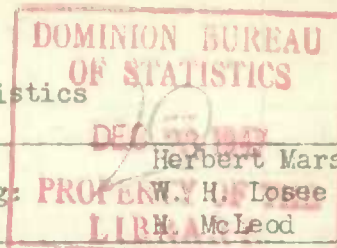


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Department of Trade and Commerce
Dominion Bureau of Statistics
Census of Industry
Mining, Metallurgical and Chemical Statistics
Ottawa - Canada



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Annual Industry Report

Chemicals and Allied Products Group

THE COMPRESSED GASES INDUSTRY, 1946

Manufacturing plants in Canada engaged chiefly in making industrial gases reported production in 1946 at \$8,308,028 compared with \$8,429,524 in 1945, a decrease of 1.4 per cent.

There were 42 factories in operation during 1946, of which 18 were located in Ontario; 11 in Quebec; 3 in Manitoba; 3 in Nova Scotia; 3 in British Columbia; 2 in Alberta; 1 in Saskatchewan and 1 in New Brunswick. The average number of employees in the industry in 1946 was 1,064, including 491 salaried workers and 573 wage-earners. Salaries for the year amounted to \$916,070 and wages totalled \$1,045,423.

The chief products were oxygen, acetylene and carbon dioxide. The output of oxygen declined 16 per cent to 476,822,719 cubic feet; acetylene increased 5 per cent to 100,276,367 cubic feet, and carbon dioxide declined 3 per cent to 20,233,138 pounds. Aqua ammonia, anhydrous ammonia, nitrogen, hydrogen and nitrous oxide were other products of this industry.

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. Liquefied petroleum gases are not included as they are produced in the petroleum refining industry.

Table 1 - PRINCIPAL STATISTICS FOR THE COMPRESSED GASES INDUSTRY, 1939-1946

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
1939	31	672	1,037,718	156,372	501,108	4,009,829
1940	31	736	1,103,462	178,683	648,259	4,934,313
1941	35	860	1,446,884	216,549	945,836	6,345,140
1942	36	940	1,534,621	286,649	1,255,876	8,203,556
1943	38	1,080	1,848,753	344,136	1,380,575	9,212,226
1944	40	1,025	1,854,511	350,668	1,193,038	8,933,207
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
% change, 1946 from 1945 ....	..	-3.0	+1.4	-9.6	-0.9	-1.4

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, BY PROVINCES, 1945 and 1946

Province	Number of plants	Average number of em- ployees	Salaries and wages \$	Cost of fuel and electricity at works \$	Cost of materials at works \$	Gross sell- ing value of products at works \$
<u>1945</u>						
Nova Scotia	3	103	172,398	31,175	104,577	638,712
Quebec	10	307	547,183	87,354	383,194	2,302,006
Ontario	18	401	742,941	167,693	468,126	3,389,125
Manitoba	3	81	130,824	13,791	82,810	559,231
New Brunswick ..	1)					
Saskatchewan ...	1)	205	340,381	47,827	230,602	1,540,450
Alberta	2)					
British Columbia	3)					
CANADA	41	1,097	1,933,727	347,840	1,269,309	8,429,524
<u>1946</u>						
Nova Scotia	3	96	166,204	23,680	87,590	557,020
Quebec	11	292	543,101	79,740	295,549	2,264,548
Ontario	18	380	728,899	149,176	577,915	3,394,120
Manitoba	3	85	161,155	14,421	101,215	618,758
New Brunswick ..	1)					
Saskatchewan ...	1)	110	179,180	25,259	100,809	754,272
Alberta	2)					
British Columbia	3	101	182,954	22,248	95,345	719,310
CANADA	42	1,064	1,961,493	314,524	1,258,423	8,308,028

Table 3 - EMPLOYEES, SALARIES AND WAGES, 1945 and 1946

	Average Number of Employees					Salaries	Wages	TOTAL SALARIES and WAGES
	On Salaries		On Wages		Total			
	Male	Female	Male	Female				
						\$	\$	\$
1945								
Nova Scotia	20	32	49	2	103	83,437	88,961	172,398
Quebec	78	53	176	...	307	213,437	333,746	547,183
Ontario	72	86	242	1	401	281,921	461,020	742,941
Manitoba	21	20	39	1	81	65,915	64,909	130,824
British Columbia	18	38	52	5	113	91,794	100,969	192,763
Other provinces.	23	26	41	2	92	83,311	64,307	147,618
CANADA	232	255	599	11	1,097	819,815	1,113,912	1,933,727
1946								
Nova Scotia	28	22	46	...	96	84,224	81,980	166,204
Quebec	83	45	164	...	292	225,740	317,361	543,101
Ontario	88	63	228	1	380	312,914	415,985	728,899
Manitoba	27	16	42	...	85	93,521	67,634	161,155
British Columbia	26	29	43	3	101	96,089	86,865	182,954
Other provinces.	34	30	46	...	110	103,582	75,598	179,180
CANADA	286	205	569	4	1,064	916,070	1,045,423	1,961,493

Table 4 - WAGE-EARNERS, BY MONTHS, 1945 and 1946 (Number on Pay-roll on Last Work Day of Each Month)

Month	1 9 4 5			1 9 4 6		
	Male	Female	Total	Male	Female	Total
	(Number)					
January	592	13	605	548	4	552
February	588	13	601	546	4	550
March	604	13	617	571	4	575
April	577	13	590	573	4	577
May	577	13	590	558	4	562
June	618	12	630	578	4	582
July	637	11	648	602	4	606
August	630	12	642	585	4	589
September	610	10	620	568	4	572
October	603	9	612	566	4	570
November	575	9	584	570	4	574
December	558	8	566	572	5	577
AVERAGE	599	11	610	569	4	573

Table 5 - FUEL AND ELECTRICITY USED, 1945 and 1946

Kind	Unit of measure	1 9 4 5		1 9 4 6	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Bituminous coal--Canadian	ton	1,227	12,231	1,121	11,154
Imported	ton	3,611	27,486	3,506	27,084
Anthracite coal	ton	657	6,752	503	5,477
Coke (for fuel only)	ton	19	164	273	1,286
Gasoline	Imp.gal.	2,947	984	3,675	1,241
Kerosene	Imp.gal.	25,280	1,790	1,709	179
Fuel oil	Imp.gal.	17,358	1,552	50,706	3,674
Gas--Manufactured	M cu.ft.	754	786	1,934	1,587
Natural	M cu.ft.	1,518	1,396	2,974	1,699
Other fuel .....	...	...	4,184	...	2,526
Electricity purchased ...	K.W.H.	39,173,083	290,515	30,739,191	258,617
TOTAL .....	...	...	347,840	...	314,524

Table 6 - POWER EQUIPMENT, 1945 and 1946

Kind	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
	1 9 4 5			
Steam engines and steam turbines..	2	50	...	...
Hydraulic turbines or water wheels	1	150	...	...
Electric motors run by purchased power	385	8,273	27	504
TOTAL	388	8,473	27	504
Stationary power boilers	6	1,078	...	...
Motor-generator sets	12	4,150	...	...

Table 6 - POWER EQUIPMENT, 1945 and 1946 (Concluded)

Kind	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
<u>1 9 4 6</u>				
Steam engines and steam turbines..	2	30	...	...
Hydraulic turbines or water wheels	1	150	...	...
Electric motors run by purchased power	413	8,195	22	544
TOTAL	416	8,375	22	544
Stationary power boilers	5	1,070	...	...
Motor-generator sets	10	2,525 k.v.a.	...	...

Table 7 - MATERIALS USED, 1945 and 1946

Material	Unit of measure	1 9 4 5		1 9 4 6	
		Quantity	Cost at works \$	Quantity	Cost at works \$
Acetone	pound	332,035	55,250	341,809	42,359
Calcium carbide	ton	9,867	720,881	10,220	757,197
Coke	ton	5,469	83,541	4,848	70,812
Other materials (*) .....	...	...	257,276	...	323,036
Cylinders purchased during the year	number	4,821	152,361	3,420	65,019
TOTAL .....	...	...	1,269,309	...	1,258,423

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

Table 8 - PRODUCTS MANUFACTURED, 1945 and 1946

	Unit of measure	1 9 4 5		1 9 4 6	
		Quantity	Selling value at works \$	Quantity	Selling value at works \$
Acetylene (a)	cu.ft.	95,889,965	2,273,945	100,276,367	2,403,386
Carbon dioxide (in cylinders and solid)	pound	20,895,441	1,165,188	20,233,138	1,184,719
Hydrogen	cu.ft.	40,311,122	142,964	71,142,593	237,870
Oxygen (a)	cu.ft.	565,601,348	4,297,791	476,822,719	3,973,866
Other products (b) ..	...	...	549,636	...	508,187
TOTAL .....	...	...	8,429,524	...	8,308,028

(a) In cylinders or delivered by pipe line.

(b) Includes nitrous oxide, nitrogen, and ammonia made from gas liquor.

Table 9 - PRODUCTION OF ACETYLENE, CARBON DIOXIDE and OXYGEN, 1936-1946

Year	Acetylene	Carbon dioxide, solid and in cylinders	Oxygen
	Cubic feet	Pounds	Cubic feet
1936	41,315,830	10,124,202	151,500,660
1937	48,310,646	9,183,645	194,446,735
1938	45,394,062	11,530,694	173,992,296
1939	48,616,265	12,645,575	189,030,687
1940	62,075,617	14,156,284	257,519,584
1941	81,791,386	16,805,039	356,633,855
1942	105,751,660	18,442,416	541,184,707
1943	114,111,166	19,939,470	636,281,176
1944	101,981,116	21,856,183	614,110,740
1945	95,889,965	20,895,441	565,601,348
1946	100,276,367	20,233,138	476,822,719

Table 10 - CONSUMPTION OF CARBON DIOXIDE IN THE MANUFACTURE OF CARBONATED BEVERAGES (SOFT DRINKS), 1939-1945

	Quantity	Cost at Works
	Pounds	\$
1939 - In cylinders	4,957,744	403,068
Solid	768,793	44,813
1940 - In cylinders	5,769,675	632,961
Solid	1,361,055	95,787
1941 - In cylinders	6,705,658	678,299
Solid	789,676	67,783
1942 - In cylinders	6,341,040	504,246
Solid	650,511	44,805
1943 - In cylinders	6,719,137	556,954
Solid	825,441	57,472
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

LIST OF FIRMS IN THE COMPRESSED GASES INDUSTRY, 1946

Name of Firm	Location of Plant
Liquid Carbonic Canadian Corporation Limited H.C. - 2120 Cabot St., Montreal, Que.	Dartmouth, N.S.; Montreal, Que.(2); Toronto, Ont.; St. Boniface, Man.; Edmonton, Alta.; Vancouver, B.C.
L'Air Liquide Society & Canadian Liquid Air Co. Limited H.O. 1111 Beaver Hall Hill, Montreal, Que.	Halifax, N.S.; Sydney, N.S.; Moncton, N.B.; Montreal, Que.; Sorel, Que.; Toronto, Ont.; London, Ont.; Hamilton, Ont.; Winnipeg, Man.; Regina, Sask.; Calgary, Alta.; Vancouver, B.C.
Dominion Oxygen Company, Limited H.O. - Canada Life Building, 340 University Ave., Toronto, Ont.	Quebec, Que.; Montreal, Que.(2); Shawinigan Falls, Que.; Sault Ste. Marie, Ont.; Toronto, Ont.; Welland, Ont.; Merritton, Ont.; St. Boniface, Man.



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LIST OF FIRMS IN THE COMPRESSED GASES INDUSTRY, 1946

Name of Firm	Location of Plant
Wall Chemicals Canadian Corporation, Limited H.O. - 8400 Decarie Blvd., Montreal, Que.	Montreal, Que.; Ville la Salle, Que.; Toronto, Ont.; Windsor, Ont.
Oxygen Company of Canada, Limited 2535 St. James St. W., Montreal, Que.	Montreal, Que.; Toronto, Ont.
Canadian Industries, Limited H.O. - 1135 Beaver Hall Hill, Montreal, Que.	Toronto, Ont.
Canada Packers Limited	2200 St. Clair Ave. W., Toronto, Ont.
Lever Brothers, Limited	299 Eastern Ave., Toronto, Ont.
Peoples Gas Supply Co., Ltd.	2-10 Mill St., Ottawa, Ont.
Procter & Gamble Co. of Canada, Ltd.	Burlington St. E., Hamilton, Ont.
Swift Canadian Co., Limited	1960 St. Clair Ave., Toronto, Ont.
A. C. Wickman (Canada) Limited	Etobicoke, Ont.
B.C. Welding Sales & Equipment Co., Ltd.	Armstrong, B.C.
