# The Report on the <br> Census of Production for 1954 

Volume 4: Industry B
MARINE FAGINEERING

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

[^0]The Report on the Census of Production for 1954
VOLUME 4 INDUSTRY B
MARINE ENGINEERING

THIS REPORT on the Marine Engineering Industry relates to establishments, other than Government establishments, engaged wholly or mainly in the manufacture, repair and installation of main and auxiliary engines for ships, marine boilers and turbines, and engines and out-board motors for motor boats

This industry corresponds to minimum list heading $51(2)$ in the Standard Industrial Classification: there were no Government Departments mainly engaged in marine engineering corresponding to minimum list heading 51 (1)

LIST of tables

| Table No. | Title <br> Industry summary: estimates for the industry as a whole | Page <br> $4 / B / 3$ | Table No. 6 | Title <br> Sales of principal products of the industry by estab lishments classif ied to other industries | Page <br> 4/B/6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | Summary of returns received | 4/B/3 | 7 | Sales in the industry of other than principal products | 4/B/7 |
| 3 | Analys is by size, 1954 | 4/B/4 | 8 | Total make of intermediate products | 4/B/7 |
| 4 | Analys is according to specialisation within the industry, 1954 | Does not apply | 9 | Purchases of materials and fuel. 1954 | 4/B/7 |
| 5 | Sales of principal products of the industry, including sales of these products byestablishments classified to other industries | 4/B/4 | 10 | Average number of employees and wages, salaries and superannuation payments | 4/B/10 |
|  |  |  | 11 | Employment in a specified week | 4/B/10 |

[^1]The following notes describe terms in general use
the tables of the report. More detailed explanain the tables of the report. More detail ed explana-
tions of te term used and acription of the sope
tion enthe
 Industrial Classi fication:
ied to industrishmente are classiff


 duction. The principle of classification normally
followed is that an estanilishment is clasifified to an
industry if its output of the principal products of that industry
industry acounted for a qurater propartion of the value
of its output than did its output of the principal proof its output than didustry.
Specialist producers normally comprise those establish-
ments so per cent. or more of whose total output by ments 50 per cent. or more of whose total output by
value 18 accounted for by the characteristic products of
the specialist group. the specialist group.
Intemediate products: For some industries figures are
given shoming the total
of quantitites made during the fear
 further proce
are produced.



 other ancillary places of business situated arart from
the producing works are not reacarded as separate estab-
lishments and are included in the return for the works. Small firms are those employing on the average 10 o ferer persons
The estimates for the industry as a whole given in
Table 1 are normaly obtained by increasing the other
items shown in the same proporty Table 1 are normally obtained by increasing the othe
items shown in the same proportion as total employment Gross output (production) is the total value of goods
made and pother nork done during the year: it is obtained by adjusting the value of sales and work done during the year for changes in the value of
on hand for sale and work in progress.
Net output is the amount left after deducting from the
value of gros output the aggregate of the cost of end. for 1951 and 1954, any transport payments made
This This represents the value added to materials by the pro-
cease of prodution, and const tutes the fund from which
naces, salaries, rents. rates and taxes. odvertising and
 Sales means sales during the year of goods made in the
sestabliishment covered by the return or made on conmiss
int ion for it, whether produced in the year or not. The

 tax. etc. For goods charged on a delivered basis to
cantomers overseas. firms were required to give the
f.o.b. value. Materials an
Materials and fuel The total cost of materials and
fuel purchased inciudes alo purchases during the year
of materials for use in production, and of fuel (includ-
ing oil. gas and electricity) for all purposes: packing
matericis. including the full cost of returnable cases wher rials. including the full cost of returnable cases
When firchased. worksho and of fice materials
vater charges water charges materials for repairs to buidings.
plont and venicies when carried out by firms. own work.
people included in their returns people included in their returns: consumable tols:
and parts for machinery purchased as replacenents.
purchase

 Stods: Firms were required to give stocks of materials and fuel products on hand
gress. at income tax values.
Customs and Excise Duty paid on materials purchased is normally included in the cost of materias. Finished
goods are similarly valued as they were sold, duty-paid or duty-f fee. The net amount of any duty paid is de-
ducted in arriving at net output. Employment: Total employment in
Employment: Total employment includes working propriet-
ors. administrative. temhical and clericar employees.
and operatives, but oxcludes outworkers. and operatives, but oxelunes outworkers. canteen employ.
nes and persons engaged in merchanting or any other ac.

 urance cards wore hel
full-time or part-time.
horking proprietors are proprietors of businesses other than limited companies. togethers with members of their
familios who worked in the business without rece viving
Axed wages or salaries. families who worked in the business without rece iving
fixed wage or salaries. Any persons working less than
half the normal hurs Ialf the normal hours are oxcluded. For Nort thern
Ireland directors of inimited companies (other than those
paid by fee only) are also included paid by fee only) are also included.
Administrative, tednical and clerical enployees include
directors. other than those paid by fee only (except in

 nen and tracers: travellers: and office (including
works office) employees. Operatives include all other classes or
broadly speaking, all manual workers. Outworkers are persons employed by the firm who work on
materials supplied by the firm in the ir own homes. Wages and sal aries include all overtime payments, bonus-
es and commissions without any deductions for income tax es and commissions ni thout any deductions for income tax.
insurances. contributory pensions eto. They exclude insurances. Contributory pensio
payments to working proprietors.
Cepi tal expenditure includes expenditure on new building
oork, and on plant, machinery and vehicles, charged to capital account during the year. including any transport and installoution costs involved. It includes expendi-
are in respect of establishments in Great Britain which
tur ure in respect of establishments in Great Britain which
had not be una production be fore the end of the year
(mhich has not previousiy been included in the Census of (which has not previously been included in the
Production reports for individual industries). Symbols used:
for not available
for nil or negligible (less than half the final
digit shown). Where figures are rounded. e.g.. given to the near-
est thousand. there may be apparent slight discrepancies between the sums of constituent items and the tot-
als shown. In some cases. figures have been comber als shown. In some ases, figures have been combined
ith others of aimilar nature where publication of eparate details might disclose information relating to

Larger establishments in the United Kingdom

| Average number employed (a) | $\begin{aligned} & \text { Estab- } \\ & \text { lish- } \\ & \operatorname{ments} t \end{aligned}$ | $\begin{aligned} & \text { Gross } \\ & \text { output } \end{aligned}$ | $\begin{gathered} \text { Net } \\ \text { output } \end{gathered}$ | Employees |  | Wages and salaries |  | Capital <br> expenditure <br> (b) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Operatives | Others | Operatives | Others |  |  |
|  | Number | $\varepsilon^{\prime} 000$ | $\varepsilon^{\prime} 000$ | Number | Number | £ 000 | £. 000 | £. 000 | $\varepsilon$ |
| 11-24(c) | 15 | 263 | 152 | 195 | 56 | 78 | 25 | 14 | 600 |
| 25-49 | 11 | 645 | 388 | 334 | 85 | 140 | 55 | 14 | 926 |
| 50-99 | 13 | 1,372 | 640 | 748 | 165 | 332 | 92 | 18 | 701 |
| 100-199 | 14 | 3,542 | 1.680 | 1,546 | 433 | 670 | 262 | 75 | 849 |
| 200-299 | 8 | 3.148 | 1.340 | 1,594 | 422 | 677 | 228 | 141 | 665 |
| 300-499 | 9 | 4,611 | 2,449 | 2,809 | 619 | 1,284 | 370 | 147 | 714 |
| 500-749 | 3 | 3,361 | 1:182 | 1.778 | 262 | 810 | 153 | 39 | 579 |
| 750-999 | 4 | 6,034 | 2,764 | 2,816 | 552 | 1,348 | 326 | 144 | 821 |
| 1,000-1,499 | 9 | 20,222 | 7.716 | 9,252 | 1.528 | 4,312 | 852 | 602 | 716 |
| 1,500-1,999 | 4 | 12,797 | 5,380 | 5,622 | 1,136 | 2,675 | 695 | 587 | 796 |
| 2,000-2,499 | 3 | 10,014 | 4.166 | 5,578 | 1,257 | 2,613 | 652 | 299 | 610 |
| 2,500 and over | 3 | 16,862 | 7.566 | 10,964 | 1,862 | 5,201 | 1,096 | 762 | 590 |
| Total | 96 | 82,871 | 35,425 | 43, 236 | 8,377 | 20.140 | 4,807 | 2,842 | 686 |

(a) Excluding outworke es and including working propriit tors.
(b) Capital expend ture on nem building work and on acquis 1
(a) ingnditure for estabhishments not yet in production.

Including one establishment with fewer than 11 perssons employed, particulars of which were included with
those for $a$ larger establishment on $a$ single return.

TABLE 4 - Analysis according to specialisation wi thin the industry, 1954
No specialisation within this industry was distinguished.

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

Larger establishments in the United Kingdom

## TABLE 5

| Kind of output <br> (i) Complete machines <br> (ii) Parts | 1951 |  |  | 1954 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Quantity |  | Value | Quantity |  | Value | Entries |
| Marine machinery <br> Propelling machinery No. I.h.p. £.000 No. I.h.p. £.000 Number |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Steam reciprocating $\quad\left\{\begin{array}{c}\text { (i) } \\ \text { (ii) }\end{array}\right\}$ | 89 | 113.410 | 2.450 18 223 | 57 | 78.085 | 2.406 280 | 15 |
|  | No.of | Shaft |  | No. of | Shaft |  |  |
|  | sets | h.p. |  | sets | h.p. |  |  |
| Steam turbine $\quad\{$ (i) | ${ }_{32}^{52}$ | 481.145 | 6.018 345 | 45 95 | 509.245 | 6.972 ${ }_{843}$ | 15 |
| (ii) |  | .. | 744 |  | .. | 1.293 | 14 |
| Internal combustion reciprocating engines |  |  |  |  |  |  |  |
| Compression ignition (diesel) | No.1.663117 | $\begin{aligned} & \text { B.h.p. } \\ & 36,318 \end{aligned}$ | 705 | ${ }^{\text {No. }}$ | B.h.p. |  | 15 |
| Not exceeding 50 b.h.p. \{ (i) \{ |  |  |  |  |  |  |  |
| Not exceeding so b.h.p. \{ (ii) |  |  | $\begin{array}{r}73 \\ 22 \\ \hline\end{array}$ |  |  | ${ }_{236}^{623}$ |  |
|  | 1,054 | 101,848 | 1.448 460 | 1,010 | 107.933 | 1.910 577 | 22 17 |
| Over 300 b.h.p, not \{ (i) | 88 | 53,393 | 1.139 | 320 | 205,053 | 4,877 | 13 |
| over 1.500 b.h.p. ${ }_{\text {(ii) }}$ |  |  | 400 |  |  | 959 | 14 |
| Over 1.500 b.h.p. $\left\{\begin{array}{c}\text { (i) } \\ (\text { ii })\end{array}\right.$ | 121 | 548,820 | 16.698 1.463 | 120 | 523,260 | 15.514 3.379 | ${ }_{20}^{22}$ |
| (89939) ${ }^{\text {(1i) }}$ |  |  |  |  |  |  |  |



Sales in the industry of other than principal products Larger establishments in the United Kingdom


| TABLE 9 (contd.) | Quantity | Cost |
| :---: | :---: | :---: |
|  | Th.tons | £'000 |
| Materials (contd.) |  |  |
| Iron and steel (contd.) ${ }^{25}$ |  |  |
| Chains |  | 25 |
| Transmission and conveyer types |  | 11 |
|  | 4.1 | 31 |
| Iron and steel scrap |  |  |
| Other iron efined pig-iron | 9.9 | 198 |
| Pig-iron, except refined pig-iron Castings in the rough or machined except machined | 27.3 | 2.437 |
| castings elsemhere specified | 1.0 | ${ }_{4}^{30}$ |
| Other iron, except finished parts |  |  |
| Ferro-alloys (then | .. | 1 |
| Spiegeleisen and ferro-manganese (other than refined) Other ferro-alloys | $\ldots$ | 4 |
| Other steel (alloy and non-alloy) and sheet and 139 |  |  |
| Ingots, blooms, billets, and slabs, and sheet and tinplate bars | 2.8 | 139 |
|  |  |  |
|  |  |  |
| Forgings, except drop-forgings, in the rough or machined. |  |  |
| Tin-, terne-, and black-plates and tinned and terne sheets |  |  |
| Other plates and sheets. $1 / 8$ in. thick and over, and 47.4 1.745 |  |  |
| hoop and strip shets under 1/8in. thick, including ${ }^{\text {Other plates and sheets }}$ |  |  |
| electrical quality sheets | . |  |
| Axles, tyres and wheels (rail type) |  |  |
| Springs, laminated and other types |  |  |
| finished parts, wire and scrap <br> Th. cwt. |  |  |
|  | 26.1 | 534 |
| Aluminium and aluminium alloys | .. | 2 |
| Magnesium and magnesium alloys | 0.2 | 2 |
| Antimony |  |  |
| Brass and other alloys of copper, inctuding nickel ays <br> and cupro-nickel. but excluding other nickel alloys 39.6 942 |  |  |
| Castings | 77.8 | 1.200 |
| Other | 75.4 | 1.318 |
| Copper ${ }^{\text {Lead and alloys of lead, except solder }}$ | 1.3 | 14 |
|  | 4.8 | ${ }_{81}^{168}$ |
| Tin | 5.8 | 40 |
| 2 inc |  | 1 |
| Non-ferrous metal wire, not insulated |  | 4 |
| Soft solder | 1.0 | 11 |
| Scrap non-ferrous metals |  | 60 |
| Insulated wires and cables | 1.7 | 35 |
| Rubber in all forms, including finished parts |  |  |
|  | Th. $\begin{gathered}\text { tons } \\ 1.7\end{gathered}$ | ${ }_{7}^{23}$ |
| Refractory materials |  |  |

[^2]

| TABLE 10 | 1951 | 1954 |
| :---: | :---: | :---: |
| Number ${ }^{\text {r }}$ ( |  |  |
| Average number of employees |  |  |
| ( Operatives ${ }_{\text {a }}^{\text {Aministrative, }}$, technical and clerical employees | 9,521 | ${ }_{8.377}$ |
| Total | 57.009 | 51,613 |
|  | \&. 000 | £. 000 |
| Wages and salaries paid to |  |  |
| Operatives $\begin{aligned} & \text { Administrative, technical and clerical employees }\end{aligned}$ | $\begin{array}{r}17.247 \\ 4.551 \\ \hline\end{array}$ | 4,807 |
| Total | 21.799 | 24.948 |
|  | £ | $\varepsilon$ |
|  |  |  |
| Operatives $\begin{aligned} & \text { Administrative, technical and clerical employees }\end{aligned}$ | 363 478 | ${ }_{574}^{466}$ |
| Administrative, technical and cherical employees |  | \&.000 |
| Superannuation and other pension funds for employees and dependents (b) |  |  |
| Employers ${ }^{\text {. }}$ ' contributions | .. | 241 |
|  |  | ${ }_{\substack{\text { Number } \\ 6.889}}^{\text {cer }}$ |
| Employees covered |  | \&. 000 |
| Pension, etc. payments to former employees and | .. | 48 |

(a) The following persons. not included above. were also employed by larger establishments in this industry

|  | 1951 | 1954 |
| :---: | :---: | :---: |
| Canteen workers | Number | Number |
| Canten morkers Male | ${ }_{4}^{4}$ | $17{ }^{6}$ |
| Female |  |  |
| Total | 168 | 181 |
| Other workers Male Female | 7 | $\frac{1}{1}$ |
| Total | 16 | 2 |
| Total excluded employees | 184 | 183 |

(b) 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 |  |  |  | Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1951 |  |  | 1954 |  |  |
|  | Males | Females | Total | Males | Females | Total |
| Working praprietors | 5 | - | 5 | 3 | - | 3 |
| Operatives | 46,853 | 821 | 47,674 | 42,477 | 775 | 43, 252 |
| Administrative, technical and clerical employees | 7.288 | 2,287 | 9,575 | 6,362 | 2,109 | 8,471 |
| Total exployees | 54,141 | 3,108 | 57.249 | 48,839 | 2,884 | 51.723 |

(a) Week ended September 22, 1951, or October 30, 1954.

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[^1]:    IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

[^2]:    (89939)

