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DOMINION BUREAU OF STATISTICS - CANADA

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THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA, 1927.

A further increase in the output value of acids, alkalies, salts and compressed gases was recorded in 1927 when production for the industry reached a total value of \$30,740,846 or half a million dollars above the corresponding figure for 1926.

(a) Acids, Alkalies, and Salts.- Output from the 16 plants in Canada producing acids, alkalies and salts as principal products in 1927 was valued at \$28,115,148 and as materials used cost \$15,110,991; the value added by manufacturing amounted to \$13,004,157. Capital employed stood at \$31,134,457 and employment was given to 1,881 people to whom \$2,858,644 was paid in salaries and wages during the year.

Of the 16 plants in operation, 8 were in Ontario, 4 in Quebec, 3 in British Columbia and 1 in Nova Scotia. Sulphuric acid was made in 7 different plants, nitric acid in 2 plants and hydrochloric acid in 3 plants; cyanamide, bleaching powder, sodium cyanide, paraldehyde, glacial acetic acid, phosphorus, liquid chlorine, soda ash, phosphoric acid, hydrofluosilicic acid, sodium hypochlorite, ethyl acetate, butyl acetate, butyl alcohol and caustic soda were each made by only 1 firm in Canada. Calcium carbide was made for sale in 2 plants and for intermediate use in one other establishment.

(b) Compressed Gases.- Production of compressed gases in 1927 totalled \$2,625,698 in value as compared with \$2,422,486 in 1926. Capital employed amounted to \$4,177,794; employees numbered 404; expenditures for salaries and wages totalled \$604,417 and materials cost \$550,795.

Of the 25 plants reporting, 11 were in Ontario, 6 in Quebec, 3 in Manitoba, 2 in Nova Scotia, 2 in British Columbia and 1 in Alberta. Acetylene was made in 11 different plants, carbon dioxide in 8, oxygen in 12, hydrogen in 3 and aqua and anhydrous ammonia in 1 plant.

PRINCIPAL STATISTICS OF THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA, 1923 - 1927.

| Year | No. of plants | Capital employed \$ | No. of Employees | Salaries and Wages \$ | Cost of Materials \$ | Selling Value of Products \$ | Value added by manufacturing \$ |
|----------------------------------|---------------|---------------------|------------------|-----------------------|----------------------|------------------------------|---------------------------------|
| <u>Acids, Alkalies and Salts</u> | | | | | | | |
| 1923 | 24 | 31,963,429 | 2,488 | 3,318,679 | 11,147,442 | 21,747,547 | 10,600,105 |
| 1924 | 20 | 30,382,113 | 2,121 | 3,025,998 | 11,214,692 | 24,190,274 | 12,975,562 |
| 1925 | 20 | 32,236,424 | 2,004 | 2,992,695 | 12,472,687 | 25,396,782 | 12,924,095 |
| 1926 | 19 | 34,589,930 | 2,040 | 3,075,649 | 12,924,539 | 27,809,836 | 14,885,297 |
| 1927 | 16 | 31,134,457 | 1,881 | 2,858,644 | 15,110,991 | 28,115,148 | 13,004,157 |
| <u>Compressed Gases</u> | | | | | | | |
| 1923 | 23 | 4,472,896 | 300 | 461,764 | 488,879 | 2,165,445 | 1,676,566 |
| 1924 | 21 | 4,115,958 | 292 | 443,322 | 401,951 | 2,051,448 | 1,649,497 |
| 1925 | 20 | 3,420,104 | 325 | 481,595 | 370,569 | 2,086,615 | 1,716,044 |
| 1926 | 24 | 3,799,733 | 360 | 521,824 | 437,729 | 2,422,486 | 1,986,757 |
| 1927 | 25 | 4,177,794 | 404 | 604,417 | 550,795 | 2,625,698 | 2,070,903 |
| <u>TOTAL</u> | | | | | | | |
| 1923 | 47 | 35,436,315 | 2,788 | 3,780,443 | 11,636,321 | 23,912,992 | 12,276,671 |
| 1924 | 41 | 34,298,071 | 2,413 | 3,469,320 | 11,616,643 | 26,241,722 | 14,625,079 |
| 1925 | 40 | 35,656,528 | 2,409 | 3,474,290 | 12,843,256 | 27,483,395 | 14,640,139 |
| 1926 | 43 | 38,389,663 | 2,400 | 3,597,473 | 13,360,268 | 30,232,322 | 16,872,054 |
| 1927 | 41 | 35,312,251 | 2,235 | 3,463,061 | 15,661,786 | 30,740,846 | 15,079,060 |

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-2-

MATERIALS USED IN THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA,
1926 and 1927.

| Material | Unit of Measure | 1926 | | 1927 | |
|--|--------------------|-----------|---------------|-----------|---------------|
| | | Quantity | Cost at Works | Quantity | Cost at Works |
| ACIDS, ALKALIES AND SALTS. | | | | | |
| Acid, sulphuric, 66°Be..... | lb. | 2,932,532 | 26,567 | 7,161,589 | 109,373 |
| Ammonia, anhydrous, and ammonia liquor..... | lb;NH ₃ | 174,633 | 22,132 | 161,683 | 15,684 |
| Calcium carbonate (limestone).... | ton | 212,009 | 495,254 | 273,783 | 472,212 |
| Calcium chloride..... | lb. | 153,400 | 2,454 | 206,050 | 3,267 |
| Calcium hydroxide (slaked lime).. | lb. | 4,748,040 | 24,684 | 1,437,107 | 7,540 |
| Coke (not for fuel)..... | ton | 93,278 | 794,031 | 84,624 | 751,066 |
| Coal, anthracite (not for fuel).. | ton | 7,649 | 47,179 | 3,688 | 28,386 |
| Carbon electrodes..... | lb. | 5,869,870 | 322,277 | 3,503,997 | 218,252 |
| Iron sulphide (pyrites)..... | ton | 15,986 | 82,708 | 19,379 | 100,374 |
| Silica..... | ton | 29,233 | 88,975 | 4,504 | 16,015 |
| Sodium carbonate (soda ash)..... | lb. | 1,866,289 | 27,209 | 598,346 | 9,926 |
| Sodium chloride (including brine)ton | | 42,189 | 122,067 | 83,858 | 117,510 |
| Sodium hydroxide..... | lb. | 258,347 | 9,143 | 318,723 | 11,020 |
| Sodium nitrate (Chile saltpetre).ton | | 1,200 | 73,274 | 1,115 | 65,597 |
| Sodium salts, all other..... | - | - | 10,960 | - | 6,613 |
| Sulphur (brimstone)..... | ton | 22,893 | 419,056 | 19,847 | 388,008 |
| Containers, boxes, etc..... | - | - | 416,996 | - | 418,205 |
| All other materials. ¹ | - | - | 658,391 | - | 1,351,461 |
| TOTAL..... | - | - | 3,643,357 | - | 4,090,509 |
| Intermediate products used as materials ² | - | - | 9,281,182 | - | 11,020,482 |
| TOTAL MATERIALS USED..... | - | - | 12,924,539 | - | 15,110,991 |
| COMPRESSED GASES | | | | | |
| Acetone..... | lb. | 91,281 | 18,520 | 125,532 | 25,244 |
| Calcium carbide..... | lb. | 6,361,871 | 207,125 | 7,385,241 | 234,192 |
| Coke..... | ton | 4,609 | 32,817 | 1,696 | 25,769 |
| All other materials..... | - | - | 98,987 | - | 54,414 |
| Cylinders purchased during year.. | No. | 3,011 | 78,280 | - | 211,176 |
| TOTAL..... | - | - | 435,729 | - | 550,795 |
| TOTAL..... | - | - | 13,360,268 | - | 15,661,786 |

¹ Includes acetylene, calcium acetate, calcium fluoride, phosphate rock, sodium bichromate, pathway oil and other materials.

² Includes calcium carbide, acetaldehyde, acetylene, electrodes, crude phosphorus, crude cyanamide, lime, calcined salt cake, nitrogen and sulphuric acid, 66°Be and 100%.

PRODUCTS OF THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA, 1926 and 1927.

| Product | Unit of Measure | 1926 | | 1927 | |
|---|-----------------|-------------|------------------------|-------------|------------------------|
| | | Quantity | Selling Value at works | Quantity | Selling Value at works |
| ACIDS, ALKALIES AND SALTS | | | | | |
| Products made for sale:- | | | | | |
| Sulphuric acid, 66°Be..... | lb. | 207,585,802 | 1,265,866 | 193,734,509 | 1,153,507 |
| Hydrochloric acid, 20°Be ¹ | lb. | 7,409,881 | 109,992 | 6,938,978 | 68,356 |
| All other products..... | - | - | 17,150,389 | - | 15,864,925 |
| TOTAL..... | - | - | 18,526,247 | - | 17,086,788 |
| Intermediate products made for own use | - | - | 9,283,589 | - | 11,028,360 |
| TOTAL..... | - | - | 27,809,836 | - | 28,115,148 |
| COMPRESSED GASES | | | | | |
| Acetylene..... | Cu.ft. | 27,814,736 | 700,977 | 31,195,053 | 798,480 |
| Carbon dioxide..... | lb. | 3,896,524 | 395,974 | 4,706,519 | 445,989 |
| Hydrogen..... | Cu.ft. | 23,951,424 | 41,262 | 26,989,730 | 43,228 |
| Oxygen..... | Cu.ft. | 86,989,015 | 1,102,523 | 112,757,727 | 1,238,987 |
| All other products ² | - | - | 181,750 | - | 99,014 |
| Total..... | - | - | 2,422,486 | - | 2,625,698 |
| TOTAL..... | - | - | 30,232,322 | - | 30,740,846 |

¹ Includes products reported by only 1 or 2 firms such as acetylene, acetic acid, 28%, glacial acetic acid, hydrochloric acid, hydrofluosilicic acid, phosphoric acid, nitric acid, butyl acetate, ethyl acetate, butyl alcohol, calcium carbide, calcium cyanamide, bleaching powder, liquid chlorine, iron phosphide, copper cyanide, copper carbonate, paraldehyde, phosphorus, soda ash, sodium cyanide, caustic soda, sodium hypochlorite, saltcake, glauber's salt, acetylene black and satin white.

² Includes aqua and anhydrous ammonia, nitrogen and other products.

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