Cement, Canada
Products

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DOMINION BUREAU OF STATISTICS -- CANADA D.B.S.

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Industry

CEMENT, 1933.

Revised statistics just issued by the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics at Ottawa, show that shipments from Canadian cement plants during 1933 totalled 3,007,432 barrels valued at $4,536,935 as compared with 4,498,721 barrels worth $6,930,721 in 1932.

Cement was produced in 1933 at plants located in Quebec, Ontario, Manitoba, Alberta and British Columbia. Mills in Quebec produced 50.5 per cent of the total Canadian shipments, those in Ontario, 36.4 per cent, Manitoba, 4.3 per cent, Alberta, 5.0 per cent and British Columbia, 3.8 per cent.

Imports of Portland cement into Canada during 1933 totalled 19,119 barrels (estimated at 350 pounds each) averaging $1.97 per barrel as against 21,350 barrels averaging $2.72 in 1932 and 38,392 barrels at $3.74 in 1931. Exports of Portland cement were recorded at 52,531 barrels valued at $47,369 in 1933 as compared with 53,333 barrels at $38,921 in 1932.

The selling prices both in 1932 and 1933, f.o.b. Canadian works, were: high, $2.55 and low, $1.25 per barrel. During 1932 and 1933 the Canadian cement industry operated 41 rotary kilns possessing a total daily output capacity of 43,622 barrels. The industry in 1933 consumed 13,319 tons of gypsum and 616,364 tons of limestone as compared with 27,537 tons of gypsum and 1,141,376 tons of limestone in 1932. Both wet and dry processes were employed by the Canadian cement industry in 1933.

The Chemical Trade Journal and Chemical Engineer, London, England, states that many of the impediments to the development of reinforced concrete construction in Great Britain arising from out-of-date rules of practice, should be removed by the adoption of the recommendations of a report (Report of the Reinforced Concrete Structures Committee of the Building Research Board, published by H. M. Stationers Office, Price 1s. 3d.) issued recently by the Department of Scientific and Industrial Research. The report contains the findings of an authoritative committee under the chairmanship of Sir George Humphreys, appointed in 1931 to "review the present methods and regulations for the use of reinforced concrete in building and make recommendations for rules of practice embodying the best available technical information and experience." These recommendations are set out in a new code of practice appended to the report. A Building Research Technical Paper (No. 14 H. M. S. O., 2s. net) issued by the Department of Scientific and Industrial Research, London, England, deals with the influence of temperature upon the strength development of concrete - "It is only within the last few years", the report states, "that it has been realized that the expansion due to heat hydration of the cement, followed by contraction on subsequent cooling, has been largely responsible for the detrimental cracks that have been observed in large concrete masses." The report contains the latest results of laboratory work at the Building Research Station, corroborated by full scale tests, on the evolution of heat in concrete during setting. These

experiments, it is believed, form the most complete examination of the subject yet made anywhere in the world.

The Engineering and Contract Record, Toronto, reports that the first convention in Canada of the American Concrete Institute held in Toronto on February 20 - 22, 1934, was an unquestioned success. Some of the papers read at the meeting included the following - "Architectural Concrete"; "Architecture of Reinforced Concrete Structures"; "Principles of Heating Concrete Mixtures in Cold Weather"; "Cold Weather Protection of Concrete"; "Temperature Effects on Concrete Strength"; "Vibrating Concrete at Pine Canyon Dam"; "Durability Studies of Concrete and of Aggregate"; "A Method of Evaluating Admixtures"; "Properties of Mortars and Concrete Using Various High Silica Cements"; "Present Tendencies in Canadian Railway Bridge Design"; "Rigid Frame Highway Bridges in Ontario"; "Does Cement Protect a Poor Quality Aggregate? Yes and No.".

The annual report of one of Canada's largest cement producers contains the following information relating to the industry in 1933. "The volume of building, including engineering projects, according to published statistics, fell to a lower level in Canada in 1933 than any year since 1915, but due also to the lack of purchasing power of the farmer and small user, the demand for cement was less than in any year since 1906. However, the extreme low point of the decline in cement consumption would appear to have been reached in February, 1933. After that month the decline, while still very severe, was of less intensity each month thereafter until October when for the first time in practically three years, there was a cessation of the downward trend ... Bussiness generally in Canada has shown slow but steady improvement over a period of several months and the prospects for construction work during the coming year are more favourable than at this time last year. There is reason for hope, therefore, that your company has passed through the worst of the depression period, and may look forward with some confidence to an increased volume of business."

A resumé of construction activity during 1933 by MacLean Building Reports, Ltd., Toronto, is as follows: "Contracts awarded during the early months of 1933 were so low it was predicted as late as August that the total for the year would not exceed seventy million dollars. Fortunately there was a decided pick-up in the fall and the final figures, as compiled by the MacLean Building Reports Ltd., show a total of $97,289,800. This is a decline of 26.7 per cent from the 1932 total of $132,872,400. The decline in buildings only was 22.1 per cent. Contemplated projects, however, amounted to $213,645,600 as compared with $186,017,400 for 1932, an increase of 14.8 per cent. A reversal of trend is distinctly noticeable and the prospect of a better year before us."

It is interesting to note the following statistical data relating to concrete paving completed in Canada as reported by the "Engineering and Contract Record" - square yards completed in 1913 - 469,000; 1923 - 1,457,082; 1929 - 3,824,156; 1930 - 3,482,681; 1931 - 3,342,932; 1932 - 1,159,305; 1933 - 973,122. The total square yards completed in Canada to the end of 1933 amounts to 34,243,350.

Rather wide publicity has been recently given to the possibilities of cement-bound macadam, and the Bureau of Mines, Washingon, D.C., states that the wide adoption of this type of highway would open a large market for Portland cement in secondary road construction; this Bureau also refers to potential outlets for cement in the manufacture of concrete joists for residences and precast reinforced concrete mine timbering.

In addition to the standard first quality products of Canadian cement plants, there has recently been manufactured a high early strength cement; the development of this material was due largely to research work conducted in Canadian plants and it is reported that this particular type of cement is being employed rather extensively in the mining industry, especially for underground guniting, foundations and cementing diamond drill holes. Another new product of the Canadian cement industry resulting from Canadian research is an alkali resisting cement which, it is stated, is particularly suitable for construction in certain parts of the Prairie provinces.

An examination of recent statistics relating to trade in the Orient reveals a pronounced shrinkage of cement imports by both Japan and China; in 1931 the former country imported 16,648,900 kin (kin = 1.3228 lb.) evaluated at 223,769 yen while in 1933 imports had fallen to 252,700 kin worth 3,399 yen. Chinese imports of cement totalled 2,278,701 piculs (1.654 piculs = 220.462 lb.) valued at 4,002,845 standard dollars (December, 1933, standard dollar = 0.33 United States dollars) in 1933 as against 3,670,201 piculs worth 8,812,305 standard dollars in 1932. Among the largest exporters of cement to China were French Indo-China, Hongkong, Japan and Macao; imports listed under "other countries" totalled 346,922 piculs in 1933.

Under the title "Possibilities for Indent Trade with West Africa" the Commercial Intelligence Journal of the Department of Trade and Commerce, Ottawa, contains the following information relating to cement - "The Associated Portland Companies of England have the bulk of the cement trade for public works purposes, but Italy and Japan are important suppliers for general commercial use. The cement is packed in the usual barrels - artificial Portland - and must be up to British standard specifications and meet severe tests for tensile strain. It is believed that there is a considerable amount of business available ..... also in cement-asbestos, corrugated roofing sheets, and flat tiles."

SUMMARY STATISTICS OF CEMENT IN CANADA, 1933.

	Barrels	Value
		$
Output	2,410,518	....
Sold or used	3,007,432	4,536,935
Stocks on hand December 31, 1933	1,830,928	...
IMPORTS -		
Portland cement and hydraulic or water lime	19,119	37,768
Manufactures	...	4,971
EXPORTS -		
Portland cement	52,531	47,369
APPARENT CONSUMPTION	2,974,020	...

PRODUCERS' SALES OF CEMENT IN CANADA, BY PROVINCES, 1933.

	Barrels	Value
		$
Quebec	1,517,555	2,128,900
Ontario	1,095,845	1,587,812
Manitoba	129,540	295,351
Alberta	149,206	299,530
British Columbia	115,286	225,342
CANADA	3,007,432	4,536,935

PRODUCTION AND APPARENT CONSUMPTION OF CEMENT IN CANADA, 1924 1933

Year	PRODUCTION Barrels	PRODUCTION $	APPARENT CONSUMPTION $
1924	7,498,624	13,398,411	7,372,776
1925	8,116,597	14,046,704	7,140,531
1926	8,707,021	13,013,283	8,442,203
1927	10,065,865	14,391,947	9,835,525
1928	11,023,928	16,739,163	10,790,650
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

PRINCIPAL STATISTICS OF THE CEMENT INDUSTRY IN CANADA, 1932 and 1933.

		1932	1933
Number of plants		12	12
Capital employed	$	55,294,814	54,403,379
Number of employees	On salary	103	85
	On wages	1,113	655
	Total	1,216	740
Salaries and wages	Salaries $	213,891	160,680
	Wages $	1,130,881	621,066
	Total $	1,344,772	781,746
Cost of fuel and electricity	$	1,701,125	982,087
Selling value of products	$	6,930,721	4,536,935

FUEL AND ELECTRICITY USED IN THE CEMENT INDUSTRY, 1932 and 1933.

		1932 Quantity	1932 $	1933 Quantity	1933 $
Bituminous coal	Canadian .. short ton	120,296	652,734	48,905	236,947
	Imported .. short ton	90,718	440,546	46,955	229,399
Gasoline	Imp. gal.	87,050	15,856	39,178	6,793
Kerosene	Imp. gal.	826	138	581	102
Fuel oil	Imp. gal.	7,386	960	37	5
Electricity purchased	K.W.H.	85,630,342	(x) 590,891	48,160,143	(x) 508,841
TOTAL COST	xxx		1,701,125		982,087

(x) Includes service charge.

WORLD PRODUCTION OF CEMENT

Metric tons (000's omitted)

From Statistical Year Book of the League of Nations, 1924, 1928 1932.

Country	1924	1928	1929	1930	1931	1932(x)
Africa (x)	...	257	377	529	530	...
Canada	1,233	1,759	1,945	1,872	1,619	737
United States	25,715	30,445	29,481	27,798	21,592	13,200
Mexico	104	216	225	...	...	...
Argentine	143	233	350	384	536	...
Brazil	...	88	96	87	167	...
Chili	68	111	145	161	102	110
India (British)	268	568	570	573	588	...
Japan (a)	...	3,841	4,274	3,748	3,615	3,731
China (e)	93	93	185	178	235	...
U.S.S.R. (Russia)	372	1,903	2,367	3,115	3,332	...
Germany (b)	4,048	7,576	7,039	5,513	3,718	2,795
Belgium (c)	1,925	3,046	3,248	3,050	...	...
Spain	917	1,542	1,820	1,839	1,630	...
France	3,201	4,240	5,787	4,989	...	...
Italy	2,350	3,077	3,497	3,482	3,077	3,177
Poland	409	1,098	1,008	832	546	365
United Kingdom	3,242	4,400	4,766	5,111	5,986	4,320
Switzerland	620	630	690	790	850	800
Australia (d)	500	766	720	708	396	...
Others (x)	5,792	5,211	5,610	5,843	11,781	...
TOTAL (x)	51,000	71,100	74,200	70,600	60,300	...

(x) Estimate
(a) Including Korea, Formosa and Kwantung.
(b) Works affiliated to the German Cement Association.
(c) Artificial cement.
(d) Twelve months ending June 30.
(e) Exclusive of South Manchuria.
Data for 1933 not yet available.

DIRECTORY OF CANADIAN CEMENT MANUFACTURING COMPANIES, 1933

Name	Head Office Address	Location of Plant
QUEBEC -		
Canada Cement Co. Ltd.	Box 290, Station B, Montreal	Hull and Montreal East
National Cement Co. Ltd.	Box 170, Station Hochelaga, Montreal	Montreal East.
ONTARIO -		
Canada Cement Co. Ltd.	Box 290, Station B, Montreal, P.Q.	Belleville, Lakefield and Port Colborne.
St. Marys Cement Co. Ltd.	357 Bay St., Toronto	St. Marys
MANITOBA -		
Canada Cement Co. Ltd.	Box 290, Station B, Montreal, P.Q.	Fort White and Steep Rock.
ALBERTA -		
Canada Cement Co. Ltd.	Box 290, Station B, Montreal, P.Q.	Exshaw
Marlboro Cement Co. Ltd.	Dominion Bank Bldg., Edmonton	Marlboro
BRITISH COLUMBIA -		
British Columbia Cement Co. Ltd.	Belmont Bldg., Victoria	Ramberton
Coast Cement Co. Ltd.	Granville Island, Vancouver	Granville Island