

CATALOGUE No. ²⁷

46-219

ANNUAL

FEB 17 1967



MANUFACTURERS OF INDUSTRIAL CHEMICALS

1964

ANNUAL CENSUS OF MANUFACTURES

Published by Authority of
The Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS
Industry Division

February 1967
6506-866

Price: 50 cents

PUBLICATIONS

In addition to the report, on this industry, the DBS publishes annual statistics on a number of related industries and current statistics on the more important commodities. Copies of reports provided in the following list are available from the Information and Public Relations Division of the DBS, Ottawa or from the Queen's Printer, Hull, P.Q.

| Catalogue number | Title | Periodicity | Price | |
|------------------|---|-------------|----------|----------|
| | | | Per copy | Per year |
| 46-209 | Manufacturers of Pharmaceuticals and Medicines | A | .50 | |
| 46-210 | Paint and Varnish Manufacturers | A | .50 | |
| 46-211 | Manufacturers of Plastics and Synthetic Resins | A | .50 | |
| 46-214 | Manufacturers of Soap and Cleaning Compounds | A | .50 | |
| 46-215 | Manufacturers of Toilet Preparations | A | .50 | |
| 46-216 | Other Chemical Industries | A | .50 | |
| 46-217 | Chemicals and Chemical Products Industries Preliminary Summary Statistics | A | .25 | |
| 46-218 | Explosives and Ammunition Manufacturers | A | .25 | |
| 46-219 | Manufacturers of Industrial Chemicals | A | .50 | |
| 46-220 | Manufacturers of Mixed Fertilizers | A | .50 | |
| ----- | | | | |
| 31-001 | Inventories, Shipments and Orders in Manufacturing Industries | M | .30 | \$3.00 |
| 31-201 | General Review of the Manufacturing Industries of Canada | A | \$2.00 | |
| 32-005 | Margarine | M | .10 | 1.00 |
| 32-006 | Oils and Fats | M | .10 | 1.00 |
| 32-205 | Breweries | A | .50 | |
| 32-206 | Distilleries | A | .50 | |
| 32-222 | Sugar Refineries | A | .50 | |
| 33-202 | Leather Tanneries | A | .50 | |
| 34-208 | Synthetic Textile Mills | A | .50 | |
| 36-204 | Pulp and Paper Mills | A | .50 | |
| 45-004 | Refined Petroleum Products | M | .30 | 3.00 |
| 45-205 | Petroleum Refineries | A | .50 | |
| 46-001 | Sales of Paints, Varnishes and Lacquers | M | .10 | 1.00 |
| 46-002 | Specified Chemicals | M | .10 | 1.00 |
| 46-003 | Soaps and Synthetic Detergents | M | .10 | 1.00 |
| 46-207 | Fertilizer Trade, | A | .50 | |
| 46-212 | Sales of Pest Control Products by Canadian Registrants | A | .25 | |
| 46-221 | Sales of Toilet Preparations in Canada | A | .25 | |
| 46-502 | Chemical Directory | O | 1.50 | |
| 65-004 | Exports by Commodities | M | .75 | 7.50 |
| 65-007 | Imports by Commodities | M | .75 | 7.50 |
| Special | Sulphuric Acid, Caustic Soda and Chlorine | A | .25 | |

A - Annual

O - Occasional

M - Monthly

Remittances should be in the form of cheque or money order, made payable to the Receiver General of Canada and forwarded to the Information and Public Relations Division, Ottawa or to the Queen's Printer, Hull, P.Q.

MANUFACTURERS OF INDUSTRIAL CHEMICALS

1964

For statistical purposes the industry titled Manufacturers of Industrial Chemicals in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing basic industrial inorganic chemicals such as acids, alkalis, salts, compressed gases and other inorganic compounds or in manufacturing industrial organic chemicals by chemical processes. This industry includes establishments primarily engaged in manufacturing dry colours, pigments, white lead, lead oxides, iron oxides and titanium oxide and in manufacturing dyes. Included also are establishments primarily engaged in manufacturing synthetic rubber and those primarily engaged in manufacturing compressed organic gases.

Establishments primarily engaged in manufacturing coke are classified in the Iron and Steel Mills industry or in the Other Petroleum and Coal Products industry; petroleum refineries are classified in the Petroleum Refineries industry; establishments primarily engaged in manufacturing plastics materials are classified in the Manufacturers of Plastics and Synthetic Resins industry; establishments primarily engaged in manufacturing superphosphates and mixed fertilizers are classified in the Manufacturers of Mixed Fertilizers industry.

Separate figures for the production of chemicals in this industry are not published as many of the individual items are made by only one or two firms. However, figures for the several items which are available for publication, such as ammonium sulphate, pigments and colours, synthetic rubber, acetylene and oxygen, sulphuric acid, chlorine and caustic soda, are shown in Tables 8 to 22 inclusive.

Value of shipments and other revenue of this industry totalled \$710.1 million, an increase of \$69.7 million over 1963. This amount included shipments of industrial chemicals valued at \$510.6 million, shipments of other products (secondary products) valued at \$107 million, and other revenue of \$92.5 million.

This industry's shipments of industrial chemicals represented 83.8 per cent of its manufacturing revenue. Secondary products shipped in 1964 included anti-freeze, feed supplements, acrylic fibres, ethyl anti-knock compounds, fatty acids, plasticizers, vinyl chloride monomers, pest control products, etc.

The cost of materials and supplies, etc., used in the production of goods of own manufacture increased by \$29.5 million. Cost of materials and supplies, etc., (inputs), in 1964 represented 47.5 per cent of the value of shipments of own manufacture (outputs), compared to 47.8 per cent in 1963.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

.. figures not available.

... figures not appropriate or not applicable.

— nil or zero.

-- amount too small to be expressed.

p preliminary figures.

r revised figures.

x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, 1961-64

| Year and province | Estab-lish-ments | Manufacturing activity | | | | | | | Total activity | | | | |
|---------------------------------|------------------|--------------------------------|----------------|--------|-------------------------------|--------------------------------|--|-------------|-----------------------------|--------------|-----------|--------------------|-------------|
| | | Production and related workers | | | Cost of fuel and elec-tricity | Cost of materials and supplies | Value of shipments of goods of own man-u-facture | Value added | Working owners and partners | | Employees | | Value added |
| | | Number | Man-hours paid | Wages | | | | | Number | With-drawals | Number | Salaries and wages | |
| No. | | '000 | | | \$'000 | | | | \$'000 | | \$'000 | | |
| 1961 | | | | | | | | | | | | | |
| Totals | 125 | 10,791 | 23,485 | 55,798 | 42,001 | 181,624 | 478,690 | 260,137 | x | x | 16,748 | 91,686 | 270,688 |
| 1962 | | | | | | | | | | | | | |
| Totals | 126 | 10,595 | 23,069 | 57,382 | 42,756 | 190,967 | 517,199 | 280,908 | x | x | 16,508 | 94,384 | 293,173 |
| 1963 | | | | | | | | | | | | | |
| Newfoundland | 1 | x | x | x | x | x | x | x | - | - | x | x | x |
| Prince Edward Island | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Nova Scotia | 4 | 39 | 80 | 163 | 84 | 244 | 1,428 | 1,095 | - | - | 91 | 392 | 1,419 |
| New Brunswick | 3 | x | x | x | x | x | x | x | - | - | x | x | x |
| Quebec | 33 | 2,771 | 6,015 | 14,949 | 8,375 | 43,270 | 102,082 | 52,895 | - | - | 3,955 | 22,661 | 56,531 |
| Ontario | 56 | 6,741 | 14,818 | 37,853 | 31,370 | 140,562 | 347,688 | 177,990 | - | - | 10,684 | 64,160 | 189,277 |
| Manitoba | 4 | 40 | 86 | 173 | 49 | 502 | 1,969 | 1,417 | - | - | 109 | 469 | 2,016 |
| Saskatchewan | 2 | x | x | x | x | x | x | x | - | - | x | x | x |
| Alberta | 11 | 760 | 1,673 | 4,165 | 3,125 | 17,373 | 49,043 | 28,875 | - | - | 1,225 | 7,013 | 29,724 |
| British Columbia | 15 | 1,004 | 2,113 | 5,208 | 3,018 | 18,710 | 49,654 | 26,707 | - | - | 1,422 | 7,743 | 27,707 |
| Yukon and Northwest Territories | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Totals | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | - | - | 17,587 | 102,935 | 308,831 |
| 1964 | | | | | | | | | | | | | |
| Newfoundland | 1 | 96 | 207 | 469 | 547 | 1,035 | 4,897 | 3,329 | - | - | 197 | 940 | 4,130 |
| Prince Edward Island | - | | | | | | | | | | | | |
| Nova Scotia | 4 | | | | | | | | | | | | |
| New Brunswick | 3 | | | | | | | | | | | | |
| Quebec | 32 | 2,813 | 6,330 | 15,925 | 9,047 | 52,345 | 124,145 | 62,917 | - | - | 4,114 | 24,543 | 65,173 |
| Ontario | 57 | 6,763 | 14,611 | 39,271 | 32,419 | 150,962 | 376,543 | 194,673 | - | - | 10,830 | 67,170 | 205,720 |
| Manitoba | 4 | 44 | 87 | 179 | 61 | 697 | 2,098 | 1,340 | - | - | 105 | 468 | 1,938 |
| Saskatchewan | 4 | 47 | 116 | 277 | 116 | 1,402 | 1,853 | 1,023 | - | - | 80 | 472 | 1,756 |
| Alberta | 11 | 774 | 1,766 | 4,397 | 3,281 | 18,804 | 54,213 | 33,119 | - | - | 1,231 | 7,381 | 34,292 |
| British Columbia | 16 | 1,054 | 2,291 | 5,555 | 3,604 | 22,380 | 53,822 | 29,551 | - | - | 1,488 | 8,216 | 31,048 |
| Yukon and Northwest Territories | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Totals | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | - | - | 18,045 | 109,190 | 344,057 |

TABLE 2. Principal Statistics classified by Size Group based on Value of Shipments of Goods of Own Manufacture, 1963 and 1964

| Size group | Estab- lish- ments | Manufacturing activity | | | | | | | Total activity | | | | |
|---|--------------------------|--------------------------------|--------------------|---------------|-----------------------------------|--------------------------------|---|----------------|-----------------------------|------------------|---------------|--------------------|----------------|
| | | Production and related workers | | | Cost of fuel and elec- tricity | Cost of materials and supplies | Value of shipments of goods of own manu- facture | Value added | Working owners and partners | | Employees | | Value added |
| | | Number | Man- hours paid | Wages | | | | | Number | With- drawals | Number | Salaries and wages | |
| | No. | | '000 | | | \$'000 | | | \$'000 | | \$'000 | | |
| 1963 | | | | | | | | | | | | | |
| Under \$10,000 | — | — | — | — | — | — | — | — | — | — | — | — | |
| \$ 10,000 to \$ 24,999 | — | — | — | — | — | — | — | — | — | — | — | — | |
| 25,000 " 49,999 | 4 | 22 | 46 | 108 | 60 | 122 | 213 | 48 | — | — | 36 | 170 | 135 |
| 50,000 " 99,999 | | 13 | 59 | 123 | 239 | 47 | 828 | 2,012 | 1,144 | — | 151 | 657 | 3,130 |
| 100,000 " 199,999 | | 27 | 181 | 384 | 792 | 224 | 2,989 | 8,389 | 4,978 | — | 383 | 1,811 | 7,436 |
| 200,000 " 499,999 | | 20 | 308 | 685 | 1,422 | 470 | 4,695 | 13,742 | 8,579 | — | 591 | 2,918 | 11,092 |
| 500,000 " 999,999 | 38 | 1,745 | 3,802 | 9,025 | 5,974 | 34,751 | 85,081 | 46,226 | — | 2,867 | 15,533 | 49,890 | |
| 1,000,000 " 4,999,999 | 27 | 9,087 | 19,846 | 51,146 | 39,341 | 177,683 | 444,326 | 229,220 | — | 13,212 | 79,354 | 235,078 | |
| 5,000,000 and over | 38 | — | — | — | — | — | — | — | — | — | — | — | |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 347 | 2,492 | 2,070 |
| Totals | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | — | — | 17,587 | 102,935 | 308,831 |
| 1964 | | | | | | | | | | | | | |
| Under \$10,000 | — | — | — | — | — | — | — | — | — | — | — | — | |
| \$ 10,000 to \$ 24,999 | — | — | — | — | — | — | — | — | — | — | — | — | |
| 25,000 " 49,999 | 5 | 11 | 23 | 48 | 17 | 178 | 319 | 162 | — | — | 19 | 83 | 217 |
| 50,000 " 99,999 | | 12 | 71 | 138 | 270 | 78 | 852 | 1,646 | 896 | — | 187 | 797 | 3,373 |
| 100,000 " 199,999 | | 28 | 212 | 461 | 1,017 | 242 | 3,569 | 9,297 | 5,509 | — | 373 | 1,934 | 8,728 |
| 200,000 " 499,999 | | 18 | 272 | 578 | 1,272 | 462 | 4,434 | 12,919 | 8,218 | — | 565 | 2,737 | 10,755 |
| 500,000 " 999,999 | 38 | 1,519 | 3,325 | 7,981 | 6,049 | 37,804 | 86,733 | 44,349 | — | 2,510 | 13,530 | 48,445 | |
| 1,000,000 " 4,999,999 | 31 | 9,506 | 20,885 | 55,486 | 42,227 | 200,790 | 506,656 | 266,818 | — | 13,947 | 87,059 | 270,399 | |
| 5,000,000 and over | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 444 | 3,049 | 2,140 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 444 | 3,049 | 2,140 |
| Totals | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | — | — | 18,045 | 109,190 | 344,057 |

TABLE 3. Principal Statistics classified by Size Group based on Manufacturing Value Added, 1963 and 1964

| Size group | Estab- lish- ments | Manufacturing activity | | | | | | | Total activity | | | | |
|---|--------------------------|--------------------------------|--------------------|---------------|-----------------------------------|--------------------------------|---|----------------|-----------------------------|------------------|---------------|--------------------|----------------|
| | | Production and related workers | | | Cost of fuel and elec- tricity | Cost of materials and supplies | Value of shipments of goods of own manu- facture | Value added | Working owners and partners | | Employees | | Value added |
| | | Number | Man- hours paid | Wages | | | | | Number | With- drawals | Number | Salaries and wages | |
| | No. | | '000 | | | \$'000 | | | \$'000 | | \$'000 | | |
| 1963 | | | | | | | | | | | | | |
| Under \$10,000 | — | — | — | — | — | — | — | — | — | — | — | — | |
| \$ 10,000 to \$ 24,999 | 3 | 35 | 65 | 110 | 13 | 419 | 455 | 21 | — | — | 94 | 451 | 1,583 |
| 25,000 " 49,999 | 5 | 26 | 54 | 116 | 66 | 480 | 631 | 106 | — | — | 42 | 187 | 155 |
| 50,000 " 99,999 | 10 | 48 | 102 | 195 | 23 | 1,163 | 1,836 | 689 | — | — | 100 | 449 | 1,837 |
| 100,000 " 199,999 | 16 | 98 | 205 | 439 | 149 | 2,835 | 5,363 | 2,144 | — | — | 145 | 694 | 2,484 |
| 200,000 " 499,999 | 30 | 422 | 936 | 1,974 | 1,349 | 10,103 | 21,241 | 10,220 | — | — | 766 | 3,849 | 12,429 |
| 500,000 " 999,999 | 21 | 594 | 1,357 | 3,175 | 1,436 | 15,198 | 31,768 | 15,800 | — | — | 1,087 | 5,855 | 18,514 |
| 1,000,000 " 4,999,999 | 29 | 2,590 | 5,565 | 13,644 | 10,714 | 48,439 | 131,792 | 73,619 | — | — | 3,850 | 21,507 | 76,875 |
| 5,000,000 and over | 15 | 7,589 | 16,600 | 43,079 | 32,367 | 142,431 | 360,674 | 187,596 | — | — | 11,156 | 67,450 | 192,883 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 347 | 2,492 | 2,070 |
| Totals | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | — | — | 17,587 | 102,935 | 308,831 |
| 1964 | | | | | | | | | | | | | |
| Under \$10,000 | — | — | — | — | — | — | — | — | — | — | — | — | |
| \$ 10,000 to \$ 24,999 | 3 | 13 | 24 | 52 | 15 | 192 | 253 | 53 | — | — | 58 | 209 | 726 |
| 25,000 " 49,999 | 5 | 35 | 68 | 116 | 38 | 530 | 555 | 193 | — | — | 55 | 207 | 947 |
| 50,000 " 99,999 | 13 | 62 | 129 | 256 | 59 | 1,577 | 2,624 | 958 | — | — | 119 | 532 | 1,946 |
| 100,000 " 199,999 | 15 | 145 | 309 | 663 | 782 | 4,209 | 7,192 | 2,259 | — | — | 288 | 1,503 | 4,640 |
| 200,000 " 499,999 | 29 | 362 | 809 | 1,749 | 514 | 9,721 | 19,934 | 10,219 | — | — | 702 | 3,570 | 12,920 |
| 500,000 " 999,999 | 14 | 390 | 853 | 1,898 | 1,052 | 8,339 | 19,278 | 10,040 | — | — | 675 | 3,466 | 12,344 |
| 1,000,000 " 4,999,999 | 34 | 2,406 | 5,211 | 13,335 | 10,976 | 54,576 | 139,269 | 74,731 | — | — | 3,616 | 20,723 | 77,936 |
| 5,000,000 and over | 19 | 8,178 | 18,006 | 48,004 | 35,639 | 168,482 | 428,465 | 227,500 | — | — | 12,088 | 75,930 | 230,458 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 444 | 3,049 | 2,140 |
| Totals | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | — | — | 18,045 | 109,190 | 344,057 |

TABLE 4. Principal Statistics classified by Size Group based on Total Value Added, 1963 and 1964

| Size group | Estab- lish- ments | Manufacturing activity | | | | | | | Total activity | | | | |
|--|--------------------------|-----------------------------------|-----------------------|---------------|---|---|---|----------------|--------------------------------|------------------|---------------|--------------------------|----------------|
| | | Production and related workers | | | Cost of fuel and elec- tricity | Cost of materials and supplies | Value of shipments of goods of own manu- facture | Value added | Working owners and partners | | Employees | | Value added |
| | | Number | Man- hours paid | Wages | | | | | Number | With- drawals | Number | Salaries and wages | |
| No. | | '000 | | | \$'000 | | | \$'000 | | \$'000 | | | |
| 1963 | | | | | | | | | | | | | |
| Under \$10,000 | — | — | — | — | — | — | — | — | — | — | — | — | |
| \$ 10,000 to \$ 24,999 | 3 | 22 | 45 | 97 | 58 | 445 | 519 | 36 | — | — | 34 | 150 | 31 |
| 25,000 " | 8 | 27 | 59 | 122 | 21 | 764 | 1,194 | 434 | — | — | 46 | 233 | 528 |
| 50,000 " | 16 | 99 | 207 | 435 | 142 | 2,947 | 5,367 | 2,048 | — | — | 137 | 658 | 2,285 |
| 100,000 " | 28 | 361 | 801 | 1,660 | 922 | 8,794 | 17,620 | 8,212 | — | — | 616 | 3,057 | 9,917 |
| 200,000 " | 27 | 620 | 1,381 | 3,187 | 1,654 | 15,068 | 31,966 | 15,958 | — | — | 1,207 | 6,380 | 20,568 |
| 500,000 " | 32 | 2,684 | 5,791 | 14,151 | 10,952 | 50,618 | 136,422 | 75,910 | — | — | 4,044 | 22,516 | 80,549 |
| 1,000,000 " | 15 | 7,589 | 16,600 | 43,079 | 32,367 | 142,431 | 360,674 | 187,596 | — | — | 11,156 | 67,450 | 192,883 |
| 5,000,000 and over | 32 | 2,684 | 5,791 | 14,151 | 10,952 | 50,618 | 136,422 | 75,910 | — | — | 4,044 | 22,516 | 80,549 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 347 | 2,492 | 2,070 |
| Totals | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | — | — | 17,587 | 102,935 | 308,831 |
| 1964 | | | | | | | | | | | | | |
| Under \$10,000 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| \$ 10,000 to \$ 24,999 | 3 | 6 | 12 | 25 | 14 | 145 | 189 | 67 | — | — | 13 | 53 | 89 |
| 25,000 " | 9 | 39 | 85 | 168 | 29 | 1,248 | 1,852 | 572 | — | — | 63 | 301 | 645 |
| 50,000 " | 12 | 113 | 241 | 497 | 116 | 3,309 | 5,104 | 1,712 | — | — | 147 | 681 | 1,842 |
| 100,000 " | 30 | 314 | 693 | 1,500 | 519 | 9,003 | 17,035 | 8,127 | — | — | 535 | 2,820 | 10,345 |
| 200,000 " | 22 | 447 | 961 | 2,046 | 1,335 | 8,892 | 21,207 | 11,260 | — | — | 930 | 4,550 | 16,496 |
| 500,000 " | 37 | 2,494 | 5,410 | 13,833 | 11,423 | 56,546 | 143,719 | 76,215 | — | — | 3,825 | 21,806 | 82,042 |
| 1,000,000 " | 19 | 8,178 | 18,006 | 48,004 | 35,639 | 168,482 | 428,465 | 227,500 | — | — | 12,088 | 75,930 | 230,458 |
| 5,000,000 and over | 19 | 8,178 | 18,006 | 48,004 | 35,639 | 168,482 | 428,465 | 227,500 | — | — | 12,088 | 75,930 | 230,458 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 444 | 3,049 | 2,140 |
| Totals | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | — | — | 18,045 | 109,190 | 344,057 |

TABLE 5. Principal Statistics classified by Size Group based on Total Employed, 1963 and 1964

| Size group | Estab- lish- ments | Manufacturing activity | | | | | | | Total activity | | | | |
|--|--------------------------|-----------------------------------|-----------------------|---------------|---|---|---|----------------|--------------------------------|------------------|---------------|--------------------------|----------------|
| | | Production and related workers | | | Cost of fuel and elec- tricity | Cost of materials and supplies | Value of shipments of goods of own manu- facture | Value added | Working owners and partners | | Employees | | Value added |
| | | Number | Man- hours paid | Wages | | | | | Number | With- drawals | Number | Salaries and wages | |
| No. | | '000 | | | \$'000 | | | \$'000 | | \$'000 | | | |
| 1963 | | | | | | | | | | | | | |
| Under 5 employed | 8 | 16 | 39 | 80 | 19 | 722 | 1,491 | 747 | — | — | 24 | 136 | 846 |
| 5 - 14 employed | 27 | 155 | 331 | 716 | 208 | 2,955 | 8,077 | 4,729 | — | — | 249 | 1,236 | 5,821 |
| 15 - 49 " | 39 | 613 | 1,365 | 3,013 | 2,991 | 17,275 | 38,789 | 19,281 | — | — | 1,094 | 5,735 | 23,249 |
| 50 - 99 " | 25 | 1,068 | 2,319 | 5,811 | 5,087 | 28,022 | 77,284 | 44,110 | — | — | 1,738 | 9,844 | 47,768 |
| 100-199 " | 13 | 1,382 | 3,126 | 8,100 | 8,038 | 29,299 | 76,204 | 39,776 | — | — | 1,924 | 11,539 | 42,045 |
| 200-499 " | 9 | 1,660 | 3,627 | 8,418 | 4,856 | 33,595 | 86,843 | 49,324 | — | — | 2,637 | 14,291 | 50,601 |
| 500 employed and over | 8 | 6,508 | 14,078 | 36,593 | 24,916 | 109,198 | 265,074 | 132,227 | — | — | 9,574 | 57,662 | 136,430 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 347 | 2,492 | 2,070 |
| Totals | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | — | — | 17,587 | 102,935 | 308,831 |
| 1964 | | | | | | | | | | | | | |
| Under 5 employed | 9 | 20 | 42 | 86 | 26 | 629 | 1,340 | 717 | — | — | 28 | 134 | 809 |
| 5 - 14 employed | 26 | 141 | 308 | 679 | 616 | 3,299 | 9,580 | 5,717 | — | — | 229 | 1,151 | 6,648 |
| 15 - 49 " | 41 | 650 | 1,437 | 3,291 | 2,816 | 20,556 | 44,521 | 23,048 | — | — | 1,108 | 5,924 | 29,049 |
| 50 - 99 " | 25 | 1,045 | 2,271 | 5,762 | 6,235 | 31,965 | 80,384 | 42,947 | — | — | 1,697 | 9,731 | 46,151 |
| 100-199 " | 12 | 1,216 | 2,782 | 7,446 | 8,696 | 30,684 | 83,255 | 44,212 | — | — | 1,692 | 10,564 | 45,942 |
| 200-499 " | 11 | 2,070 | 4,442 | 10,663 | 5,721 | 42,440 | 112,598 | 65,681 | — | — | 3,175 | 17,397 | 67,964 |
| 500 employed and over | 8 | 6,449 | 14,125 | 38,146 | 24,964 | 118,052 | 285,892 | 143,630 | — | — | 9,672 | 61,240 | 145,355 |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 444 | 3,049 | 2,140 |
| Totals | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | — | — | 18,045 | 109,190 | 344,057 |

TABLE 6. Principal Statistics classified by Type of Organization, 1963 and 1964

| Type of organization | Establishments | Manufacturing activity | | | | | | | Total activity | | | | |
|---|----------------|--------------------------------|----------------|---------------|------------------------------|--------------------------------|--|----------------|-----------------------------|-------------|---------------|--------------------|----------------|
| | | Production and related workers | | | Cost of fuel and electricity | Cost of materials and supplies | Value of shipments of goods of own manufacture | Value added | Working owners and partners | | Employees | | Value added |
| | | Number | Man-hours paid | Wages | | | | | Number | Withdrawals | Number | Salaries and wages | |
| No. | | '000 | | | '000 | | | | '000 | | | '000 | |
| 1963 | | | | | | | | | | | | | |
| Individual ownerships | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Partnerships | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Incorporated companies | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | - | - | 17,240 | 100,443 | 306,761 |
| Co-operatives | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 347 | 2,492 | 2,070 |
| Totals | 129 | 11,402 | 24,885 | 62,731 | 46,115 | 221,067 | 553,762 | 290,194 | - | - | 17,587 | 102,935 | 308,831 |
| 1964 | | | | | | | | | | | | | |
| Individual ownerships | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Partnerships | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Incorporated companies | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | - | - | 17,601 | 106,141 | 341,917 |
| Co-operatives | | | | | | | | | | | | | |
| Head offices, sales offices and auxiliary units | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 444 | 3,049 | 2,140 |
| Totals | 132 | 11,591 | 25,408 | 66,074 | 49,075 | 247,626 | 617,570 | 325,953 | - | - | 18,045 | 109,190 | 344,057 |

TABLE 7. Calculation of Output, Input and Value Added, 1963 and 1964

| | Manufacturing activity | | Non-manufacturing activities | | Total activity | |
|--|------------------------|---------|------------------------------|--------|----------------|---------|
| | 1963 | 1964 | 1963 | 1964 | 1963 | 1964 |
| \$'000 | | | | | | |
| Output | | | | | | |
| 1. Shipments and other revenue | 553,762 | 617,570 | 86,600 | 92,500 | 640,362 | 710,070 |
| Inventories—Goods of own manufacture: | | | | | | |
| Add closing—Goods in process | 8,832 | 8,633 | ... | ... | 8,832 | 8,633 |
| Finished goods | 44,632 | 49,360 | ... | ... | 44,632 | 49,360 |
| Deduct opening—Goods in process | 8,370 | 8,827 | ... | ... | 8,370 | 8,827 |
| Finished goods | 41,480 | 44,082 | ... | ... | 41,480 | 44,082 |
| 2. Net inventory change | 3,614 | 5,084 | ... | ... | 3,614 | 5,084 |
| 3. Gross output (1 + 2) | 557,376 | 622,654 | 86,600 | 92,500 | 643,976 | 715,154 |
| Input | | | | | | |
| 4. Purchases of goods not of own manufacture | ... | ... | 60,794 | 69,076 | 60,794 | 69,076 |
| Inventories—Goods not of own manufacture: | | | | | | |
| Add opening | ... | ... | 7,267 | 7,533 | 7,267 | 7,533 |
| Deduct closing | ... | ... | 7,526 | 7,444 | 7,526 | 7,444 |
| 5. Cost of goods sold (not of own manufacture) | ... | ... | 60,535 | 69,165 | 60,535 | 69,165 |
| 6. Materials, supplies, etc. | 221,067 | 247,626 | 7,427 | 5,232 | 228,494 | 252,858 |
| 7. Fuel and electricity | 46,115 | 49,075 | ... | ... | 46,115 | 49,075 |
| 8. Gross input (5 + 6 + 7) | 267,182 | 296,701 | 67,962 | 74,397 | 335,144 | 371,098 |
| Value added (3 - 8) | 290,194 | 325,953 | 18,638 | 18,104 | 308,831 | 344,057 |

TABLE 8. Employment and Payroll, 1963 and 1964

| Year and province | Employees | | | | | | | | | | Salaries and wages | | | | |
|---------------------------------|--------------------------------|-----------|------------|----------|---------------------------|--------------|------------------------|------------|---------------|--------------|--------------------------------|--------------|---------------------------|------------------------|----------------|
| | Production and related workers | | | | Administrative and office | | Sales and distribution | | Total | | Production and related workers | | Administrative and office | Sales and distribution | Total |
| | Manufacturing | | Other | | Male | Female | Male | Female | Male | Female | Manufacturing | Other | | | |
| | Male | Female | Male | Female | | | | | | | | | | | |
| | number | | | | | | | | | | \$'000 | | | | |
| 1963 | | | | | | | | | | | | | | | |
| Newfoundland | x | - | - | - | x | - | x | - | x | x | x | - | x | x | x |
| Prince Edward Island | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Nova Scotia | 39 | - | - | - | 30 | 11 | 11 | - | 80 | 11 | 163 | - | 171 | 58 | 392 |
| New Brunswick | x | x | - | - | x | x | x | - | x | x | x | - | x | x | x |
| Quebec | 2,767 | 4 | 4 | - | 887 | 178 | 90 | 25 | 3,748 | 207 | 14,949 | 19 | 6,956 | 736 | 22,661 |
| Ontario | 6,708 | 33 | 193 | 1 | 2,409 | 658 | 571 | 111 | 9,881 | 803 | 37,853 | 1,149 | 21,022 | 4,136 | 64,160 |
| Manitoba | 40 | - | 3 | - | 36 | 13 | 17 | - | 96 | 13 | 173 | 16 | 195 | 85 | 469 |
| Saskatchewan | x | - | - | - | x | x | x | x | x | x | x | - | x | x | x |
| Alberta | 751 | 9 | 6 | - | 353 | 70 | 34 | 2 | 1,144 | 81 | 4,165 | 28 | 2,630 | 190 | 7,013 |
| British Columbia | 1,001 | 3 | - | - | 329 | 47 | 41 | 1 | 1,371 | 51 | 5,208 | - | 2,316 | 219 | 7,743 |
| Yukon and Northwest Territories | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Totals | 11,353 | 49 | 206 | 1 | 4,074 | 982 | 783 | 139 | 16,416 | 1,171 | 62,731 | 1,212 | 33,462 | 5,530 | 102,935 |
| 1964 | | | | | | | | | | | | | | | |
| Newfoundland | | | | | | | | | | | | | | | |
| Prince Edward Island | | | | | | | | | | | | | | | |
| Nova Scotia | 96 | - | 1 | - | 62 | 16 | 22 | - | 181 | 16 | 469 | 4 | 356 | 110 | 940 |
| New Brunswick | | | | | | | | | | | | | | | |
| Quebec | 2,800 | 13 | 3 | - | 925 | 217 | 132 | 24 | 3,860 | 254 | 15,925 | 14 | 7,467 | 1,137 | 24,543 |
| Ontario | 6,731 | 32 | 191 | - | 2,480 | 674 | 592 | 130 | 9,994 | 836 | 39,271 | 1,155 | 22,323 | 4,421 | 67,170 |
| Manitoba | 44 | - | 4 | - | 29 | 13 | 15 | - | 92 | 13 | 179 | 24 | 190 | 75 | 468 |
| Saskatchewan | 47 | - | - | - | 18 | 4 | 10 | 1 | 75 | 5 | 277 | - | 123 | 72 | 472 |
| Alberta | 767 | 7 | 5 | - | 339 | 73 | 37 | 3 | 1,148 | 83 | 4,397 | 26 | 2,750 | 208 | 7,381 |
| British Columbia | 1,051 | 3 | - | - | 357 | 43 | 33 | 1 | 1,441 | 47 | 5,555 | - | 2,447 | 213 | 8,216 |
| Yukon and Northwest Territories | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Totals | 11,536 | 55 | 204 | - | 4,210 | 1,040 | 841 | 159 | 16,791 | 1,254 | 66,074 | 1,224 | 35,655 | 6,237 | 109,190 |

TABLE 9. Production and Related Workers, - Manufacturing Activity, 1963 and 1964

| Month | 1963 | | 1964 | |
|--|--------|--------|--------|--------|
| | Male | Female | Male | Female |
| | number | | | |
| Establishments reporting monthly detail (large establishments only): | | | | |
| January | 10,172 | 51 | 11,160 | 53 |
| February | 10,785 | 47 | 11,216 | 53 |
| March | 11,389 | 46 | 11,293 | 54 |
| April | 11,409 | 50 | 11,343 | 50 |
| May | 11,580 | 47 | 11,535 | 52 |
| June | 11,779 | 48 | 11,734 | 52 |
| July | 11,857 | 52 | 11,751 | 58 |
| August | 11,856 | 46 | 11,860 | 54 |
| September | 11,575 | 47 | 11,658 | 51 |
| October | 11,580 | 53 | 11,588 | 55 |
| November | 11,223 | 50 | 11,605 | 52 |
| December | 11,124 | 51 | 11,483 | 53 |
| Averages | 11,353 | 49 | 11,536 | 55 |
| Establishments reporting annual averages (small establishments only) | - | - | - | - |
| Average for all establishments | 11,353 | 49 | 11,536 | 55 |

TABLE 10. Inventories, 1964

| Province | Manufacturing | | | | Non-manufacturing | Total inventories |
|---------------------------------------|---------------------------|------------------|-----------------------------------|---------------|--|-------------------|
| | Materials, supplies, etc. | Goods in process | Finished goods of own manufacture | Total | Products or materials purchased for resale | |
| book value \$'000 | | | | | | |
| Opening: | | | | | | |
| Newfoundland | | | | | | |
| Prince Edward Island | | | | | | |
| Nova Scotia | 139 | 16 | 22 | 177 | 240 | 417 |
| New Brunswick | | | | | | |
| Quebec | 8,058 | 1,267 | 8,485 | 17,810 | 2,101 | 19,911 |
| Ontario | 20,449 | 7,092 | 21,827 | 49,368 | 3,854 | 53,222 |
| Manitoba | 54 | 9 | 16 | 79 | 204 | 283 |
| Saskatchewan | 18 | — | 11 | 29 | 105 | 134 |
| Alberta | 2,937 | 221 | 3,616 | 6,773 | 429 | 7,203 |
| British Columbia | 5,668 | 223 | 10,207 | 16,097 | 600 | 16,698 |
| Yukon and Northwest Territories | — | — | — | — | — | — |
| Totals | 37,323 | 8,827 | 44,185 | 90,335 | 7,533 | 97,868 |
| Closing: | | | | | | |
| Newfoundland | | | | | | |
| Prince Edward Island | | | | | | |
| Nova Scotia | 224 | 8 | 45 | 277 | 303 | 580 |
| New Brunswick | | | | | | |
| Quebec | 8,826 | 1,607 | 8,310 | 18,743 | 1,500 | 20,243 |
| Ontario | 22,659 | 6,480 | 23,919 | 53,058 | 4,295 | 57,353 |
| Manitoba | 78 | 2 | 24 | 104 | 143 | 247 |
| Saskatchewan | 250 | 56 | 644 | 950 | 320 | 1,269 |
| Alberta | 3,024 | 265 | 4,563 | 7,852 | 386 | 8,237 |
| British Columbia | 6,353 | 216 | 11,927 | 18,496 | 498 | 18,994 |
| Yukon and Northwest Territories | — | — | — | — | — | — |
| Totals | 41,414 | 8,633 | 49,432 | 99,479 | 7,444 | 106,923 |

TABLE 11. Purchased Fuel and Electricity Used in Manufacturing Activity, 1963 and 1964

| Description | 1963 | | 1964 | |
|--|-----------|---------------|---------------|---------------|
| | Quantity | Cost | Quantity | Cost |
| | | \$'000 | | \$'000 |
| 1. Large establishments reporting commodity detail: | | | | |
| Bituminous coal: | | | | |
| (a) From Canadian mines | ton | 21,900 | 229 | 25,860 |
| (b) Imported | " | 931,137 | 7,736 | 1,065,735 |
| Sub-bituminous coal (from Alberta mines only) | " | — | — | — |
| Anthracite coal | " | 71 | 1 | 79 |
| Lignite coal | " | — | — | — |
| Coke | " | 43,570 | 264 | 9,949 |
| Gasoline (including gasoline used in cars and trucks) | Imp. gal. | 969,519 | 309 | 1,109,758 |
| Fuel oil including kerosene or coal oil | " | 36,753,040 | 2,921 | 36,254,430 |
| Wood | cord | 13 | -- | 23 |
| Gas: | | | | |
| (a) Liquefied petroleum gases | Imp. gal. | 142,883 | 24 | 2,860,709 |
| (b) Other manufactured gas | M cu. ft. | 7,280,952 | 3,540 | 12,548,629 |
| (c) Natural gas | " | 20,476,131 | 5,267 | 21,781,057 |
| Other fuel | ... | ... | 543 | ... |
| Electricity purchased | kwh. | 5,457,539.172 | 22,703 | 5,563,200,817 |
| Steam purchased | ... | ... | 2,580 | ... |
| 2. Small establishments not reporting commodity detail: | | | | |
| Estimate for fuel and electricity | | — | — | — |
| 3. All establishments: | | | | |
| Total fuel and electricity used | | ... | 46,115 | ... |

¹ The differences between figures in Table 10 and those in Table 7 arise from firms reporting output of products on the basis of production rather than of shipments. Consequently, inventories of finished products for such respondents are not taken into account for purposes of compiling value added in Table 7. See also "Concepts and Definitions" for explanation of other variances.

TABLE 12. Materials and Supplies - Manufacturing Activity, 1963 and 1964

| Description | 1963 | | 1964 | |
|---|-----------|----------------|-------------|----------------|
| | Quantity | Cost \$'000 | Quantity | Cost \$'000 |
| I. Materials used: | | | | |
| Acetone | lb. | 2,501,780 | 2,016,351 | 174 |
| Acid - Acetic, 99½% | " | 737,450 | 1,969,873 | 164 |
| Fatty - Oleic | " | 1,061,651 | 1,107,385 | 210 |
| Stearic | " | 1,858,445 | 1,201,145 | 161 |
| Other fatty acids | " | 11,264,475 | 11,084,319 | 1,209 |
| Formic, 85% | " | 600,593 | 344,879 | 47 |
| Hydrochloric (muriatic), 100% | " | 9,155,820 | 11,065,333 | 409 |
| Hydrofluoric | " | 5,245,895 | 6,089,004 | 1,130 |
| Nitric, 100% | " | 22,575,876 | 42,328,238 | 667 |
| Phosphoric | " | 65,665,000 | 72,032,506 | 5,084 |
| Sulphuric - New acid (as 100%) | ton | 74,099 | 92,739 | 1,906 |
| Spent acid (as 100%) | " | 294 | - | - |
| Alcohol - Butyl (including isobutyl and normal) | lb. | 3,914,289 | 6,537,289 | 903 |
| Isopropyl | " | 1,702,162 | 2,050,418 | 129 |
| Methyl | Imp. gal. | 2,613,736 | 2,476,533 | 654 |
| Aluminum chloride | lb. | 3,647,334 | 3,052,521 | 428 |
| Aluminum sulphate (alum) | " | 1,626,353 | 1,264,321 | 31 |
| Ammonia, anhydrous | ton | 113,308 | 114,320 | 6,053 |
| Barium carbonate | lb. | 1,369,742 | 1,423,534 | 70 |
| Barium chloride | " | 680,226 | 711,867 | 48 |
| Benzol | " | 189,367,972 | 190,743,274 | 6,293 |
| Betanaphthol | " | 254,115 | 395,482 | 93 |
| Calcium carbonate (whiting and chalk) | " | 523,708 | 532,280 | 11 |
| Carbon, activated | " | 296,966 | 563,390 | 193 |
| Carbon bisulphide (disulphide) | " | 2,478,079 | 2,595,640 | 133 |
| Carbon tetrachloride | " | 20,865,880 | 22,983,720 | 1,604 |
| Chlorine | ton | 24,278 | 38,253 | 2,620 |
| Coal, (except for fuel) - Anthracite | " | 85,724 | 61,160 | 1,022 |
| Bituminous | " | 58,495 | 58,902 | 859 |
| Cobalt acetate | lb. | 33,812 | 39,262 | 30 |
| Coke, (except for fuel) other | ton | 138,832 | 172,631 | 3,041 |
| Cresol (including cresylic acid, all forms) | lb. | 262,181 | 161,859 | 27 |
| Diatomaceous earth | ton | 15,771 | 12,837 | 759 |
| Electrodes (purchased) | " | .. | 927 | 982 |
| Ethanolamine - Mono | lb. | 783,930 | 1,104,534 | 293 |
| Di | " | 601,900 | 116,631 | 38 |
| Tri | " | 127,957 | 301,758 | 90 |
| Fluorspar | ton | 8,982 | 11,246 | 538 |
| Formaldehyde, 100% solids basis | lb. | 1,108,878 | 1,999,851 | 209 |
| (Glycerine (includes mainly crude grade) | " | 1,138,414 | 1,969,916 | 365 |
| Glycols - Ethylene | " | 192,765 | 270,416 | 40 |
| Other grades | " | 1,484,741 | 1,109,846 | 182 |
| Graphite | " | 955,130 | 1,544,005 | 604 |
| Iron and steel scrap (borings, etc.) | ton | 5,767 | 6,056 | 195 |
| Lead, pig | lb. | 27,408,037 | 2,838 | 3,496 |
| Lead sulphate | " | 7,800 | 13,550 | 3 |
| Limestone | ton | 579,396 | 582,735 | 1,314 |
| Lime - Hydrated | " | 3,886 | 3,898 | 80 |
| Quick | " | 19,275 | 30,088 | 430 |
| Litharge | lb. | 2,176,248 | 2,527,245 | 435 |
| Mercury | " | 111,221 | 96,166 | 294 |
| Muriate of potash (potassium chloride) | ton | 5,790 | 8,445 | 374 |
| Natural gas (as a material in manufacturing; not for fuel) | M cu. ft. | 13,533,158 | 14,716,741 | 5,339 |
| Oils - Castor | lb. | 2,158,547 | 2,120,087 | 325 |
| Cocoonut | " | 2,395,298 | 3,102,320 | 477 |
| Linseed | Imp. gal. | 4,935 | 27,714 | 38 |
| Tall | lb. | 639,803 | 591,041 | 109 |
| Other oils | " | 2,152,817 | 3,329,899 | 400 |
| Phenol | " | 5,957,495 | 8,639,226 | 1,012 |
| Petrochemical feed stocks - L.P.G's (Butane, propane, other) | " | .. | 5,508 | 5,604 |
| Other | " | .. | 30,884 | 33,533 |
| Phosphate rock | ton | 781,427 | 908,695 | 13,604 |
| Potassium bichromate | lb. | 227,512 | 283,620 | 55 |
| Potassium hydroxide (as 100% KOH) | " | 4,169,258 | 4,775,571 | 272 |
| Phthalic anhydride | " | 3,811,990 | 6,578,659 | 795 |
| Quartz and quartzite | ton | 66,252 | 70,685 | 242 |
| Silica sand | " | 25,446 | 29,787 | 272 |
| Sodium chloride, dry (common salt) | " | 405,476 | 498,340 | 4,722 |
| Sodium chloride, brine (salt content) | " | 72,042 | 73,913 | 213 |
| Sodium bichromate | lb. | 2,834,849 | 1,952,618 | 432 |
| Sodium hydroxide (caustic soda as 100% Na OH) | ton | 40,573 | 53,132 | 2,817 |
| Sodium nitrate | lb. | 321,847 | 893,657 | 50 |
| Sodium prussiate | " | 496,508 | 430,654 | 67 |
| Sodium silicate (water glass) (including metasilicate) | " | 2,256,315 | 2,136,209 | 55 |
| Sulphur (brimstone) | ton | 227,160 | 243,696 | 5,460 |
| Tallow | lb. | 18,219,993 | 20,673,917 | 1,496 |
| Titanium dioxide | " | 317,738 | 81,810 | 22 |
| Toluene (toluol) | " | 34,678,199 | 44,520,647 | 1,177 |
| Urea | " | 20,052,918 | 17,909,071 | 512 |
| Xylene (xylol) | " | 343,998 | 322,989 | 16 |
| Zinc chloride | " | 443,336 | 637,083 | 59 |
| Zinc oxide | " | 366,593 | 379,612 | 59 |
| Steel sheets for making containers | ton | 1,675 | 3,063 | 536 |
| All other materials and components used | .. | 69,650 | .. | 78,623 |
| 2. Containers and other packaging materials and supplies used | .. | 11,313 | .. | 11,952 |
| 3. Operating, maintenance and repair supplies used (excluding fuel) | .. | 26,205 | .. | 28,047 |
| 4. Amount paid out to others for work done on materials owned by establishments | .. | 1,609 | .. | 3,111 |
| Totals | .. | 221,067 | .. | 247,626 |

TABLE 13. Factory Shipments of Chemicals, 1963 and 1964

| Description | Value | |
|---|----------------------------|----------------|
| | 1963 | 1964 |
| | \$'000 | |
| Acids, including acetic, muriatic, nitric, sulphuric, phosphoric, stearic, etc. | 34,992 | 40,112 |
| Calcium compounds, including carbide, chloride, phosphide, cyanamide, cyanide acid phosphate, grey acetate, arsenate, chloride of lime, etc. | 18,152 | 19,831 |
| Sodium compounds, including hydroxide, phosphate, cyanide, silicate, hypochlorite, bisulphite, saltcake, Glauber's salt, chlorate, acid pyrophosphate, soda ash, sal soda, bisulphate, etc., (pharmaceutical salts included elsewhere) | 54,983 | 59,932 |
| Organic chemicals, including acetic anhydride, butyl acetate, ethyl acetate paraldehyde, glycols, pentasol acetate, vinyl acetate, ethyl alcohol, methyl hydrate, glycerine, phenol, cresol, benzol, etc., (acetic acid and acetylene included elsewhere) | 187,512 | 209,588 |
| Compressed and liquefied gases, etc., including acetylene, carbon dioxide, oxygen, nitrous oxide, liquid sulphur dioxide, liquid chlorine, anhydrous and aqua ammonia, liquefied petroleum gases, etc. | 86,380 | 102,722 |
| Fertilizer chemicals, including ammonium sulphate, ammonium nitrate (fertilizer grade), ammonium phosphate and superphosphate | 83,148 | 90,348 |
| Synthetic resins, including casein type, vinyls, polystyrene, phenol-formaldehyde, urea-formaldehyde, alkyds, sodium carboxymethylcellulose, etc. | 116,960 ^f | 142,851 |
| Other chemicals, including white lead, zinc oxide, red lead, litharge, cobalt salts, nickel salts, ferric chloride, lead arsenate, phosphorus, white arsenic, ammonium nitrate, fine chemicals, precious metal salts, etc. | 91,248 | 109,343 |
| Totals | 673,375^f | 774,727 |

TABLE 14. Production,¹ Imports, Exports and Apparent Consumption of Sulphuric Acid, 1925-64

| Year | Production | Imports | Exports | Apparent consumption ² |
|------------|-------------------------|---------|---------|-----------------------------------|
| | short tons of 100% acid | | | |
| 1925 | 77,700 | 52 | 19,179 | 58,573 |
| 1930 | 100,020 | 150 | 571 | 99,599 |
| 1935 | 209,083 | 83 | 1,027 | 208,139 |
| 1940 | 301,444 | 142 | 2,244 | 299,342 |
| 1945 | 664,302 | 149 | 11,203 | 653,248 |
| 1950 | 756,110 | 332 | 44,417 | 712,025 |
| 1955 | 950,277 | 151 | 29,578 | 920,850 |
| 1957 | 1,290,000 | 1,000 | 29,500 | 1,261,500 |
| 1958 | 1,586,000 | 39,345 | 23,252 | 1,602,093 |
| 1959 | 1,739,000 | 18,489 | 27,863 | 1,729,626 |
| 1960 | 1,673,000 | 9,526 | 43,430 | 1,639,096 |
| 1961 | 1,614,000 | 7,275 | 38,914 | 1,582,361 |
| 1962 | 1,696,000 | 7,162 | 34,960 | 1,668,202 |
| 1963 | 1,790,000 | 5,634 | 37,316 | 1,758,318 |
| 1964 | 1,941,000 | 4,209 | 67,409 | 1,877,800 |

¹ From all industries.

² No allowance made for changes in inventories.

TABLE 15. Production,¹ Imports and Exports of Chlorine and Caustic Soda, 1960-64

| Year | Chlorine | Caustic soda ² (100% Na OH) |
|-----------------|----------|---|
| | tons | |
| (a) Production: | | |
| 1960 | 322,000 | 373,000 |
| 1961 | 354,000 | 415,000 |
| 1962 | 371,000 | 432,000 |
| 1963 | 423,000 | 485,000 |
| 1964 | 469,000 | 539,000 |
| (b) Imports: | | |
| 1960 | 27,820 | 41,361 |
| 1961 | 29,686 | 37,107 |
| 1962 | 32,478 | 53,062 |
| 1963 | 34,552 | 77,593 |
| 1964 | 42,848 | 55,222 |
| (c) Exports: | | |
| 1960 | 24,483 | 3,135 |
| 1961 | 19,965 | .. |
| 1962 | 24,900 | .. |
| 1963 | 27,000 | .. |
| 1964 | 18,320 | .. |

¹ From all industries.

² Imports of caustic soda solution are generally reported in terms of gross weight of approximately 50% Na OH. Figures in Table 15 have been converted to 100% Na OH to agree with the basis used in production and exports.

TABLE 16. Available Data on the Consumption of Sulphuric Acid, by Industries, 1963 and 1964

| Industry | 1963 | 1964 |
|--|-------------------------|------------------|
| | short tons of 100% acid | |
| Iron and steel mills..... | 60,300 | 67,896 |
| Other iron and steel..... | 12,500 | 14,784 |
| Electrical products..... | 5,100 | 5,352 |
| Vegetable oil mills..... | 200 | 79 |
| Sugar refineries..... | 300 | 271 |
| Leather tanneries..... | 2,400 | 2,550 |
| Pulp and paper mills..... | 48,800 | 53,985 |
| Uranium ore processing..... | 228,800 | 143,162 |
| Manufacturers of mixed fertilizers ¹ | 289,400 | 362,883 |
| Manufacturers of plastics and synthetic resins..... | 23,600 | 24,491 |
| Manufacturers of soap and cleaning compounds..... | 16,600 | 17,315 |
| Other chemical industries..... | 12,700 | 12,104 |
| Manufacturers of industrial chemicals ² (includes bauxite concentration)..... | 916,400 | 1,004,555 |
| Petroleum refining industry..... | 12,200 | 14,612 |
| Mining ³ | 40,100 | 47,549 |
| Miscellaneous ⁴ | 68,300 | 85,275 |
| Total accounted for..... | 1,741,700 | 1,856,920 |

¹ Includes used for production of superphosphates.

² Includes consumption of "own make" or "captive" acid by firms classified to these industries.

³ Includes metal mines, non-metal mines, mineral fuels and structural materials.

⁴ Includes synthetic textiles, explosives and ammunition, other petroleum and coal, mineral wool, miscellaneous food industries and textile dyeing and finishing industries.

TABLE 17. Available Data on the Consumption of Chlorine, by Industries, 1963 and 1964

| Industry | 1963 | 1964 |
|--|--------------------|--------------------|
| | net tons | |
| Municipal waterworks (1959 latest available)..... | 2,721 | 2,721 |
| Mining ¹ | 5,113 ² | 5,113 ² |
| Pulp and paper mills ³ | 229,583 | 278,035 |
| Textile dyeing and finishing plants..... | 9 | 9 |
| Manufacturers of plastics and synthetic resins..... | 239 | 247 |
| Manufacturers of soap and cleaning compounds..... | 5,312 | 6,835 |
| Other chemical industries..... | 584 | - |
| Manufacturers of industrial chemicals ⁴ | 184,002 | 192,822 |
| Miscellaneous food industries..... | 764 | 439 |
| Total accounted for..... | 428,327 | 486,221 |

¹ Includes non-metal mines, metal mines, mineral fuels and structural materials.

² Estimated.

³ Includes consumption of "own make" or "captive" chlorine by firms classified to these industries.

TABLE 18. Available Data on the Consumption of Caustic Soda, by Industries, 1963 and 1964

| Industry | 1963 | 1964 |
|--|------------------------|----------------|
| | net tons of 100% Na OH | |
| Pulp and paper mills ¹ | 247,383 | 290,545 |
| Manufacturers of soap and cleaning compounds..... | 21,723 | 27,982 |
| Manufacturers of industrial chemicals ² (includes bauxite concentration)..... | 191,383 | 218,615 |
| Petroleum refining..... | 12,685 | 10,280 |
| Manufacturers of plastics and synthetic resins..... | 15,032 | 16,840 |
| Other chemical industries..... | 5,595 | 7,497 |
| Miscellaneous food industries (includes starch and glucose)..... | 1,651 | 2,652 |
| Mining ³ | 10,356 ³ | 10,356 |
| Iron and steel mills..... | 954 | 1,211 |
| Textile dyeing and finishing..... | 122 | 118 |
| Sugar refineries..... | 88 | 104 |
| Vegetable oil mills..... | 323 | 224 |
| Miscellaneous ⁴ | 24,456 | 26,238 |
| Total accounted for..... | 531,751 | 612,662 |

¹ Includes consumption of "own make" or "captive" caustic by firms classified to these industries.

² Includes metal mines, non-metal mines, mineral fuels and structural materials.

³ Estimated.

⁴ Includes synthetic textile mills and plastic fabricators.

TABLE 19. Factory Shipments¹ of Ammonium Sulphate, 1960-64

| Year | Shipments |
|------------|----------------------|
| | tons |
| 1960 | 349,677 |
| 1961 | 278,527 |
| 1962 | 291,683 |
| 1963 | 257,581 ^r |
| 1964 | 286,439 |

¹ From all industries.

TABLE 20. Factory Shipments¹ of Pigments and Dry Colours, 1960-64

| Year | Shipments ² |
|------------|------------------------|
| | \$'000 |
| 1960 | 25,980 |
| 1961 | 28,477 |
| 1962 | 33,306 |
| 1963 | 42,416 |
| 1964 | 51,189 |

¹ From all industries.

² Includes white lead, red lead and litharge; colours, dry and in oils; acetylene black, satin white, zinc oxide, cobalt oxide, cobalt sulphate, carbon black, copper oxide, aluminum paste, synthetic iron oxide and titanium oxide.

TABLE 21. Factory Shipments of Synthetic Rubber, 1960-64

| Year | Quantity | Selling value at plant |
|------------|----------|------------------------|
| | M pounds | \$'000 |
| 1960 | 335,872 | 76,039 |
| 1961 | 372,254 | 83,427 |
| 1962 | 372,394 | 80,200 |
| 1963 | 409,390 | 79,076 |
| 1964 | 452,026 | 82,659 |

TABLE 22. Factory Shipments¹ of Acetylene and Oxygen, 1960-64

| Year | Acetylene | | Oxygen ² | |
|------------|-------------|------------------------|---------------------|------------------------|
| | Quantity | Selling value at plant | Quantity | Selling value at plant |
| | cu. ft. | \$'000 | cu. ft. | \$'000 |
| 1960 | 209,480,259 | 7,849 | 1,836,199,766 | 12,331 |
| 1961 | 178,777,276 | 6,967 | 1,888,655,030 | 12,317 |
| 1962 | 192,492,117 | 7,236 | 1,552,477,747 | 12,775 |
| 1963 | 197,462,539 | 7,690 | 1,704,636,705 | 12,244 |
| 1964 | 213,956,910 | 8,109 | 1,677,809,347 | 13,062 |

¹ Includes only the shipments, chiefly in cylinders, or delivered by pipeline, to adjacent consuming plants. Does not include amounts made for own use by some chemical companies.

² Excludes tonnage oxygen.

List of Establishments classified to This Industry, 1964

(Does not include establishments classified to other industries, which as a secondary activity, manufacture products typical of this industry)

| Name and location | Name and location |
|--|---|
| Newfoundland: | Ontario — Concluded: |
| L'Air Liquide and Canadian Liquid Air Co. Ltd., St. John's | Independent Oxygen and Acetylene Co. Ltd., Cornwall L'Air Liquide and Canadian Liquid Air Co. Ltd., Hamilton L'Air Liquide and Canadian Liquid Air Co. Ltd., London L'Air Liquide and Canadian Liquid Air Co. Ltd., Port Arthur L'Air Liquide and Canadian Liquid Air Co. Ltd., Sudbury L'Air Liquide and Canadian Liquid Air Co. Ltd., Toronto Liquid Carbonic Canadian Corp. Ltd., Maitland Liquid Carbonic Canadian Corp. Ltd., 41 Mill St., Toronto Liquid Carbonic Canadian Corp. Ltd., 565 Tretheway Dr., Toronto National Oxygen Ltd., Div. of Anthes Imperial Co. Ltd., Oakville National Silicates Ltd., Toronto Naugatuck Chemicals, Div. of Dominion Rubber Co. Ltd., Elmira Nichols Chemical Co. Ltd., The, Port Arthur Nichols Chemical Co. Ltd., The, Sulphide Nichols Chemical Co. Ltd., The, Thorold Northern Pigment Co. Ltd., Towns Rd., Etobicoke Nuodex Products of Canada Ltd., 34 Industrial St., Toronto Pfizer Company Limited, Cornwall Pigment and Chemical Co. Ltd., Milton Polymer Corporation Limited, Sarnia Resco Chemicals and Colours Ltd., 113 Shorncliffe Rd., Toronto Sherbrooke Metallurgical Co. Ltd., Sherbrooke St. Clair Chemical Ltd., Sarnia Union Carbide Canada Ltd., Linde Gases Div., Fort William Union Carbide Canada Ltd., Linde Gases Div., Oakland Union Carbide Canada Ltd., Linde Gases Div., Merriton Union Carbide Canada Ltd., Linde Gases Div., Sault Ste. Marie Union Carbide Canada Ltd., Linde Gases Div., Welland Vir Chem. of Canada Ltd., Cornwall Welland Chemicals of Canada Ltd., Port Colborne Witco Chemical Co. (Canada) Ltd., Oakville |
| Nova Scotia: | Manitoba: |
| L'Air Liquide and Canadian Liquid Air Co. Ltd., Halifax L'Air Liquide and Canadian Liquid Air Co. Ltd., Sydney Liquid Carbonic Canadian Corp. Ltd., Dartmouth Union Carbide Canada Ltd., Linde Gases Div., Halifax | Border Chemical Co. Ltd., Gunn Rd. and Day St., Transcona L'Air Liquide and Canadian Liquid Air Co. Ltd., Winnipeg Liquid Carbonic Canadian Corp. Ltd., Winnipeg Union Carbide Canada Ltd., Linde Gases Div., Transcona |
| New Brunswick: | Saskatchewan: |
| Canadian Industries Limited, Dalhousie L'Air Liquide and Canadian Liquid Air Co. Ltd., Moncton Union Carbide Canada Ltd., Linde Gases Div., Saint John | Armour Industrial Chemicals Ltd., Saskatoon Interprovincial Co-operative Ltd., Saskatoon L'Air Liquide and Canadian Liquid Air Co. Ltd., Regina Union Carbide Canada Ltd., Linde Gases Div., Saskatoon |
| Quebec: | Alberta: |
| Abbey Chemical Co., St-Antoine-des-Laurentides A.C.C. (Chrome and Chemicals) Lte., Ville d'Anjou Canadian Alcolac Ltd., Valleyfield Canadian Industries Limited, Shawinigan Falls Canadian Titanium Pigments Ltd., Varennes Carter White Lead Co. of Canada Ltd., The, 1071 Delorimier Ave., Montreal Chemicals Refineries Corp., Napierville Durham Industries (Canada) Limited, 1435 Island St., Montreal Electric Reduction Co. of Canada Ltd., Buckingham Electric Reduction Co. of Canada Ltd., Varennes Hercules Powder Co. (Canada) Ltd., St. Johns L'Air Liquide and Canadian Liquid Air Co. Ltd., Bale Comeau L'Air Liquide and Canadian Liquid Air Co. Ltd., Montreal L'Air Liquide and Canadian Liquid Air Co. Ltd., Quebec L'Air Liquide and Canadian Liquid Air Co. Ltd., Tracey Laurentides Chemicals and Sulphur Ltd., Montreal East McArthur Irwin Ltd., 7 Bates Rd., Outremont National Silicates Ltd., Valleyfield Nichols Chemicals Co. Ltd., The, Valleyfield Ogilvie Flour Mills Co. Ltd., The, Montreal Shawinigan Chemicals Ltd., Montreal East Shawinigan Chemicals Ltd., Shawinigan Falls Shawinigan Chemicals Ltd., Varennes Shawinigan Chemicals Ltd., (Petrochemical Plant), Varennes Shell Canada Ltd., Montreal East Standard Chemical Limited, Beauharnois Trioxide of Canada Ltd., Tracy Union Carbide Canada Ltd., Linde Gases Div., Lauzon Union Carbide Canada Ltd., Linde Gases Div., Montreal (305 Bourgeois St.) Union Carbide Canada Ltd., Linde Gases Div., Montreal (10451 Metropolitan Blvd.) Union Carbide Canada Ltd., Linde Gases Div., Sept-Isles Union Carbide Canada Ltd., Linde Gases Div., Shawinigan Falls | Canadian Chemical Co. Ltd., Edmonton Consolidated Mining and Smelting Co. of Canada Ltd., Calgary Dow Chemical of Canada Ltd., Fort Saskatchewan Inland Chemicals Ltd., Fort Saskatchewan L'Air Liquide and Canadian Liquid Air Co. Ltd., Calgary L'Air Liquide and Canadian Liquid Air Co. Ltd., Edmonton Naugatuck Chemicals, Div. of Dominion Rubber Co. Ltd., Clover Bar Northwest Nitro Chemicals Ltd., Medicine Hat Union Carbide Canada Ltd., Linde Gases Div., Edmonton Union Carbide Canada Ltd., Linde Gases Div., Ogden Western Chemicals Limited, Duvernay |
| Ontario: | British Columbia: |
| Brockville Chemicals Ltd., Maitland Brunner Mond Canada Ltd., Amherstburg Cabot Carbon of Canada Limited, Sarnia Canada Packers Limited, Toronto Canadian Industries Limited, Copper Cliff Canadian Industries Limited, Cornwall Canadian Industries Limited, Hamilton Canadian Industries Limited, Millhaven Canadian Oxygen Limited, 355 Horner Ave., Toronto Church and Dwight Ltd., Amherstburg Columbian Carbon (Canada) Ltd., 755 Parkdale Ave. N., Hamilton Cornwall Chemicals Limited, Cornwall Cyanamid of Canada Ltd., Niagara Falls Cyanamid of Canada Ltd. (Welland works), Niagara Falls Cyanamid of Canada Ltd., Hamilton Dominion Colour Corporation Ltd., 199 New Toronto St., New Toronto Dow Chemical of Canada Ltd., Sarnia Dryden Chemicals Ltd., Dryden Du Pont of Canada Ltd., Maitland Dussek Bros. Canada Ltd., Belleville Emery Industries (Canada) Ltd., 68 Nelson St., London Ethyl Corporation of Canada Ltd., Corunna Harchem Limited, 715 Kipling Ave. S., Toronto Holland Suco Colour of Canada Ltd., 120 St. Helen's Ave., Toronto Howards and Sons (Canada) Ltd., Cornwall Imperial Oil Ltd., Sarnia | Consolidated Mining and Smelting Co. of Canada Ltd., Kimberley Consolidated Mining and Smelting Co. of Canada Ltd., Tadanac Dow Chemical of Canada Ltd., Ladner Electric Reduction Co. of Canada Ltd., North Vancouver Hooker Chemicals Ltd., Nanaimo Hooker Chemicals Ltd., North Vancouver L'Air Liquide and Canadian Liquid Air Co. Ltd., Cranbrook L'Air Liquide and Canadian Liquid Air Co. Ltd., Dawson Creek L'Air Liquide and Canadian Liquid Air Co. Ltd., Kitimat L'Air Liquide and Canadian Liquid Air Co. Ltd., Nanaimo L'Air Liquide and Canadian Liquid Air Co. Ltd., Vancouver L'Air Liquide and Canadian Liquid Air Co. Ltd., Victoria Liquid Carbonic Canadian Corp. Ltd., Prince George Liquid Carbonic Canadian Corp. Ltd., Vancouver Nichols Chemical Co. Ltd., Barnet Union Carbide Canada Ltd., Linde Gases Div., Vancouver |

CONCEPTS AND DEFINITIONS

Census of Manufactures

General

The Census of Manufactures is an annual mail survey covering Canada's Manufacturing Industries. It is based on the Standard Classification of Industries and full details concerning the system may be found in the Standard Industrial Classification manual, Catalogue No. 12-501 which is available from the Queen's Printer or the Dominion Bureau of Statistics. In summary, the Classification as it relates to the manufacturing industries provides for a breakdown into 140 industries arranged in 20 major industry groups. Of the 140 (3 digit) industries, 18 are further broken down into 56 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 176 separate industries. They cannot all be published separately by province, however, because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the **establishment** (see definition of "Establishment" in following section) and a return is requested from every establishment classified to a manufacturing industry. Although respondents are required to submit reports covering the calendar year, financial year reports other than the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in the Census of Manufactures; (a) short form (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to manufacturing industries and differ only in the amount of detail requested. The short form is a single-sheet questionnaire sent to small manufacturers generally reporting shipments of less than \$100,000; this cut-off, however, varies somewhat between industries. The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the manufacturing establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments which are coded (on the basis of their principal activity) to industries other than manufacturing in the Standard Industrial Classification system, but which undertake some manufacturing as a subsidiary activity. This single-sheet questionnaire is designed to collect information on the quantity and value of goods of own manufacture shipped by such establishments in order to achieve full coverage of domestically manufactured commodities (see the following note under Shipments).

The results of the Census are presented in some 140 publications. In addition to these annual industry publications there are annual summary reports for Canada and the provinces and special reports giving principal statistics by detailed geographic areas, by type of ownership and size of establishment. A special annual report covering the shipments of all manufactured commodities arranged in alphabetical order is also published.

Since 1960 the following major changes have been implemented in the Census of Manufactures: (a) a revised Standard Industrial Classification (b) a new establishment definition and (c) an extension of the establishment definition to cover the non-manufacturing activities of manufacturing establishments. The statistics presented in the various 1963 reports reflect the complete implementation of these changes and enable comparisons to be made with the years 1961 and 1962. For a complete description of the procedures followed in establishing the revised series, reference should be made to the Explanatory Notes included in the 1960, 1961 and 1962 industry publications. The statistical framework within which the Census of Manufactures is now carried out is based on the following concepts and definitions which have been developed as part of a general programme to achieve a fully integrated system of economic statistics.

Establishment

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment":

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour

force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

Head Offices and Auxiliary Units

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digit). When establishments of

such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers – Manufacturing activities

In addition to those engaged in production and assembling activities, they include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. In the case of those establishments reporting on the "short" form, respondents are requested to report average annual figures. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). Data on man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated on the basis of ratios derived from the 1958 census. During this census all establishments reported on the long form. In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers – Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total Employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees before deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages,

bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for over-time are included. Figures on salaries and wages refer to the calendar year.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

Materials and Supplies

(a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-manufacturing activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of

purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Shipments

(a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of the net change in progress payments over the year.

(b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity

are collected by means of the Commodity questionnaire referred to earlier. Such shipments together with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

(c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the

receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods pur-

chased for re-sale) and the cost of non-manufacturing materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By Total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net output or net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, "Survey of Production".

STATISTICS CANADA LIBRARY
BIBLIOTHÈQUE STATISTIQUE CANADA



1010649819