Published by Authority of Hon, H. H. Stevens, M.P., Annual Bulletin Minister of Trade and Commerce. 30-12-8-32 800 DOMINION BUREAU OF STATISTICS - CANADA. Dominion Statistician: R. H. Coats, B.A., F.S.S. (Hon.), F.R.S.C.

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LIME, 1931

Lime production in Canada during 1931 amounted to 344,785 tons valued at \$2,764,415 as compared with 490,802 tons valued at \$4,038,698 in 1930, according to finally revised statistics issued by the Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics at Ottawa. Canadian producers received an average of \$7.38 per ton for quicklime and \$10.71 for hydrated lime in 1931 as against \$7.68 for quicklime and \$11.30 per ton for hydrated lime during 1930.

Lime used in chemical or metallurgical processes employed in the pulp and paper industry, smelting, iron and steel mills, sugar refineries and other industries amounted to 221,305 tons or 64.1 per cent of the total lime production. Of this tonnage the pulp and paper industry consumed 79,893 tons valued at \$569,258; this represents 36.1 per cent of the lime used for chemical purposes.

A bulletin issued by the Department of Mines, Ottawa, gives the following information regarding limes-

"Lime up to 20 pounds per ton of ore is used in the selective flotation of copper, lead, molybdenite and graphite, and in the cyanide process of extracting gold and silver from their ores from 3 to 5 pounds of lime per ton of ore is added to the solution. The lime for these uses must be made from a high-calcium limestone; for use in cyanide mills it must be absolutely free from charcoal and coke. In the pulp and paper industry 200 pounds of lime is required if the milk-of-lime system is used; a further 130 pounds of lime is needed in bleaching each ton of sulphite pulp. The sulphate pulp process requires 500 pounds of lime per ton of pulp produced; for the making of a ton of bleached soda pulp about 600 pounds of lime is required. In the two latter processes it is possible to recover most of the lime for further use. Rag paper requires from 120 to 250 pounds of lime per ton of rags, depending on the kind of rag used. Milk-of lime systems require a lime made from a pure dolomite and it must be free from dark coloured specks; the lime is used either as quicklime or hydrate. A particularly pure limestone is required for the making of lime used in sugar refining, it should possess less than I per cent silica and I per cent magnesia. Imme used in removing of hair from hides at tanneries should be low in content of iron oxides and magnesia. It should be free from grit and preferably be slow in settling. Bleaching powder is simply hydrated lime saturated with chlorine gas, the lime for this purpose must be white and high-calcium in composition and the magnesia content less than la per cent, iron oxide should be low. For the commercial production of caustic soda a purer lime than that used in the pulp industry should be employed. Lime enters into nearly every common process of water treatment. A pure high-calcium lime, practically free from iron, is necessary for bleaching and dyeing in the textile industry, Lime is also used in the hardwood distillation industry for the production of calcium acetate and in the sand-lime brick industry in the manufacture of sand-lime brick."

A Canadian Order-in-Council dated October 28, 1931, fixed the value for duty of lime (slaked or hydrated) dutiable under tariff item 293, at \$8 88 per ton at the point of production. A cordingly, "dumping" or special duty becomes leviable

whenever the export or actual selling price of such lime to an importer in Canada is less than the value so fixed. Lime shipped on consignment without sale prior to shipment, so as to evade the payment of special duty, will be subject to the same special duty as if the goods had been sold prior to shipment.

Imports of lime into Canada during 1931 amounted to 568 tons valued at \$10,561 as compared with 2,096 tons worth \$28,107 in 1930. Imports of calcium chloride not in solution for road treating purposes totalled 42,684,442 pounds valued at \$476,443. Exports of lime totalled 14,425 tons worth \$283,459 as compared with 22,364 tons valued at \$444,728 in 1930.

PRINCIPAL STATISTICS OF THE LIME INDUSTRY IN CANADA, 1930 and 1931.											
			1	930	193	l.					
Number of plants				50	60)					
Capital employed			8.8	16,879	7,289,990						
Number of employees - On salary				91 78							
On wages		995 721									
Total				1,086		799					
Salaries and wages:- Salaries			1	48.525	121,525						
Wages				39,253	664,343						
	Total			87,778	785,868						
Cost of fuel and electricity				886,354		612,278					
Selling value of products\$				38,698		2,764,415					
PRODUCTION OF LIME IN CANADA, BY		ES, 1931, OLD.	SHOWING P	URPOSES	FOR WHICH US	SED OR					
	Nova	OLID 5		Mani							
	Scotia			toba	British						
	and New	Quebec	Ontario		Columbia	CANADA					
	Brunswi			Albert		V-244-243-74					
QUICKLIME											
Building trades -											
Finishing limetons	200	74	4,187	1,985	250	6,496					
\$	200	842	29,749	18,744	4,000	53,335					
Masons'lime tons	880	8,208	17,773	3,013	0 9 6	29,874					
\$	10,500	100,910	143,875	27,956	9.20	283,241					
Sand-lime brick tons	200	2,898	8,064	457	0.40	11,419					
A ami and there	390	18,631	57,738	4,297	0 0 0	80,666					
Agriculture tons	410	2	10,540	0.00	000	10,952					
CHEMICAL -	4,750	16	73,788	2 9 9	000	78,554					
Smelters tons	0 0 0	1.05	478	3,025	1	3,609					
\$	000	1,067	3,276	24,282	10	28,635					
Fron and steel mills tons	16,665	2,200	4,240	000	000	21,155					
yanide mills tons	68,519	2,200	4,240 30,706 17,997	68	°70	101,425					
\$	990	200	123,730	997	1,250	125,977					
Pulp and paper mills tons	2,998	41,397	763	9,907	11,848	66,913					
\$	25,358	242,262	5,448	68,032	107,803	448,903					
Glass works tons	3 9 9	364	5,185	580	J J J	6,129					
Sugar refineries tons	210	2,730	40,379 8,769	5,298	333	48,407					
\$	1,800	787	83,641	21,600	0 0 0	107,828					
Tanneries tons	230	173	1.,686	200	0 9 4	1.859					
Other chemical works tons	U 5 G	1,919	12,928	196	129	14,847					
ther chemical works tons	0 3 0	39,990 279,930	33,681 236,850	1.630	1,278	519,688					

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PRODUCTION OF LIME IN CANADA, BY PROVINCES, 1931, SHOWING PURPOSES FOR WHICH USED OR

			SOLD.	(concluded)						
		Nova			Mani-					
		Scotia			toba	British				
		and New	Quebec	Ontario	and	Columbia	CANADA			
		Brunswic			Alberta					
QUICKLIME - concluded										
Dealers - uses unspeci-										
fied	tons	1,788	6,441	10		480	8,719			
	\$	23,820	56,160	80		5,560	85,620			
Other consumers	tons	000	1,209	3		7,586	8,798			
	\$		12,595	86	0 0 0	75,177	87,858			
TOTAL QUICKLIME	tons	22,951	101,186	113,376	21,631	20,364	279,508			
TOTAL GOTOVITHE	\$	134,747	720,049	842,274	172,836	195,078	2,064,984			
HYDRATED LIME										
Programme and the second										
Building trades -	+	25	150	24,048	4,501		28,724			
Finishing lime	Č	400	1,357	276,808	81,350	0 0 0	359,915			
Mesons' lime	tona	430	975	8,182		000	9,587			
MERCHA TIME 000000000	Š	5,800	9,487	81,545	• • •		96,832			
Sand-lime brick	T			358		909	358			
Sand-IIme Dilck	\$	000	000	3,659	000	6 3 0	3,659			
A mi miltuma	. "	360	91	281	0 0 0	580	1,312			
Agriculture	tons		740	2,810	000	3,289	11,539			
CHEMICAL	Ф	4,700	740	2,010	000	0,200	11,000			
	tona			75		2,530	2,605			
Smelters	tons	000	0.00	788	9 6 9					
Inch and steel mills	77	0 0 0	900	3		21,903	22,691			
from and steel mills .	\$	000	9 9 9	37	0 0 4		37			
Guanida milla	11	0 0 0	000	25	* * *		25			
Cyanide mills	S	000	8 9 0	263	0 0 0		263			
Fully and paper mills	44	E 400	2 411	109		1 060	12,980			
Fulp and paper mills	\$	5,400	3,411		0 0 0	4,060	120,355			
Glass works	-	55,500	27,21.5	1,145		36,495				
GIASS WOLKS 222000000	e e	o u e			0 0 0	• • 9	a 3 @			
Sugar refineries	tono	65	0 0 0	0 0 0	2 + +		65			
bugar relineries	\$	925	300	0 2 0	* * *	0 0 0	925			
Tanneries	tons		125	5	• • •		130			
refuleries	\$	000	1,025	52	• • •	• • •	1,077			
Other chemical works .	10	440	325	1,198	4 4 6	284	2,247			
Other Chemical works .	\$	4,400	2,769	12,889	000	2,479	22,537			
Dealers - uses unspeci-	4	49400	2,100	12,000	400	69413	22,001			
fied	tone		5,233			76	5,309			
1160 000000	\$	000	41,576	5 9 6	6 9 0	637	42,213			
Other consumers		000		9 9 8	0 9 0	1,932	1,932			
Oner Consumers of a see a see	\$	000	000	000	0 9 8	17,388	17,388			
	tons	6,720	10,310	34,284	4,501	9,462	65,277			
TOTAL HYDRATED LIME	. \$	71.725	84,169	379,996	81,350	82,191	699,431			
		120100	01,100	0,0,000	01,000	ORTEGI	0001301			
GRAND TOTAL - LIME	tons	29,671	111,496	147,660	26,132	29,826	344,785			
	\$	206,472	804,218	1,222,270	254,186	277,269	2,764,415			

