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

THE CEMENT MANUFACTURING INDUSTRY
IN
CANADA
1941



OTTAWA
1942

Price 25 cents

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THE CEMENT MANUFACTURING INDUSTRY, 1941

Producers' sales of cement in 1941 as reported by the Canadian cement industry totalled 8,368,711 barrels valued at \$12,063,583, compared with 7,559,648 barrels worth \$11,775,345 in 1940. The output in 1941 was the largest attained since 1931 when production totalled 10,161,653 barrels valued at \$15,826,243. Of the 1941 sales, 4,043,749 barrels were produced in Quebec plants; 2,743,854 barrels in Ontario; 576,643 barrels in Manitoba; 492,515 barrels in Alberta and 501,945 barrels in British Columbia. The high and low prices per barrel in 1941 were \$2.70 and \$1.25.

The number of firms reporting commercial production of Portland cement in Canada during 1941 was 3 and the plants in operation numbered 8. Capital employed totalled \$51,108,224 and the industry distributed \$1,360,921 in salaries and wages to 1,235 employees. The total value of fuel and electricity used during the year under review amounted to \$2,997,333, of which \$2,194,277 were expended for coal and \$743,631 for electricity. Process supplies consumed, including chemicals, explosives, etc., were valued at \$387,041 and in addition the following tonnages of primary materials of mineral origin were used in the manufacture of the final product: limestone, 2,086,781; clay, 185,954; gypsum, 49,031; shale, 26,837; sand, 16,110 and iron pyrites (cinder) 614. Data relating to imports and exports of cement are being withheld from publication until the termination of the war.

Erection of new plants and office buildings for war-time service, together with the construction of air training centres and other military projects, has greatly stimulated the production of Portland cement in Canada. A report on cement, prepared by the Bureau of Mines, Ottawa, contains the following information:

"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 now made in this country, the last named variety, however, being made from imported clinker.

"Canada Cement Company, Limited, operates plants at Hull and Montreal East in Quebec; at Port Colborne and Belleville in Ontario; at Fort Whyte, Manitoba; and at Exshaw, Alberta. St. Mary's Cement Company, Limited, operates a plant at St. Mary's, Ontario. Medusa Products Company of Canada, Limited, has a plant at Paris, Ontario, making white cement, cement paints, etc., from imported clinker. British Columbia Cement Company operates at Bamberton, British Columbia. The total rated daily-capacity of all plants at present is about 35,000 barrels, (a barrel of cement weighs 350 pounds net), but this will be increased in 1942 when equipment now being installed is in operation.

"When the change over from the "dry" to the "wet" process, now under way at the Exshaw plant of Canada Cement Company, is completed, all Canadian plants making cement from domestic raw materials will be 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.

"A new 325-foot kiln is being installed at the Montreal East plant of Canada Cement Company. A new pack house with a dust-collecting system, and storage silos having a capacity of 350,000 barrels of finished cement were built in 1941 at the Hull plant of this company.

"Froth flotation is now used in a number of plants in the United States and other countries to remove certain materials, principally excess silica and mica, from limestone. The successful adaptation of this process to the beneficiation of cement raw materials has permitted the utilization of limestone deposits, which, though advantageously situated are not sufficiently pure in their natural state for cement manufacture."

Complete data relating to world production of Portland cement have not been available since 1938; total world production in that year was estimated at 34,000,000 metric tons.

Table 1 - PRINCIPAL STATISTICS OF THE CEMENT MANUFACTURING INDUSTRY IN CANADA, 1939 - 1941

	1939	1940	1941
Number of firms	3	3	3
Number of plants	3	8	8
Capital employed	\$ 51,251,358	50,370,276	51,108,294
Number of employees - On salary..	91	83	87
On wages ..	210	969	1,148
Total ..	1,001	1,052	1,235
Salaries and wages - Salaries ...	\$ 198,141	191,548	190,771
Wages	\$ 1,099,401	1,324,218	1,670,160
Total ..	\$ 1,297,542	1,515,766	1,860,931
Selling value of products (Gross) \$	8,511,211	13,008,643+	14,323,372+
Cost of fuel and electricity	\$ 1,705,931	2,347,750	2,897,383
Cost of process supplies (x)	\$ 532,058	712,193	687,041
Value of containers	\$	1,251,228	1,252,784
Net value of products sold	\$ 6,275,172	8,715,422	9,279,164

+ Includes value of containers in 1940 and 1941 but not in preceding years.

(x) Other than fuel and electricity.

Table 2 - WAGE-EARNERS ON 15th OF EACH MONTH, OR NEAREST REPRESENTATIVE DATE, 1939 - 1941

Month	1939	1940	1941	
			Quarry	Mill
January	774	736	135	918
February	799	711	140	913
March	820	795	151	933
April	216	374	153	1,016
May	1,045	1,021	153	1,019
June	1,062	1,041	155	1,064
July	1,037	1,046	162	1,059
August	1,066	1,052	153	1,024
September	1,032	1,111	153	1,044
October	357	1,146	151	1,007
November	763	1,100	141	1,004
December	650	923	143	981

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

Hours	1 9 4 1		Hours	1 9 4 1	
	No.			No.	
30 hours or less	5		51 - 54 hours	104	
31 - 43 hours	54		55 hours	13	
44 hours	69		56 - 64 hours	411	
45 - 47 hours	23		65 hours and over	78	
48 hours	457		GRAND TOTAL ...	1,281	
49 - 50 hours	62		Total wages paid in that week	\$ 34,775	

Table 4 - TOTAL FUEL AND ELECTRICITY USED IN THE CEMENT MANUFACTURING INDUSTRY, 1940 and 1941

	Unit of measure	1 9 4 0		1 9 4 1	
		Quantity	Value \$	Quantity	Value \$
Bituminous coal - Canadian short ton		185,325	1,108,287	125,740	772,829
Imported short ton		85,885	513,224	203,905	1,331,448
Gasoline	Imp.gal.	134,033	30,959	157,133	38,277
Kerosene	Imp.gal.	4,238	759	5,831	1,102
Fuel oil and diesel oil ..	Imp.gal.	35,116	4,108	41,911	4,369
Wood (cords of 128 cu.ft.)	cord	31	127	35	127
Electricity purchased, in- cluding service charges..	K.W.H.	126,737,622	690,266	151,845,680	748,631
TOTAL .....		...	\$ 2,347,730	...	\$ 2,897,282
Process supplies used, ex- plosives, etc. ....		...	712,193	...	887,041

Table 5 - COAL USED IN CANADIAN CEMENT PLANTS, 1932 - 1941

	CANADIAN		FOREIGN	
	Tons	\$	Tons	\$
1932	120,296	652,734	90,718	440,546
1933	48,905	236,947	46,955	229,399
1934	63,853	367,880	60,877	330,452
1935	78,477	453,347	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

Table 6 - KILNS USED BY CANADIAN CEMENT INDUSTRY, 1932 - 1941

Year	Total Daily Capacity	
	Number	Barrels
1932	47	43,822
1933	41	43,622
1934	41	43,922
1935	20	32,650
1936	19	33,000
1937	18	33,900
1938	21 (a)	35,200
1939	21 (b)	35,000
1940	21 (c)	35,000
1941	20 (d)	33,050

(a) 10 in use with a daily capacity of 23,100 barrels.

(b) 11 in use, capacity 23,700 barrels per day.

(c) 13 in use, capacity 27,950 barrels per day.

(d) 16 in use, capacity 30,350 barrels per day.

Table 7 - QUANTITY AND VALUE OF ELECTRICITY PURCHASED BY CANADIAN CEMENT COMPANIES, 1932 - 1941

Year	Kilowatt		Year	Kilowatt	
	hours	\$ (x)		hours	\$ (x)
1932	85,630,342	590,891	1937	61,045,600	606,969
1933	48,160,143	508,841	1938	59,705,200	583,858
1934	48,457,250	496,138	1939	105,938,210	539,190
1935	51,953,859	494,538	1940	126,737,622	690,266
1936	62,038,700	553,212	1941	151,845,680	748,631

(x) Includes service charges.

Table 8 - POWER EQUIPMENT IN CANADIAN CEMENT PLANTS, 1941

Description	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power (x)	Number of units	Total horse power (x)
Steam engines and steam turbines..	2	107	1	50
Diesel engines	3	825	...	...
Gasoline, gas and oil engines, other than diesel engines	48	2,139	4	222
Hydraulic turbines or water wheels	...	...	...	...
Electric motors -				
(a) Operated by purchased power..	1,435	76,264	297	13,629
TOTAL	1,488	79,335	302	13,901
(b) Operated by power generated by the establishment	18	1,086	3	212
Stationary boilers	9	515	2	30

(x) According to manufacturers' rating.

Table 9 - SUMMARY STATISTICS OF CEMENT PRODUCTION, SALES, ETC., IN CANADA, 1940 and 1941

	1 9 4 0		1 9 4 1	
	Barrels(x)	Value	Barrels(x)	Value
		\$		\$
Output	6,947,577	...	8,480,987	...
Sold or used	7,559,648	11,775,345	8,368,711	13,063,588
Stocks on hand December 31st	1,253,400	...	1,365,676	...
APPARENT CONSUMPTION..	7,272,886	...	8,069,824	...

(x) 1 barrel - 350 pounds.

Table 10 - PRODUCTION AND APPARENT CONSUMPTION OF CEMENT IN CANADA, 1929 - 1941

Year	SOLD OR USED		APPARENT CONSUMPTION
	Barrels	\$	Barrels
1929	12,384,081	19,337,235	12,105,950
1930	11,032,558	17,713,067	10,977,238
1931	10,161,658	15,826,243	10,085,936
1932	4,498,721	6,930,721	4,466,738
1933	3,007,452	4,538,935	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	6,163,971	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

Table 11 - PRODUCERS' SALES OF CEMENT IN CANADA, BY PROVINCES, 1939 - 1941

Province	1 9 3 9		1 9 4 0		1 9 4 1	
	Barrels	Value	Barrels	Value	Barrels	Value
		\$		\$		\$
Quebec	3,027,759	4,035,294	3,854,339	5,432,105	4,048,749	5,798,188
Ontario	1,709,263	2,437,777	2,355,352	3,518,247	2,748,854	4,019,656
Manitoba	343,717	773,363	572,408	1,287,918	576,648	1,274,392
Alberta	377,846	744,357	414,133	832,508	492,515	985,030
British Columbia	272,679	520,420	363,366	704,567	501,345	986,322
CANADA	5,731,264	8,511,211	7,559,648	11,775,345	8,368,711	13,063,588

Table 12 - SELLING PRICE PER BARREL OF CANADIAN CEMENT, F.O.B. WORKS, 1932 - 1941

Year	High	Low	Year	High	Low
	\$	\$		\$	\$
1932	2.55	1.25	1937	2.68	1.25
1933	2.55	1.25	1938	2.35	1.25
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

Table 13 - SPECIFIED MATERIALS USED IN CANADIAN CEMENT PLANTS, 1932 - 1941

Year	Shale	Limestone	Gypsum	Sand	Clay	Pyrites
	Tons	Tons	Tons	Tons	Tons	Tons
1932	(x)	1,141,376	27,533	(x)	(x)	(x)
1933	(x)	616,364	13,313	(x)	(x)	(x)
1934	(x)	806,546	19,172	(x)	(x)	(x)
1935	(x)	818,443	21,611	5,047	(x)	(x)
1936	(x)	1,180,353	25,447	3,549	94,943	(x)
1937	(x)	1,465,163	33,631	9,231	195,877	444
1938	13,821	1,344,368	51,975	9,465	143,421	22
1939	27,241	1,379,858	31,432	7,942	105,932	16
1940	18,347	1,765,944	38,903	15,298	144,152	170
1941	26,837	2,086,731	49,031	16,110	185,954	614

(x) Data not recorded.

Table 14 - VALUE OF CONSTRUCTION CONTRACTS AWARDED, BY PROVINCES, 1937 - 1941
(MacLean Building Reports Ltd.)

Province	1937	1938	1939	1940	1941
	\$	\$	\$	\$	\$
Maritime	21,557,200	19,522,800	16,146,300	21,142,100	36,736,400
Quebec	71,940,300	65,778,900	62,846,300	96,326,300	154,541,200
Ontario	97,777,400	73,070,100	82,605,500	146,806,100	145,538,600
Manitoba	7,945,100	6,115,200	5,374,400	28,003,700	11,701,600
Saskatchewan ...	6,704,900	3,969,000	3,246,100	12,566,700	11,038,700
Alberta	4,901,000	8,180,000	5,234,900	23,940,100	15,598,800
British Columbia	13,230,300	10,641,900	11,724,700	17,224,800	18,716,000
CANADA	224,056,700	187,277,900	187,178,500	346,003,800	393,991,300

Table 15 - 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 Construction Materials	Lumber Index	Miscellaneous 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

(x) Determined partly from cement prices.

DIRECTORY OF CANADIAN PORTLAND CEMENT MANUFACTURING COMPANIES, 1941

<u>Name of Company</u>	<u>Head Office Address</u>	<u>Location of Plant</u>
<u>QUEBEC</u> - Canada Cement Co. Ltd.	Box 290, Station B, Montreal	Hull and Montreal East
<u>ONTARIO</u> - Canada Cement Company, Ltd. St. Marys Cement Co. Ltd.	Box 290, Station B, Montreal, Que. 357 Bay Street, Toronto	Belleville and Port Colborne St. Marys
<u>MANITOBA</u> - Canada Cement Company Ltd.	Box 290, Station B, Montreal, Que.	Fort Whyte and Steep Rock
<u>ALBERTA</u> - Canada Cement Company. Ltd.	Box 290, Station B, Montreal, Que.	Exshaw
<u>BRITISH COLUMBIA</u> - British Columbia Cement Co. Ltd.	805 Government St., Victoria	Bamberton and Tod Inlet

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