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DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
CENSUS OF INDUSTRY
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

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THE CEMENT MANUFACTURING INDUSTRY, 1943

Producers' sales of Portland cement in 1943, as reported by the Canadian cement industry, totalled 7,302,289 barrels (350 pounds each) valued at \$11,599,033 compared with 9,126,041 barrels valued at \$14,365,237 in 1942. Of the 1943 sales, 3,394,895 barrels were produced in Quebec plants; 1,972,009 barrels in Ontario; 793,913 barrels in Manitoba; 606,703 barrels in Alberta, and 534,769 barrels in British Columbia. Imports into Canada of cement, other than in cement manufactures, totalled 18,577 barrels valued at \$83,975 in 1943; exports of cement in the same period amounted to 172,601 barrels worth \$344,004. The high and low Canadian producers' prices per barrel in 1943 were, respectively, \$2.70 and \$1.25.

The following tonnages of primary materials of mineral origin were used during 1943 in the manufacture of the final product: Limestone, 1,918,742; clay, 165,345; shale, 75,460; gypsum, 47,034; silica sand, 19,473 and iron oxides, 1,502.

The number of firms reporting commercial production of Portland cement in Canada during 1943 was 3 and the plants in operation numbered 8. Capital employed totalled \$50,438,932 and the industry distributed \$2,154,218 in salaries and wages to 1,209 employees. The total value of fuel and electricity used during the year under review amounted to \$3,089,380, of which \$2,259,931 were expended for coal and \$783,806 for purchased electricity. Process supplies consumed, including chemicals, explosives, drill steel, gypsum, silica sand, purchased limestone, etc., were valued at \$1,356,890.

Portland cement, the principal raw materials for which are limestone and clay, is manufactured in five provinces of Canada. In addition to the standard or ordinary variety of Portland cement several other varieties, including high-early-strength, alkali-resistant, and white cement are made in this country, the last named, however, is made from imported clinker.

All Canadian plants except one making cement from domestic raw materials are using the wet process. Remarkable uniformity in the chemical and physical properties of the standard variety of cement is achieved throughout the country as the result of close technical control and improvements in plant equipment.

Production was at first greatly stimulated by the war where cement played an important part in the wartime construction program, but now that this program is completed the demand for Portland cement has lessened. A report issued by the Bureau of Mines, Ottawa, states that when the war is over, a large increase in demand for Portland cement is to be expected in connection with the lifting of restrictions on non-military construction. This will permit a start on the program of highway, public works, and industrial construction, plans for which are already made.

Complete data relating to world production of cement have not been available for some years.

Table 1 - PRINCIPAL STATISTICS OF THE CEMENT MANUFACTURING INDUSTRY IN CANADA,
1941-1943

	1941	1942	1943
Number of firms	3	3	3
Number of plants	8	8	8
Capital employed \$	51,108,294	51,121,894	50,438,932
Number of employees--On salary ..	87	89	91
On wages ...	1,148	1,152	1,118
Total ...	1,235	1,241	1,209
Salaries and wages--Salaries \$	190,771	200,779	215,137
Wages \$	1,670,160	1,858,553	1,939,081
Total ... \$	1,860,931	2,059,337	2,154,218
Selling value of products (Gross) \$	14,323,372	15,628,403	12,709,852
Cost of fuel and electricity \$	2,897,333	3,127,264	3,089,380
Cost of process supplies (x) \$	837,041	1,024,057	1,356,890
Value of containers \$	1,259,784	1,263,166	1,110,819
Net value of products sold \$	9,279,164	10,213,916	7,152,763

(x) Other than fuel and electricity.

Table 2 - WAGE-EARNERS ON THE LAST DAY OF EACH MONTH, OR NEAREST REPRESENTATIVE DATE,
1940-1943

Month	1940	1941	1942	1943		
				Quarry Male	Male	Female
January	736	1,051	1,078	152	946	...
February	711	1,058	1,092	154	959	...
March	795	1,084	1,111	157	956	...
April	974	1,169	1,148	132	978	...
May	1,021	1,177	1,141	149	898	21
June	1,041	1,219	1,182	168	944	33
July	1,046	1,221	1,212	166	951	48
August	1,052	1,177	1,193	161	956	58
September	1,111	1,197	1,188	165	927	55
October	1,146	1,158	1,149	155	916	55
November	1,100	1,145	1,175	153	910	26
December	923	1,124	1,128	151	889	19

Table 3 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS SPECIFIED, DURING
ONE WEEK IN MONTH OF HIGHEST EMPLOYMENT, 1943

Hours	Male		Hours	Female	
	No.	No.		No.	No.
30 hours or less	12	5	51-54 hours	84	1
31-43 hours	59	2	55 hours	11	...
44 hours	38	2	56-64 hours	293	5
45-47 hours	28	3	65 hours and over..	81	...
48 hours	529	38	GRAND TOTAL	1,193	57
49-50 hours	58	1	Total wages paid in that week \$	39,312	1,236

Table 4 - TOTAL FUEL AND ELECTRICITY USED IN THE CEMENT MANUFACTURING INDUSTRY,
1942 and 1943

	Unit of measure	1 9 4 2			1 9 4 3		
		Quantity		Value	Quantity		Value
				\$			\$
Bituminous coal--Canadian	short ton	156,544		1,003,490	98,135		595,385
Imported	short ton	192,105		1,305,383	225,741		1,664,546
Gasoline	Imp.gal.	152,146		41,295	142,655		38,583
Kerosene	Imp.gal.	5,121		972	6,667		1,242
Fuel oil and diesel oil..	Imp.gal.	40,212		4,946	44,132		5,499
Wood (cords of 128 cu.ft.)	cord	19		86	58		319
Electricity purchased, in- cluding service charges.	K.W.H.	154,502,140		771,092	150,929,220		783,806
TOTAL .....	...	...		3,127,264	...		3,089,380
Process supplies used, explosives, etc. ....	...	...		1,024,057	...		328,452

Table 5 - COAL USED IN CANADIAN CEMENT PLANTS, 1933-1943

Year	Canadian		Foreign	
	Tons	\$	Tons	\$
1933	48,905	236,947	46,955	229,399
1934	69,853	367,880	60,877	330,432
1935	78,477	433,347	53,338	291,741
1936	119,903	635,631	66,460	367,740
1937	145,791	760,766	90,925	513,417
1938	127,812	656,187	89,172	499,812
1939	190,538	1,010,071	16,141	82,336
1940	185,325	1,108,287	85,885	513,224
1941	125,740	772,829	203,905	1,331,448
1942	156,544	1,003,490	192,105	1,305,383
1943	98,135	595,385	225,741	1,664,546

Table 6 - NUMBER AND CAPACITY OF KILNS IN CANADIAN CEMENT PLANTS, 1933-1943

Year	Total kilns		Kilns in use during the year	
	Number	Total capacity	Number	Total capacity
		Barrels per 24 hours		Barrels per 24 hours
1933	41	43,622	(x)	(x)
1934	41	43,722	(x)	(x)
1935	20	32,650	(x)	(x)
1936	19	33,000	(x)	(x)
1937	18	33,900	(x)	(x)
1938	21	35,200	10	23,100
1939	21	35,000	11	23,700
1940	21	35,000	13	27,950
1941	20	33,050	16	30,350
1942	19	34,650	17	32,450
1943	19	33,750	15	30,296

(x) Data not recorded.

Table 7 - QUANTITY AND VALUE OF ELECTRICITY PURCHASED BY CANADIAN CEMENT COMPANIES, 1934-1943

Year	Kilowatt hours	\$ (x)	Year	Kilowatt hours	\$ (x)
1934	48,457,250	496,138	1939	105,938,210	589,190
1935	51,958,859	494,538	1940	126,737,622	690,266
1936	62,038,700	553,212	1941	151,845,680	748,631
1937	61,045,600	606,969	1942	154,502,140	771,092
1938	59,705,200	583,858	1943	150,929,220	783,806

(x) Includes service charges.

Table 8 - POWER EQUIPMENT IN CANADIAN CEMENT PLANTS, 1943

Description	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power (x)	Number of units	Total horse power (x)
Steam engines .....	...	...	1	50
Steam turbines .....	...	...	...	...
Diesel engines	5	1,176	...	...
Gasoline, gas and oil engines, other than diesel engines	41	1,254	8	490
Hydraulic turbines or water wheels	...	...	...	...
Electric motors -				
(a) Operated by purchased power..	1,472	76,969	350	17,021
TOTAL	1,518	79,419	359	17,561
(b) Operated by power generated by the establishment	26	968	6	210
Stationary boilers	9	515	1	40
Motor generator sets	11	1,264	1	160

(x) According to manufacturers' rating.

Table 9 - SUMMARY STATISTICS OF CEMENT PRODUCTION, SALES, ETC., IN CANADA, 1942 and 1943

	1942		1943	
	Barrels(x)	Value	Barrels(x)	Value
		\$		\$
Output	8,634,184	...	8,025,113	...
Sold or used	9,126,041	14,365,237	7,302,289	11,599,033
Stocks on hand December 31 ...	873,819	...	1,596,643	...
Imports -				
Portland cement and hydraulic or water lime	26,320	116,126	18,577	83,975
Manufactures .....	...	26,807	...	27,723
Total Imports .....	...	...	...	...
Exports -				
Portland cement	273,880	476,284	172,601	344,004
APPARENT CONSUMPTION	8,878,481	...	7,148,265	...

(x) - 1 barrel = 350 pounds.

Table 10 - PRODUCTION AND APPARENT CONSUMPTION OF CEMENT IN CANADA, 1929-1943

Year	SOLD OR USED		APPARENT CONSUMPTION
	Barrels	\$	Barrels
1929	12,284,081	19,337,235	12,105,950
1930	11,032,538	17,713,067	10,977,238
1931	10,161,658	15,826,243	10,085,986
1932	4,498,721	6,930,721	4,466,738
1933	3,007,432	4,536,935	2,974,020
1934	3,783,226	5,667,946	3,727,521
1935	3,648,086	5,580,043	3,610,217
1936	4,508,718	6,908,192	4,479,656
1937	6,168,971	9,095,867	6,157,485
1938	5,519,102	8,241,350	5,478,180
1939	5,731,264	8,511,211	5,591,328
1940	7,559,648	11,775,345	7,272,886
1941	8,368,711	13,063,588	8,069,824
1942	9,126,041	14,365,237	8,878,481
1943	7,302,289	11,599,033	7,148,265

Table 11 - PRODUCERS' SALES OF CEMENT IN CANADA, BY PROVINCES, 1941-1943

Province	1 9 4 1		1 9 4 2		1 9 4 3	
	Barrels	Value (x)	Barrels	Value (x)	Barrels	Value (x)
		\$		\$		\$
Quebec	4,048,749	5,798,188	4,446,416	6,487,073	3,394,895	4,899,578
Ontario	2,748,854	4,019,656	2,784,782	3,998,294	1,972,009	2,872,732
Manitoba	576,648	1,274,392	654,855	1,374,498	793,913	1,503,416
Alberta	492,515	985,030	668,043	1,307,353	606,703	1,176,442
British Columbia ...	501,945	986,322	571,945	1,198,014	534,769	1,146,865
CANADA ...	8,368,711	13,063,588	9,126,041	14,365,237	7,302,289	11,599,033

(x) Less value of containers.

Table 12 - SELLING PRICE PER BARREL OF CANADIAN CEMENT, F.O.B. WORKS, 1934-1943

Year	High		Year	High	
	\$	\$		\$	\$
1934	2.36	1.25	1939	2.35	1.25
1935	2.79	1.25	1940	2.35	1.32
1936	2.68	1.25	1941	2.70	1.25
1937	2.68	1.25	1942	2.70	1.25
1938	2.35	1.25	1943	2.70	1.25

Table 13 - SPECIFIED MATERIALS USED IN CANADIAN CEMENT PLANTS, 1933-1943

Year	Shale tons	Limestone tons	Gypsum tons	Silica sand tons	Clay tons	Iron oxides (x) tons
1933	(x)	616,364	13,319	(x)	(x)	(x)
1934	(x)	806,546	19,172	(x)	(x)	(x)
1935	(x)	818,443	21,611	5,047	(x)	(x)
1936	(x)	1,180,358	25,447	8,549	94,943	(x)
1937	(x)	1,465,168	33,691	9,281	195,877	444
1938	13,821	1,344,868	51,975	9,465	143,421	22
1939	27,241	1,379,858	31,492	7,942	105,982	16
1940	18,347	1,765,944	38,903	15,298	144,152	170
1941	26,837	2,086,781	49,031	16,110	185,954	614
1942	30,498	2,155,750	49,816	20,711	188,202	2,094
1943 (a)	75,460(b)	1,918,742	47,034	19,473	165,345	1,502

(x) Data not recorded.

(x) Produced from iron pyrites by the chemical industry.

(a) Value of these materials purchased in 1943 totalled \$408,289.

(b) Prior to 1943 shale consumed in British Columbia plants was included with limestone.

Table 14 - INDEX NUMBERS OF CANADIAN WHOLESALE PRICES OF SPECIFIED BUILDING AND CONSTRUCTION MATERIALS AND OF GENERAL WHOLESALE PRICES--1926=100
(Internal Trade Branch)

Year	Building and con- struction materials	Lumber index	Miscel- laneous materials index (x)	Paint materials index	Cement index	General wholesale price index
1913	67.0	67.4	67.1	57.5	90.9	64.0
1926	100.0	100.0	100.0	100.0	100.0	100.0
1927	96.1	97.5	95.7	92.2	94.0	97.7
1928	97.4	102.3	95.4	86.2	97.0	96.4
1929	99.0	103.5	96.3	92.0	100.2	95.6
1930	90.8	90.1	92.5	86.9	100.8	86.6
1931	81.9	77.4	89.4	69.1	102.3	72.1
1932	77.2	68.8	88.7	63.5	105.3	66.7
1933	78.3	70.8	88.4	66.2	105.5	67.1
1934	82.5	78.6	88.2	75.0	105.2	71.6
1935	81.2	77.8	87.0	71.1	105.2	72.1
1936	85.3	86.3	88.6	68.2	105.8	74.6
1937	94.4	98.1	95.9	74.6	106.2	84.6
1938	89.1	89.8	93.3	69.6	102.4	78.6
1939	89.7	94.0	90.9	68.0	96.7	75.4
1940	95.6	103.6	93.4	74.1	98.4	82.9
1941	107.3	120.6	100.8	82.3	104.1	90.0
1942	115.2	133.0	104.9	87.9	106.5	95.7
1943	121.2	146.4	105.5	87.7	106.5	100.0

(x) Determined partly from cement prices.

Table 15 - VALUE OF CONSTRUCTION CONTRACTS AWARDED, BY PROVINCES, 1938-1943
(MacLean Building Reports Ltd.)

Province	1 9 3 9	1 9 4 0	1 9 4 1	1 9 4 2	1 9 4 3
	\$	\$	\$	\$	\$
Maritimes ...	16,146,300	21,142,100	36,736,400	26,305,500	14,875,400
Quebec	62,846,600	96,326,300	154,541,200	92,235,500	61,816,700
Ontario	82,605,500	146,806,100	145,598,600	108,679,500	83,025,300
Manitoba	5,374,400	28,003,700	11,701,600	13,914,300	10,083,900
Saskatchewan.	3,246,100	12,566,700	11,098,700	5,480,200	3,970,000
Alberta	5,234,900	23,940,100	15,598,800	14,401,100	18,529,300
British Columbia ...	11,724,700	17,224,800	18,716,000	20,578,000	13,803,300
CANADA	187,178,500	346,009,800	393,991,300	281,594,100	206,103,900

DIRECTORY OF CANADIAN PORTLAND CEMENT PRODUCERS, 1943

Name of Firm	Head Office Address	Location of Plant
<u>Quebec -</u>		
Canada Cement Company Ltd.	Box 290, Station B, Montreal	Hull Montreal East
<u>Ontario -</u>		
Canada Cement Company Ltd.	Box 290, Station B, Montreal, Que.	Belleville Port Colborne
St. Mary's Cement Company Ltd.	357 Bay St., Toronto	St. Mary's
<u>Manitoba -</u>		
Canada Cement Company Ltd.	Box 290, Station B, Montreal, Que.	Fort Whyte
<u>Alberta -</u>		
Canada Cement Company Ltd.	Box 290, Station B, Montreal, Que.	Exshaw
<u>British Columbia -</u>		
British Columbia Cement Co. Ltd.	500 Fort St., Victoria, B.C.	Bamberton



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