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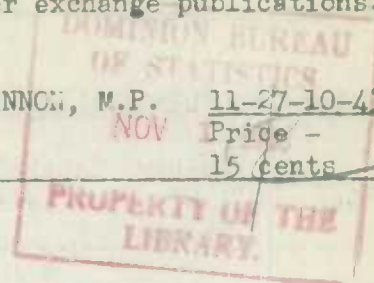
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ANNUAL INDUSTRY REPORT

CHEMICALS AND ALLIED PRODUCTS GROUP

THE COMPRESSED GASES INDUSTRY, 1942

Manufacturing plants in Canada engaged chiefly in making industrial gases reported production in 1942 at \$8,203,556 compared with \$6,345,140 in 1941, an increase of 29.3 per cent.

There were 36 factories in operation during 1942, of which 16 were located in Ontario, 8 in Quebec, 3 in Manitoba, 3 in Nova Scotia, 3 in British Columbia, 2 in Alberta and 1 in Saskatchewan. Capital employed by these establishments amounted to \$7,130,923, and of this \$3,980,715 was the value of land, buildings and equipment, \$716,368 the value placed on inventories and \$2,433,840 was the amount of working capital at the end of the year.

The average number of employees in the industry in 1942 was 940, including 408 salaried workers and 532 wage-earners. Salaries for the year amounted to \$700,756 and wages totalled \$833,865.

The chief products were oxygen, acetylene and carbon dioxide. The output of oxygen increased 52 per cent to 541,184,707 cubic feet, acetylene increased 29 per cent to 105,751,660 cubic feet and carbon dioxide gained 10 per cent to 18,442,416 pounds. Output of hydrogen declined 30 per cent to 40,365,249 cubic feet. Aqua ammonia, anhydrous ammonia, nitrogen 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.

Compressed Gases

Table 1 - PRINCIPAL STATISTICS FOR THE COMPRESSED GASES INDUSTRY, 1937 - 1942

Year	Number of plants	Capital employed	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
		\$		\$	\$	\$	\$
1937 ....	27	4,605,170	606	919,773	140,221	527,410	3,929,242
1938 ....	30	4,938,766	654	1,018,694	147,922	506,003	3,753,600
1939 ....	31	5,501,069	672	1,037,718	156,372	501,108	4,009,829
1940 ....	31	5,398,557	736	1,103,462	178,683	648,259	4,934,313
1941 ....	35	7,628,438	860	1,446,884	216,549	945,836	6,345,140
1942 ....	36	7,130,923	940	1,534,621	286,649	1,255,876	8,203,556
% change, 1942 from 1941 ....	..	-6.5	+9.3	+6.1	+32.4	+32.8	+29.3

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, 1941 and 1942

Province	Number of plants	Capital employed	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
		\$		\$	\$	\$	\$
<u>1941</u>							
Quebec .....	8	1,973,303	199	336,278	51,785	260,735	1,748,779
Ontario .....	16	3,586,555	425	732,697	107,567	415,176	2,743,975
Manitoba .....	3	524,008	59	98,602	11,989	62,208	466,770
Nova Scotia ....	3)	1,544,572	177	279,307	45,208	207,717	1,385,616
Saskatchewan ...	1)						
Alberta .....	2)						
British Columbia	2)						
CANADA .....	35	7,628,438	860	1,446,884	216,549	945,836	6,345,140
<u>1942</u>							
Quebec .....	8	2,138,546	260	411,012	69,144	329,549	2,267,757
Ontario .....	16	2,705,436	350	613,996	139,697	532,434	3,423,392
Manitoba .....	3	486,534	67	110,945	12,532	74,907	480,703
Nova Scotia ....	3)	1,800,407	263	398,668	65,276	318,986	2,031,704
Saskatchewan ...	1)						
Alberta .....	2)						
British Columbia	3)						
CANADA .....	36	7,130,923	940	1,534,621	286,649	1,255,876	8,203,556



Table 3 - CAPITAL EMPLOYED, 1941 and 1942 (On the last day of the year)

Province	Value of inventories				TOTAL CAPITAL EMPLOYED
	Present value of Raw materials land, buildings, fuel, and other machinery, tools supplies on and other equip- ment	hand, and stocks in process	Finished products on hand	Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	
	\$	\$	\$	\$	
<u>1941</u>					
Quebec .....	1,110,290	56,307	104,272	702,434	1,973,303
Ontario .....	1,512,023	65,550	279,103	1,729,879	3,586,555
Manitoba .....	257,923	31,381	16,957	217,747	524,008
Other provinces	839,793	28,070	58,301	618,408	1,544,572
CANADA ...	3,720,029	181,308	458,633	3,268,468	7,628,438
<u>1942</u>					
Quebec .....	1,179,514	114,651	117,730	726,651	2,138,546
Ontario .....	1,669,191	59,681	265,124	711,440	2,705,436
Manitoba .....	235,264	22,132	12,512	216,626	486,534
Other provinces	896,746	62,538	62,000	779,123	1,800,407
CANADA ...	3,980,715	259,002	457,366	2,433,840	7,130,923

Table 4 - EMPLOYEES, SALARIES AND WAGES, 1941 and 1942

	Average Number of Employees					Salaries	Wages	TOTAL
	On Salaries		On Wages		TOTAL			SALARIES and WAGES
	Male	Female	Male	Female				
						\$	\$	\$
<u>1941</u>								
Quebec .....	62	36	101	...	199	194,568	141,710	336,278
Ontario .....	160	74	189	2	425	438,932	293,765	732,697
Manitoba .....	17	11	31	...	59	53,651	44,951	98,602
Other provinces	46	37	94	...	177	140,448	138,859	279,307
CANADA ...	285	158	415	2	860	827,599	619,285	1,446,884
<u>1942</u>								
Quebec .....	67	57	135	1	260	206,091	204,921	411,012
Ontario .....	59	68	221	2	350	235,289	378,707	613,996
Manitoba .....	17	14	36	...	67	56,419	54,526	110,945
Other provinces	49	77	137	...	263	202,957	195,711	398,668
CANADA ...	192	216	529	3	940	700,756	833,865	1,534,621

Table 5 - WAGE-EARNERS, BY MONTHS, 1941 and 1942 (Number on pay-roll on last work day of each month)

day of each month.

1941 : 1942					1941: 1942				
Month	Male	Female	Male	Female	Month	Male	Female	Male	Female
	No.	No.	No.	No.		No.	No.	No.	No.
January ...	380	1	475	1	July .....	448	2	572	2
February ..	386	1	486	1	August ....	450	2	557	2
March .....	392	1	501	1	September .	431	2	547	3
April .....	403	1	507	1	October ...	405	2	554	3
May .....	414	1	535	1	November ..	403	2	553	2
June .....	441	1	546	2	December ..	425	2	553	3
					Average ..	415	2	529	3

Compressed Gases

Table 6 - HOURS WORKED PER WEEK BY WAGE-EARNERS, 1941 and 1942 (In one week of month of highest employment; including overtime)

Hours worked per week	1941		1942	
	Male	Female	Male	Female
	No.	No.	No.	No.
30 hours or less	12	1	32	2
31 - 43 hours ..	20	-	82	-
44 hours .....	19	-	15	-
45 - 47 hours ..	10	-	12	-
48 hours .....	274	1	249	-
49 - 50 hours ..	17	-	19	-
51 - 54 hours ..	25	-	34	-
55 hours .....	2	-	10	-
56 - 64 hours ..	70	-	154	-
65 hours .....	26	-	32	-
TOTAL .....	475	2	639	2
Total wages paid during week \$	13,440	25	19,495	12

Table 7 - FUEL AND ELECTRICITY USED, 1941 and 1942

Kind	Unit of measure	1941		1942	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Bituminous coal - Canadian	ton	1,002	7,778	1,588	11,731
Imported	ton	368	2,647	1,004	8,564
Anthracite coal .....	ton	314	2,641	273	2,949
Coke (for fuel only) .....	ton	1,091	4,498	1,189	5,587
Gasoline .....	Imp. gal.	2,130	628	1,400	459
Fuel oil .....	Imp. gal.	11,200	503	1,530	214
Gas - Manufactured .....	M cu. ft.	909	909	600	437
Natural .....	M cu. ft.	2,658	1,074	3,665	1,413
Other fuel .....	...	...	5,824	...	5,371
Electricity purchased .....	K.W.H.	25,141,638	190,047	34,924,230	249,924
TOTAL .....	...	...	216,549	...	286,649

Table 8 - POWER EQUIPMENT, 1941 and 1942

Kind	Ordinarily in Use		In Reserve or Idle	
	Number	Total rated	Number	Total rated
	of units	horse power	of units	horse power
<u>1941</u>				
Steam engines and steam turbines	4	361	-	-
Electric motors run by purchased power .....	291	7,370	14	333
TOTAL .....	295	7,731	14	333
Stationary boilers .....	2	500	-	-
<u>1942</u>				
Steam engines and steam turbines	4	361	-	-
Diesel engines .....	1	70	-	-
Hydraulic turbines or water wheels	1	150	-	-
Electric motors run by purchased power .....	325	7,860	15	325
TOTAL .....	331	8,441	15	325
Stationary boilers .....	2	500	-	-
Motor generator sets .....	7	1,662	-	-



## Compressed Gases

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Table 9 - MATERIALS USED, 1941 and 1942

Material	Unit of measure	1941		1942	
		Quantity	Cost at works	Quantity	Cost at works
Acetone .....	pound	308,031	43,310	374,141	65,561
Calcium carbide .....	ton	9,064	604,886	11,240	789,329
Coke .....	ton	5,118	70,825	6,027	79,504
Other materials (x) .....	...	...	190,636	...	272,868
Cylinders purchased during the year	number	...	36,179	...	48,614
TOTAL .....	...	...	945,836	...	1,255,876

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

Table 10 - PRODUCTS MANUFACTURED, 1941 and 1942

	Unit of measure	1941		1942	
		Quantity	Selling value at works	Quantity	Selling value at works
Acetylene (in cylinders) ..	cu. ft.	81,791,386	1,898,679	105,751,660	2,429,493
Carbon dioxide (in cylinders and solid) .....	pound	16,805,039	954,535	18,442,416	1,045,992
Hydrogen .....	cu. ft.	57,566,031	175,996	40,365,249	159,715
Oxygen (in cylinders) ....	cu. ft.	356,633,855	2,945,542	541,184,707	4,098,034
Other products .....	...	...	370,388	...	470,222
TOTAL .....	...	...	6,345,140	...	8,203,556

Table 11 - PRODUCTION OF ACETYLENE, CARBON DIOXIDE, AND OXYGEN, 1930 - 1942

Year	Acetylene in cylinders	Carbon dioxide, solid and in cylinders	Oxygen
	Cubic feet	Pounds	Cubic feet
1930 .....	44,181,816	7,469,845	152,419,201
1931 .....	37,048,521	6,437,150	120,326,797
1932 .....	33,744,251	7,161,477	92,828,715
1933 .....	32,387,312	6,287,017	93,511,573
1934 .....	37,599,346	5,630,801	113,940,515
1935 .....	39,922,683	8,307,160	136,059,706
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	12,625,575	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

Table 12 - CONSUMPTION OF CARBON DIOXIDE IN THE MANUFACTURE OF CARBONATED BEVERAGES (SOFT DRINKS), 1935 - 1941

Year	Quantity	Cost at works
	Pounds	\$
1935 .....	2,496,969	209,672
1936 .....	3,491,510	261,282
1937 .....	4,863,848	328,570
1938 .....	5,259,320	383,524
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

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