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THE CEMENT MANUFACTURING INDUSTRY, 1946

The total value of shipments of Portland cement from Canadian plants reached a new high in 1946, when 11,560,483 barrels worth \$20,122,503 were sold or used by the producers, an increase of 36 per cent in quantity and 48 per cent in value over the 1945 shipments of 8,471,679 barrels valued at \$14,246,480. Production (shipments) by provinces in 1946 was as follows: Quebec, 5,046,166 barrels; Ontario, 3,677,695 barrels; Manitoba, 1,254,946 barrels; Alberta, 809,721 barrels, and British Columbia, 771,955 barrels.

The same 8 plants were in operation during 1946 as in the previous year. The Canada Cement Company Limited had works at Hull and Montreal East in Quebec, at Port Colborne and Belleville in Ontario, at Fort Whyte in Manitoba, and at Exshaw in Alberta; the St. Mary's Cement Co. Limited operated a mill at St. Mary's, Ontario, and the British Columbia Cement Co. Limited had a plant at Bamberton, British Columbia. These plants have 18 kilns with a rated capacity of 33,550 barrels per day, and the capacity of the 16 kilns which were in operation in 1946 was 31,640 barrels per day.

Raw materials used in 1946 included 2,525,653 tons of limestone, 65,431 tons of gypsum, 227,645 tons of clay, 3,862 tons of pyrite cinder, 31,222 tons of silica sand, and 99,355 tons of shale.

There is also one plant in Canada, operated by Medusa Products Company of Canada Limited, at Paris, Ontario, which makes white Portland cement, cement paints, etc., but as this firm uses imported clinker its operations have not been included in this review which is concerned only with the establishments which operate on domestic raw materials.

An average of 1,532 employees in this industry in 1946 were paid \$2,929,020 in salaries and wages. Raw materials, process supplies and containers cost \$4,487,496, fuel and electricity cost \$4,487,496, and the gross value of shipments, f.o.b. works, including containers, was \$21,724,021.

Imports of Portland cement into Canada amounted to 350,057 barrels valued at \$1,098,532 in 1946, and imports of white Portland cement clinker totalled 14,296 barrels valued at \$30,147. Exports of Portland cement in the year under review amounted to 114,370 barrels at \$236,276. The apparent consumption in Canada in 1946 was 11,796,170 barrels.

Note: This report was prepared by A. R. Deir, Mining Statistician.

Table 1 - PRINCIPAL STATISTICS FOR THE CEMENT MANUFACTURING INDUSTRY IN CANADA, 1937-1946

Year	Number of plants	Number of employees	Salaries and wages	Cost of fuel and electricity	Cost of process supplies, materials and containers(%)	Gross value of products sold during year including containers (f.o.b. works)
			\$	\$	\$	\$
1937 ...	9	1,083	1,373,444	1,904,418	540,915	9,095,867
1938 ...	8	1,034	1,306,331	1,764,427	1,369,173	9,081,366
1939 ...	8	1,001	1,297,542	1,705,981	1,372,238	9,351,391
1940 ...	8	1,052	1,515,766	2,347,730	1,943,491	13,006,643
1941 ...	8	1,235	1,860,931	2,897,383	2,146,825	14,323,372
1942 ...	8	1,241	2,059,337	3,127,264	2,287,223	15,628,403
1943 ...	8	1,209	2,154,218	3,089,380	2,467,709	12,709,852
1944 ...	8	1,207	2,254,775	3,197,955	2,566,432	12,646,741
1945 ...	8	1,317	2,398,117	3,210,929	2,794,676	15,422,031
1946 ...	8	1,524	2,929,020	4,487,496	4,306,467	21,724,021

(\*) Includes only process supplies for 1937; both process supplies and containers for 1938 to 1942 inclusive; and process supplies, containers and raw materials for later years.

Table 2 - PRODUCERS' SHIPMENTS OF CEMENT IN CANADA, BY PROVINCES, 1944-1946

Province	1944		1945		1946	
	Barrels	Value (%)	Barrels	Value (%)	Barrels	Value (%)
Quebec ..	3,249,302	4,736,004	3,872,373	5,985,077	5,046,166	7,910,548
Ontario..	1,863,210	2,730,381	2,460,996	3,805,131	3,677,695	6,025,503
Manitoba.	865,756	1,698,567	959,398	2,027,629	1,254,946	2,811,264
Alberta..	699,989	1,370,502	620,337	1,246,346	809,721	1,635,222
British Columbia	512,594	1,085,918	558,575	1,182,297	771,955	1,739,996
CANADA..	7,190,851	11,621,372	8,471,679	14,246,480	11,560,483	20,122,503

(\*) Does not include the value of containers.

Table 3 - PRODUCTION, IMPORTS AND EXPORTS OF PORTLAND CEMENT, 1945 and 1946

	1945		1946	
	Barrels (%)	Value	Barrels (%)	Value
		\$		\$
Output .....	7,819,412	...	10,675,472	...
Shipments (sold or used by producers) .....	8,471,679	14,246,480	11,560,483	20,122,503
Stocks on hand December 31 .....	1,354,532	...	469,521	...
Imports -				
Portland cement and hydraulic or water lime .....	32,653	141,539	350,057	1,098,532
Portland cement clinker (white) .....	16,728	35,023	14,296	30,147
Manufactures, n.o.p. ....	...	31,306	...	51,633
Exports -				
Portland cement .....	281,944	535,012	114,370	236,276
APPARENT CONSUMPTION .....	8,222,388(x)	...	11,796,170	...

(\*) 1 barrel = 350 pounds.

(x) Exclusive of clinker imported.

(30 Dec '47)

Table 4 - PRODUCERS' SHIPMENTS AND APPARENT CONSUMPTION OF CEMENT IN CANADA, 1937-1946

Year	Shipments (Sold or Used)		Apparent Consumption (*)
	Barrels	\$	in Canada Barrels
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
1944 .....	7,190,851	11,621,372	6,994,406
1945 .....	8,471,679	14,246,480	8,222,388
1946 .....	11,560,483	20,122,503	11,796,170

(\*) Shipments plus imports less exports.

Table 5 - SPECIFIED MATERIALS USED IN CANADIAN CEMENT PLANTS, 1937-1946

Year	Shale	Limestone	Gypsum	Silica sand	Clay	Iron oxides(*)
		(Tons)				
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 .....	75,460(a)	1,918,742	47,034	19,473	165,345	1,502
1944 .....	74,303	1,865,597	42,672	23,942	173,728	3,924
1945 (b) ..	70,600	1,849,258	45,883	29,424	161,980	3,197
1946 (b) ..	99,355	2,525,653	65,431	31,222	227,645	3,862

(x) Data not recorded.

(\*) Produced from iron pyrites by the chemical industry.

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

(b) Value of these materials purchased in 1945 totalled \$349,195, and 1946 totalled \$505,994.

Table 6 - COAL USED IN PORTLAND CEMENT PLANTS IN CANADA, 1937-1946

Year	Canadian		Foreign	
	Tons	\$	Tons	\$
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
1944 .....	108,292	731,706	219,802	1,634,690
1945 .....	121,299	823,988	206,995	1,566,420
1946 .....	172,081	1,237,718	289,046	2,233,402

Table 7 - NUMBER AND CAPACITY OF KILNS IN PORTLAND CEMENT PLANTS IN CANADA,  
1937-1946

Year	Total Kilns		Kilns in Use During the Year	
	Number	Total capacity Barrels per 24 hours	Number	Total capacity Barrels per 24 hours
1937 .....	18	33,900	(*)	(*)
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
1944 .....	19	33,250	15	30,150
1945 .....	19	33,250	15	30,150
1946 .....	18	33,550	16	31,640

(\*) Data not recorded.

Table 8 - FUEL AND ELECTRICITY USED IN THE CEMENT MANUFACTURING INDUSTRY, 1945 and  
1946

	Unit of measure	1945		1946	
		Quantity	Value	Quantity	Value
Bituminous coal--Canadian	short ton	121,299	823,988	172,081	1,237,718
Imported	short ton	206,995	1,566,420	289,046	2,233,402
Gasoline .....	Imp.gal.	141,359	38,025	172,742	45,603
Kerosene .....	Imp.gal.	8,996	1,673	8,391	1,587
Fuel oil and diesel oil..	Imp.gal.	65,272	7,741	168,392	19,392
Wood (cords of 128 cu.ft.)	cord	72	422	52	351
Electricity purchased (in- cluding service charges.	K.W.H.	146,034,925	772,660	193,679,422	949,443
TOTAL .....	...	...	3,210,929	...	4,487,496
Electricity generated for own use .....	K.W.H.	417,869	...	347,383	...

Table 9 - POWER EQUIPMENT IN CEMENT PLANTS IN CANADA, 1946

Description	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total horse power (*)	Number of units	Total horse power (*)
Steam engines .....	...	...	...	...
Diesel engines .....	6	1,276	1	50
Gasoline, gas and oil engines, other than diesel engines .....	35	1,037	7	447
Electric motors -				
(a) Operated by purchased power	1,509	77,687	297	13,543
Total .....	1,550	80,000	305	14,040
(b) Operated by power generated by the establishment .....	26	983	8	233
Stationary boilers .....	2	250	1	40
Motor-generator sets .....	22	1,808	5	265

(\*) According to manufacturers' rating.

Table 10 - SELLING PRICE PER BARREL OF CANADIAN CEMENT, f.o.b. WORKS, 1937-1946

Year	High	Low	Year	High	Low
	\$	\$		\$	\$
1937 .....	2.68	1.25	1942 .....	2.70	1.25
1938 .....	2.35	1.25	1943 .....	2.70	1.25
1939 .....	2.35	1.25	1944 .....	2.70	1.25
1940 .....	2.35	1.32	1945 .....	2.70	1.38
1941 .....	2.70	1.25	1946 .....	2.85	1.30

Table 11 - EMPLOYEES, SALARIES AND WAGES IN THE CEMENT MANUFACTURING INDUSTRY IN CANADA, 1940-1946

CANADA, 1940-1946								
Year	Number of Employees					Salaries	Wages	Total Salaries and Wages
	On Salaries		On Wages		Total			
	Male	Female	Male	Female				
						\$	\$	\$
1940 ...	79	4	969	...	1,052	191,548	1,324,218	1,515,766
1941 ...	79	8	1,148	...	1,235	190,771	1,670,160	1,860,931
1942 ...	79	10	1,152	...	1,241	200,779	1,858,558	2,059,337
1943 ...	75	16	1,091	27	1,209	215,137	1,939,081	2,154,218
1944 ...	76	16	1,066	49	1,207	229,490	2,025,285	2,254,775
1945 ...	87	15	1,159	56	1,317	248,365	2,149,752	2,398,117
						Adminis- trators'	Workmens'	
	Administra- tion		Workmen		Total	earnings	earnings	Total
1946 ...	101	12	1,400	19	1,532	276,567	2,682,028	2,958,595

Table 12 - WAGE-EARNERS IN THE CEMENT MANUFACTURING INDUSTRY IN CANADA, BY MONTHS, 1945 and 1946

Month	1945			1946		
	Quarry		Mill	Quarry		Mill
	Male	Male	Female	Male	Male	Female
January .....	129	942	39	239	1,157	44
February .....	120	928	30	159	1,132	25
March .....	122	930	31	160	1,144	23
April .....	126	928	39	178	1,170	16
May .....	149	936	72	171	1,234	12
June .....	151	993	73	164	1,272	11
July .....	156	1,027	79	179	1,271	13
August .....	152	1,033	72	181	1,253	15
September .....	153	1,047	64	175	1,271	16
October .....	146	1,123	61	175	1,274	17
November .....	147	1,161	54	183	1,249	17
December .....	165	1,126	45	164	1,258	17
AVERAGE .....	144	1,015	56	176	1,224	19



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Cement

## DIRECTORY OF PORTLAND CEMENT PRODUCERS IN CANADA, 1946

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