 113 Shop and Office Fitting
- 114 Wooden Containers and Baskets
- 115 Miscellaneous Wood and Cork Manufactures
- 116 Paper and Board
- 117 Cardboard Boxes, Cartons and Fibre-board Packing Cases
- 118 Miscellaneous Manufactures of Paper and Board
- 119 Printing and Publishing of Newspapers and Periodicals
- 120 General Printing, Publishing, Bookbinding, Engraving, etc.
- 121 Rubber
- 122 Linoleum, Leathercloth, etc.
- 123 Brushes and Brooms
- 124 Toys, Games and Sports Equipment
- 125 Miscellaneous Stationers' Goods
- 126 Plastics Moulding and Fabricating
- 127 Miscellaneous Manufacturing Industries
- 128 Construction
- 129 Gas
- 130 Electricity
- 131 Water Supply
- 132 Index of Products
- 133 Summary Volume
- 134 Summary Volume
- 135 Summary Volume

CENSUS OF PRODUCTION REPORTS FOR OTHER RECENT YEARS

The census reports for earlier years include some items which are not included in the Report on the Census of Production for 1958. The most recent reports are listed below, with an indication of any important items they contain which do not appear in the 1958 Reports. The data in all these earlier reports is analysed in accordance with the original (1948) edition of the Standard Industrial Classification.

Census of Production for 1951: Summary Tables, Part I (H.M.S.O., 1956. Price 6s. net).

No important items which do not appear in the 1958 Reports.

Census of Production for 1951: Summary Tables, Part II (H.M.S.O., 1956. Price 6s. net).

Channels of sales, 1948

Payments for services, 1948

Shift working, 1951

Power equipment, 1951

Prime movers, 1951

Analysis of periods covered by census returns, 1948 and 1951.

The Report on the Censuses of Production for 1952 and 1953. Introductory Notes and 5 volumes. (These volumes are now out of print.)

No important items which do not appear in the 1958 Reports.

The Report on the Census of Production for 1954.

Introductory Notes, Index of Products, and 154 booklets relating to individual industries

(H.M.S.O., 1956-59. Prices vary, usually from 1s. 6d. to 2s. net for each booklet).

Detailed information about materials and fuel purchased.

Census of Production for 1954: Summary Tables, Part I (H.M.S.O., 1958. Price 9s. net).

Fuel purchased

Gas produced in certain industries

Electricity generated, purchased and sold

Materials purchased: iron and steel; non-

ferrous metals; paint; plastics materials;

cotton and rayon, nylon, etc. textiles; timber;

packing materials; replacement parts for plant

etc. (Information about purchases of other

materials is given in The Report on the Census

of Production for 1954.)

Census of Production for 1954: Summary Tables, Part II (H.M.S.O., 1959. Price 7s. net).

Regional analyses of gross output, net output and capital expenditure.

Census of Production for 1954: Summary Tables, Part III (H.M.S.O., 1959. Price 8s. net).

Sales of particular products by certain industries in Scotland and Wales.

The Report on the Censuses of Production for 1955, 1956 and 1957. Introductory Notes and 5 volumes (H.M.S.O., 1959. Prices 1s. 6d. to

3s. 6d. net according to size of volume).

No important items which do not appear in the 1958 Reports.

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