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DOMINION BUREAU OF STATISTICS - CANADA
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THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA, 1928.

Chemical plants producing acids, alkalies, salts and compressed gases in Canada during 1928 reported an output valued at $42,336,846 or nearly 12 millions above the corresponding figure for 1927, according to data compiled by the Dominion Bureau of Statistics at Ottawa. Statistics for this group in 1928 covered the operations of 41 establishments of which 16 made heavy chemicals and 25 manufactured industrial gases.

(a) Acids, Alkalies and Salts.- Production in the acids, alkalies and salts group in 1928 was valued at $39,190,962 of which $21,256,286 represented the value of sales and $17,934,676 the value of intermediates made and used in further processes by the producing plants. Sixteen plants were in operation including 9 in Ontario, 3 in Quebec, 3 in British Columbia and 1 in Nova Scotia. Capital employed amounted to $40,024,624, employees numbered 2,517, salaries and wages totalled $3,490,409 and materials cost $22,925,404.

Excepting sulphuric acid, each of the commodities made in this industry was produced by only one or two plants. Sulphuric acid was made in 6 plants, nitric acid in 2, hydrochloric acid in 2, calcium carbide for sale in 2 and for intermediate use in 1, while each of the following commodities was made by only 1 concern: acetylene black, glacial acetic acid, hydrofluosilicic acid, phosphoric acid, butyl acetate, ethyl acetate, ammonium phosphate, calcium cyanamide, bleaching powder, liquid chlorine, iron phosphide, paraldehyde, phosphorus, soda ash, sodium cyanide, caustic soda, glauber's salt, salt cake and croton aldehyde. Production figures for these chemicals cannot be published separately.

(b) Compressed Gases.- Output value for the compressed gases industry totalled $3,145,884 in 1928. Capital employed was given at $4,226,037; employees numbered 426; salaries and wages amounted to $652,893; and materials cost $479,587.

Of the 25 plants in operation 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 7; 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, 1924-1928.

Year	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Selling value of products at works	Value added by manufacturing
		$		$	$	$	$
Acids, Alkalies and Salts -							
1924	20	30,182,113	2,121	3,025,998	11,214,692	24,190,274	12,975,562
1925	20	32,236,424	2,084	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
1928	16	40,024,624	2,517	3,490,409	22,925,404	39,190,962	16,265,558
Compressed Gases -							
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	435,729	2,422,486	1,986,757
1927	25	4,177,794	404	604,417	550,795	2,625,698	2,070,903
1928	25	4,226,037	426	652,893	479,587	3,145,884	2,666,297
TOTAL -							
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	2,285	3,463,061	15,661,786	30,740,846	15,079,060
1928	41	44,250,661	2,943	4,143,302	23,404,991	42,336,846	18,931,855

MATERIALS USED IN THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA, 1927 and 1928.

Material	Unit of measure	1927 Quantity	1927 Cost at works	1928 Quantity	1928 Cost at works
ACIDS, ALKALIES AND SALTS			$		$
Acid, sulphuric, 66° Be.	lb.	7,161,589	109,373	7,737,349	105,039
Ammonia, anhydrous, and ammonia liquor	lb. NH_3	161,683	15,684	167,893	14,921
Calcium carbonate (limestone)	ton	273,783	472,212	364,921	631,580
Calcium chloride	lb.	206,050	3,267	405,688	6,166
Calcium hydroxide (slaked lime)	lb.	1,437,107	7,540	441,030	2,140
Coke (not for fuel)	ton	84,624	751,066	131,756	961,109
Coal, anthracite (not for fuel)	ton	3,688	28,386	5,631	43,589
Carbon electrodes	lb.	3,503,997	218,252	5,014,088	294,266
Iron sulphide (pyrites)	ton	19,379	100,374	18,494	88,889
Silica	ton	4,504	16,015	4,528	16,247
Sodium carbonate (soda ash)	lb.	598,346	9,926	621,943	9,752
Sodium chloride (including brine)	ton	133,858	117,510	154,957	119,447
Sodium hydroxide	lb.	318,723	11,020	393,321	13,178
Sodium nitrate (Chile saltpetre)	ton	1,115	65,597	985	55,494
Sodium salts, all other	-	...	6,613	...	20,993
Sulphur (brimstone)	ton	19,847	388,008	18,903	381,806
Containers, boxes, etc	-	...	418,205	...	531,918
All other materials[1]	-	...	1,351,461	...	1,701,554
TOTAL	-	...	4,090,509	...	4,998,088
Intermediate products used as materials[2]	-	...	11,020,482	...	17,927,316
TOTAL MATERIALS USED	-	...	15,110,991	...	22,925,404
COMPRESSED GASES					
Acetone	lb.	125,532	25,244	126,188	25,984
Calcium carbide	lb.	7,385,241	234,192	8,080,017	282,154
Coke	ton	1,696	25,769	1,846	29,005
All other materials	-	...	54,414	...	72,446
Cylinders purchased during year	No.	...	211,176	...	69,998
TOTAL	-	...	550,795	...	479,587
GRAND TOTAL	-	...	15,661,786	...	23,404,991

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, sulphuric acid, nitric acid and phosphoric acid.

PRODUCTS OF THE ACIDS, ALKALIES, SALTS AND COMPRESSED GASES INDUSTRY IN CANADA, 1927 and 1928.

Product	Unit of measure	1927 Quantity	1927 Selling value at works	1928 Quantity	1928 Selling value at works
ACIDS, ALKALIES AND SALTS			$		$
Products made for sale:-					
Sulphuric acid, 66° Be.	lb.	193,734,509	1,153,507	188,508,477	1,055,495
All other products[1]	-	...	15,933,281	...	20,200,791
TOTAL	-	...	17,086,788	...	21,256,286
Intermediate products made for own use		...	11,028,360	...	17,934,676
TOTAL	-	...	28,115,148	...	39,190,962
COMPRESSED GASES					
Carbon dioxide	lb.	4,706,519	445,989	5,533,275	515,819
Hydrogen	Cu.ft.	26,989,730	43,228	44,491,114	44,491
Oxygen	Cu.ft.	112,757,727	1,238,987	138,688,619	1,471,218
All other products[2]	-	...	897,494	...	1,114,356
TOTAL	-	...	2,625,698	...	3,145,884
GRAND TOTAL	-	...	30,740,846	...	42,336,846

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

2 Includes aqua and anhydrous ammonia, nitrogen, and acetylene. Acetylene is not shown as there was also a production in the acids, alkalies and salts group; the total production amounted to 360,243,954 cu.ft at $2,566,974 as compared with 271,506,150 cu.ft. at $1,773,750 in 1927.