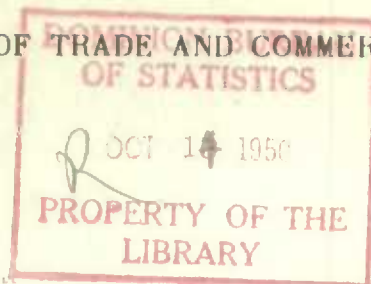


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CANADA



THE COMPRESSED GASES INDUSTRY 1949

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Prepared in the Mining, Metallurgical and Chemical Section,
Industry and Merchandising Division,
Dominion Bureau of Statistics, Ottawa

NOTICE

The Industry and Merchandising Division of the Bureau of Statistics collects and compiles figures on (a) the primary industries in Canada—mining, forestry and fishing; (b) manufacturing; (c) construction, and (d) merchandising and services.

For the purpose of annual compilation and publication, the manufacturing industries have been classified into major groups, prefaced by two reports of a general nature, as follows:

- I Summary Report on Manufacturing Industries
- II Manufacturing Industries by Geographical Distribution
- III Foods and Beveragee
- IV Tobacco and Tobacco Products
- V Rubber Products
- VI Leather Products
- VII Miscellaneous Manufactures
- VIII Textiles
- IX Wood and Paper Products
- X Printing Trades
- XI Operations in the Woods
- XII Iron and Steel Products
- XIII Transportation Equipment
- XIV Non-ferrous Metal Products
- XV Electrical Apparatus and Supplies
- XVI Non-metallic Mineral Products
- XVII Products of Petroleum and Coal
- XVIII Chemicals and Allied Products

The present report belongs in Group XVIII. It is punched to permit of filing in a ring binder along with others of the group. The reports in this group are:

- A General Review
- B The Acids, Alkalies and Salts Industry
- C The Fertilizers Industry
- D The Fertilizer Trade in Canada
- E The Medicinal and Pharmaceutical Preparations Industry
- F The Paints, Varnishes and Lacquers Industry
- G The Primary Plastics Industry
- H The Soaps, Washing Compounds and Cleaning Preparations Industry
- I The Toilet Preparations Industry
- J The Vegetable Oil Industry
- K The Inks Industry
- L The Adhesives Industry
- M The Polishes and Dressings Industry
- N The Compressed Gases Industry
- O The Coal Tar Distillation Industry
- P The Miscellaneous Chemical Products Industry

THE COMPRESSED GASES INDUSTRY

1949

Manufacturing plants in Canada engaged chiefly in making industrial gases reported production in 1949 at \$12,091,176 compared with \$11,314,387 in 1948, an increase of 6.9 per cent.

There were 48 factories in operation during 1949, of which 18 were located in Ontario; 11 in Quebec; 5 in Alberta; 4 in British Columbia; 3 in Nova Scotia; 3 in Manitoba; 2 in Saskatchewan, and 1 each in New Brunswick and Newfoundland. The average number of employees in the industry in 1949 was 1,223, including 560 salaried workers and 663 wage-earners. Salaries for the year amounted to \$1,491,331 and wages totalled \$1,739,573.

The chief products were oxygen, acetylene and carbon dioxide. The output of oxygen increased 16 per cent to 657.1 million cubic feet; acetylene decreased 2 per cent to 120.8 million cubic feet,

and carbon dioxide increased 2½ per cent to 27.6 million pounds. Aqua ammonia, anhydrous ammonia, nitrogen, hydrogen, nitrous oxide and propane were other products of this industry. The output figures for the latter items are not published separately since there were only one or two producers in each case.

No mention is made in this report of liquid chlorine, liquid sulphur dioxide, synthetic ammonia, nor of hydrogen and nitrogen for the manufacture of synthetic ammonia. These items were produced in works that also made other kinds of chemicals and the statistics concerning the output of same have been included in the heavy chemical industry which is reviewed in a separate bulletin. A similar disposition has been accorded liquefied petroleum gases produced in the petroleum refining and miscellaneous chemical industries.

TABLE 1. Principal Statistics for the Compressed Gases Industry, 1945-1949

Year	Number of plants	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
			\$	\$	\$	\$
1945.....	41	1,097	1,933,727	347,840	1,269,309	8,429,524
1946.....	42	1,064	1,961,493	314,524	1,258,423	8,308,028
1947.....	44	1,089	2,262,527	365,903	1,475,523	9,607,229
1948.....	45	1,156	2,613,283	404,455	2,180,518	11,314,387
1949.....	48	1,223	3,230,904	431,855	1,979,160	12,091,176
% change, 1949 from 1948.....	—	+ 5.8	+ 23.6	+ 6.8	— 9.2	+ 6.9

Note. Profits or losses cannot be calculated from above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

TABLE 2. Principal Statistics for the Compressed Gases Industry, by Provinces, 1948 and 1949

Province	Number of plants	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
			\$	\$	\$	\$
1948						
Nova Scotia.....	3	401	920,045	126,427	744,038	3,976,344
New Brunswick.....	1					
Quebec.....	10					
Ontario.....	18	417	986,079	203,889	835,416	4,597,036
Manitoba.....	3					
Saskatchewan.....	2					
Alberta.....	4	223	460,812	39,475	394,463	1,738,308
British Columbia.....	4					
Canada.....	45	1,156	2,613,283	404,455	2,180,518	11,314,387
1949						
Newfoundland.....	1	381	970,051	130,752	603,724	3,963,372
Nova Scotia.....	3					
New Brunswick.....	1					
Quebec.....	11	500	1,388,649	207,820	776,876	4,918,165
Ontario.....	18					
Manitoba.....	3					
Saskatchewan.....	2	120	290,679	26,700	235,015	1,209,807
Alberta.....	5					
British Columbia.....	4					
Canada.....	48	1,223	3,230,904	431,855	1,979,160	12,091,176

TABLE 3. Products of the Compressed Gases Industry, 1948 and 1949

Product	Unit of measure	1948		1949	
		Quantity	Selling value at works	Quantity	Selling value at works
			\$		\$
Acetylene ¹	cu.ft.	123,185,685	3,301,822	120,831,500	3,420,827
Carbon dioxide (in cylinders and solid).....	pound	26,964,525	1,701,627	27,619,739	1,873,721
Hydrogen.....	cu.ft.	86,503,832	300,962	87,790,070	318,132
Oxygen ¹	cu.ft.	565,869,719	5,297,530	657,134,873	5,567,476
Other products ²	—	—	712,446	—	911,020
Total	—	—	11,314,387	—	12,091,176

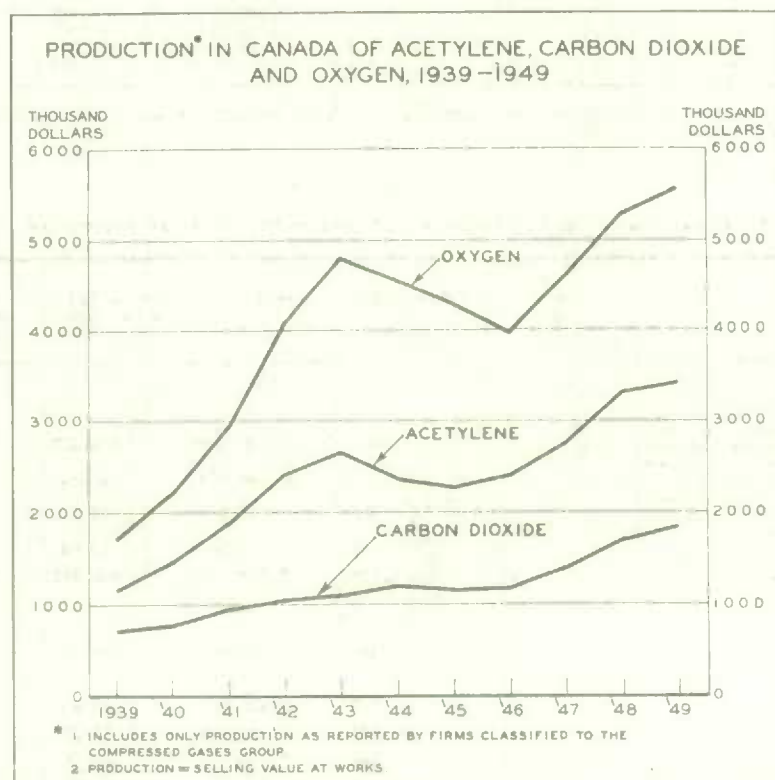
1. In cylinders or delivered by pipe line.

2. Includes nitrous oxide, propane, nitrogen, and ammonia made from gas liquor.

TABLE 4. Materials Used in the Compressed Gases Industry, 1948 and 1949

Material	Unit of measure	1948		1949	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Acetone.....	pound	388,008	57,325	417,446	65,629
Calcium carbide.....	ton	12,815	1,059,825	9,920	957,736
Coke.....	ton	4,397	87,824	2,914	61,076
Oil (for making carbon dioxide and hydrogen).....	imp. gal.	1,122,420	125,245	935,391	82,810
Potassium hydroxide.....	lb.	56,746	5,892	85,380	8,951
Sodium hydroxide.....	lb.	297,957	12,479	350,458	14,807
Other materials.....	—	—	243,946	—	559,169
Cylinders purchased during the year.....	number	20,280	587,982	7,658	228,962
Total	—	—	2,180,518	—	1,979,160

1. Includes ammonia liquor, ammonium nitrate, potassium carbonate, unpurified brewery gas, lime, soda ash, condensing water, etc.



THE COMPRESSED GASES INDUSTRY

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TABLE 5. Production¹ of Acetylene, Carbon Dioxide and Oxygen, 1940-1949

Year	Acetylene		Carbon dioxide, solid and in cylinders		Oxygen	
	Quantity	Selling value at works	Quantity	Selling value at works	Quantity	Selling value at works
	cu. ft.	\$	lb.	\$	cu. ft.	\$
1940.....	62,075,617	1,462,201	14,156,284	787,722	257,519,584	2,212,337
1941.....	81,791,386	1,898,679	16,805,039	954,535	356,633,855	2,945,542
1942.....	105,751,660	2,429,493	18,442,416	1,045,992	541,184,707	4,098,034
1943.....	114,111,166	2,657,631	19,939,470	1,108,169	636,281,176	4,811,834
1944.....	101,981,116	2,377,919	21,856,183	1,208,477	614,110,740	4,568,371
1945.....	95,889,965	2,273,945	20,895,441	1,165,188	565,601,348	4,297,791
1946.....	100,276,367	2,403,386	20,233,138	1,184,719	476,822,719	3,973,866
1947.....	111,370,838	2,748,114	23,481,700	1,408,002	577,806,032	4,603,919
1948.....	123,185,685	3,301,822	26,964,525	1,701,627	565,869,719	5,297,530
1949.....	120,831,500	3,420,827	27,619,739	1,873,721	657,134,873	5,567,476

1. Includes only production as reported by firms classified to the Compressed Gases group.

TABLE 6. Consumption of Carbon Dioxide in the Manufacture of Carbonated Beverages (Soft Drinks) 1944-1948

Year	Quantity	Cost at works
	Pounds	\$
1944:		
In cylinders.....	7,068,762	586,483
Solid.....	449,739	32,656
1945:		
In cylinders.....	6,133,176	481,088
Solid.....	352,258	23,591
1946:		
In cylinders.....	6,426,615	489,080
Solid.....	394,430	27,081
1947:		
In cylinders.....	8,066,953	606,033
Solid.....	468,821	33,184
1948:		
In cylinders.....	8,819,638	694,329
Solid.....	569,959	38,358

TABLE 7. Employees, Salaries and Wages in the Compressed Gases Industry, 1948 and 1949

	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
1948						\$	\$	\$
Quebec.....	79	49	169	—	297	298,433	400,527	698,960
Ontario.....	94	62	260	1	417	364,269	621,810	986,079
Alberta.....	20	21	42	—	83	87,330	95,055	182,385
British Columbia.....	20	31	60	4	115	107,792	138,555	246,347
Other provinces.....	72	50	122	—	244	240,590	258,922	499,512
Canada.....	285	213	653	5	1,156	1,098,414	1,514,869	2,613,283
1949								
Quebec.....	61	45	173	—	279	260,251	468,979	729,230
Ontario.....	135	115	249	1	500	716,794	671,855	1,388,649
Alberta.....	34	19	67	—	120	146,610	186,055	332,665
British Columbia.....	26	21	53	2	102	111,656	137,204	248,860
Other provinces.....	60	44	118	—	222	256,020	275,480	531,500
Canada.....	316	244	660	3	1,223	1,491,331	1,739,573	3,230,904



List of Firms in the Compressed Gases Industry, 1949

Name of Firm	Location of Plant
Liquid Carbonic Canadian Corporation Limited, H.O. 2120 Cabot St., Montreal, Quebec.	Dartmouth, Nova Scotia; Montreal, Quebec; Toronto, Ontario; St. Boniface, Manitoba; Edmonton, Alberta; Vancouver, British Columbia.
L'Air Liquide Society & Canadian Liquid Air Co. Limited H.O. 1111 Beaver Hall Hill, Montreal, Quebec.	St. John's, Newfoundland; Halifax, Nova Scotia; Sydney, Nova Scotia; Moncton, New Brunswick; Montreal, Quebec; Sorel, Quebec; Toronto, Ontario; London, Ontario; Hamilton, Ontario; Winnipeg, Manitoba; Regina, Saskatchewan; Calgary, Alberta; Edmonton, Alberta; Vancouver, British Columbia.
Dominion Oxygen Company, Limited H.O. Canada Life Building, 340 University Ave., Toronto, Ontario.	Arvida, Quebec; Quebec, Quebec; Montreal, Quebec (2); Shawinigan Falls, Quebec; Sault Ste. Marie, Ontario; Toronto, Ontario; Welland, Ontario; Merritton, Ontario; St. Boniface, Manitoba; Saskatoon, Saskatchewan; Vancouver, British Columbia.
Wall Chemicals Canadian Corporation, Limited H.O. 8400 Decarie Blvd., Montreal, Quebec.	Montreal, Quebec (2); Toronto, Ontario; Windsor, Ontario.
Ohio Chemical Canada Limited, 2535 St. James St. W., Montreal, Quebec.	Montreal, Quebec; Toronto, Ontario.
Alberta Oxygen & Acetylene Co. Ltd., 142nd Street at 108th Avenue, Edmonton, Alberta.	Edmonton, Alberta.
Canadian Industries, Limited, H.O. 1135 Beaver Hall Hill, Montreal, Quebec.	Toronto, Ontario.
Canada Packers Limited	2200 St. Clair Ave. W., Toronto, Ontario.
Lever Brothers, Limited	299 Eastern Ave., Toronto, Ontario.
Peoples Gas Supply Co., Ltd.	2-10 Mill St., Ottawa, Ontario.
Procter & Gamble Co. of Canada, Ltd.	Burlington St. E., Hamilton, Ontario.
Swift Canadian Co., Limited	1960 St. Clair Ave., Toronto, Ontario.
A.C. Wickman (Canada) Limited	Etobicoke, Ontario.
Western Oxygen Company Limited	Armstrong, British Columbia.
Western Propane Limited	Turner Valley, Alberta.

This report was prepared in the Mining, Metallurgical and Chemical Section.