

DOMINION BUREAU OF STATISTICS - CANADA  
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CLAY AND CLAY PRODUCTS, 1930.

The Clay and Clay Products Industry in Canada is separated into two divisions:

(1) Production from domestic clays, which includes the production of refractories, brick, structural tile, floor tile, roofing tile, drain tile, sewer pipe and pottery, and (2) Production from essentially imported clays which includes the manufacture of porcelain insulators, refractories, earthenware, pottery and ceramic floor and wall tile.

The Mining, Metallurgical and Chemical Branch of the Dominion Bureau of Statistics at Ottawa reports that there were 205 firms with a total capital investment of \$37,530,742 operating in the clay and clay products industry in Canada during 1930. This industry in its entirety provided employment for 5,867 persons during the year; their earnings totalled \$6,013,416. Production in 1930 was valued at \$12,737,540 which included the total sales of clay and clay products produced from domestic clays and the value added by manufacturing in the branch of this industry using imported clays.

1. Production from Domestic Clays - The value of clay and clay products sold by Canadian producers during 1930 declined 23.8 per cent below the preceding year. Sales in 1930 reached a total value of \$10,593,578 as compared with \$13,904,643 in 1929. Ontario was the leading producing province accounting for 49 per cent of the total sales during the year; Quebec followed with 23 per cent. The other provinces, in order of production value, were: Alberta, British Columbia, Nova Scotia, Saskatchewan, Manitoba, and New Brunswick.

Plants for the production of brick and tile were in operation during 1930 in every province in Canada except Prince Edward Island. In all, there were 203 plants engaged in the manufacture of various kinds of brick, sewer pipe, structural tile, drain tile and other clay products from Canadian clays or shales. The total value of sewer pipe sold during 1930 was \$1,721,915. Five firms produced coarse earthenware, stoneware and other pottery from domestic clays during the year; shipments of these companies were valued at \$296,618.

The production of firebrick, fireclay, and special fireclay blocks and shapes in Canada came from plants located in Nova Scotia, New Brunswick, Saskatchewan, Alberta and British Columbia; sales of these products reached a total value of \$350,892.



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In the Ceramics Division of the Mines Branch of the Department of Mines, Ottawa, general investigations covering some particular branch of the ceramic industries are continuous; the cost of burning brick and tile was investigated at a large number of representative Canadian plants and a general investigation of the refractories with a review of the fireclay resources of the country has recently been commenced.

The superiority of andalusite refractory over other materials of its class is reported to have been demonstrated by test results, and it is stated that this has led to an extensive search for minerals of the "sillimanite type."

The cretaceous clay deposits of the Moose River in Northern Ontario are described in a recent paper by Dr. W. S. Dyer, Department of Mines, Toronto, and Prof. R. J. Montgomery of the University of Toronto, as including a certain amount of kaolin associated with silica-sand, mottled, red, brown and white impure kaolin in commercial amounts, and rather extensive beds of carbonaceous fireclays. Tests conducted by the Ontario Department of Mines have established the fact that Mattagami fireclay will make an average first-quality firebrick; the clay can not be used alone but will require about 40 per cent or more of grog.

In Quebec the 1930 market in brick was seriously affected by large importations of the vitrified product and by the sale of important quantities of second-hand brick proceeding from the demolition of houses in Montreal. Conditions in 1930 were not favourable for a resumption of operations on the St. Remi china clay deposit.

Firebrick manufacturing and fireclay mining in Saskatchewan were active during 1930. Pottery ware, flower pots and decorated ware were manufactured in Medicine Hat, Alberta.

It was estimated that the Straiton mine of the Clayburn Company in British Columbia would be exhausted and closed in January, 1931; the Kilgard fireclay mine was opened in 1930, and the new plant of this company at Kilgard was practically completed and preparations were made to move from Clayburn.

The quantity of clay sold by the producers in the United States in 1930 amounted to 3,962,903 short tons valued at \$12,521,495 according to a report of the United States Bureau of Mines; these figures indicate a decrease of 9 per cent in quantity and 16 per cent in value in comparison with 1929, and represent only clay sold as clay, or mined under royalty, and do not include the much greater quantity of clay that was burned into clay products by the producers themselves from their own property.







Capital employed by the 191 firms making clay products from domestic clay during 1930 was reported at \$33,430,777. Salaries and wages paid to the 5,026 employees amounted to \$4,961,130. Fuel consumed during the year consisted of 49,120 tons of Canadian coal, 176,051 tons of imported coal, 53,259 cords of wood, 520,376 thousand cubic feet of natural gas and minor quantities of coke, fuel oil, gasoline and kerosene. The total cost of fuel used was \$1,654,518. Electricity purchased by the operating companies caused an outlay of \$268,088.

PRINCIPAL STATISTICS OF THE CLAY PRODUCTS INDUSTRY IN CANADA, 1929 and 1930.

	1929	1930
Number of firms .....	185	191
Capital employed .....	\$ 34,190,056	33,430,777
Number of employees:- On salary.....	415	399
On wages .....	5,115	4,627
Total .....	5,530	5,026
Salaries and wages:- Salaries .....	\$ 941,445	922,499
Wages .....	4,785,569	4,038,631
Total .....	5,727,014	4,961,130
Cost of fuel and electricity .....	\$ 2,920,384	1,922,606
Selling value of products.....	13,904,643	10,593,578

PRODUCTION OF CLAY PRODUCTS IN CANADA, BY PROVINCES, 1929 and 1930.

	1929	1930
	\$	\$
Nova Scotia .....	653,157	495,333
New Brunswick .....	160,006	162,536
Quebec .....	3,187,702	2,464,044
Ontario .....	6,830,162	5,221,214
Manitoba .....	362,240	215,967
Saskatchewan .....	302,522	349,283
Alberta .....	1,342,427	997,685
British Columbia .....	866,427	687,516
CANADA .....	13,904,643	10,593,578

PRODUCTION OF CLAY AND CLAY PRODUCTS IN CANADA, 1930.

	Quantity	Total selling value
		\$
Brick: Soft mud process (Face .....	M 11,350	247,220
(Common .....	M 56,487	861,805
Stiff mud process (Face .....	M 99,284	2,135,871
(wire cut) (Common .....	M 105,225	1,480,965
Dry press (Face.....	M 29,434	604,197
(Common .....	M 16,915	208,495
Fancy or ornamental brick (including special shapes, embossed and enamelled brick) .....	M 339	27,649
Sewer brick .....	M 804	15,299
Paving brick .....	M 9	297
Firebrick .....	M 3,789	177,608
Fireclay .....	tons 2,870	25,975
Bentonite .....	tons 74	1,396
Fireclay blocks and shapes .....	- ...	147,309
Structural tile: Hollow blocks (including fireproofing and load-bearing tile).....	tons 165,359	1,667,783
Roofing tile .....	No. 3,056	356
Floor tile (quarries).....	Sq.ft. 179,786	56,230
Drain tile .....	M 25,291	687,070
Sewer pipe (including copings, flue linings, etc.).....	- ...	1,721,815
Pottery, glazed or unglazed.....	- ...	294,866
Other products .....	- ...	231,372
TOTAL .....	- ...	10,593,578







2. Production from Imported Clays - Output in Canada of goods made from

imported clays amounted in value to \$2,978,143 during 1930. This production was 12 per cent under the record for the industry established in 1929 at \$3,373,038. Each year since 1926, excepting 1930, this industry attained a new high production value, the annual rate of increase amounting to 2 per cent in 1927, 13 per cent in 1928, and 37 per cent in 1929. Although the twelve-month period being reviewed was the first in five years in which a lower output was reported, it replaced 1928 as the second best year on record.

Among the products made from clays imported for the purpose were porcelain insulators valued at \$1,357,523; firebrick stove linings and similar refractories worth \$298,945; and other lines such as pottery, sanitary earthenware, sewer pipe, floor tile, etc.

Figures on this industry for 1930 cover the operations of 15 plants, 11 of which were located in the province of Ontario and 4 in Quebec. These concerns employed a working capital of \$4,099,965, afforded employment to a monthly average of 841 people who received \$1,052,286 as salaries and wages. By manufacturing processes a total of \$2,143,962 was added to the value of purchased materials which cost \$834,181.

TABLE 1 - PRINCIPAL STATISTICS OF THE IMPORTED-CLAY PRODUCTS INDUSTRY IN CANADA, 1926-1930.

Years	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Selling value of products at works	Value added by manufacturing
		\$		\$	\$	\$	\$
1926 .....	12	2,849,558	597	783,448	520,218	2,039,514	1,519,296
1927 .....	13	2,834,820	624	814,955	567,519	2,088,238	1,520,719
1928 .....	14	3,068,562	688	891,125	708,571	2,458,801	1,750,230
1929 .....	15	3,472,052	872	1,112,881	992,150	3,373,038	2,380,883
1930 -							
Quebec.....	4	1,905,125	255	324,957	161,667	679,278	517,611
Ontario.....	11	2,194,840	586	727,329	672,514	2,298,865	1,626,351
CANADA...	15	4,099,965	841	1,052,286	834,181	2,978,143	2,143,962

TABLE 2- EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, IN THE IMPORTED-CLAY PRODUCTS INDUSTRY IN CANADA, 1929 and 1930.

Province	Average number of employees:					Salaries and Wages		
	Salaried employees		Wage-earners		Total	Salaries	Wages	Total
	Male	Female	Male	Female		\$	\$	\$
<u>1929</u>								
Quebec .....	22	4	249	6	281	62,038	305,351	367,389
Ontario.....	45	20	449	77	591	189,797	556,695	745,492
CANADA.....	67	24	698	83	872	250,835	862,046	1,112,881
<u>1930</u>								
Quebec .....	27	3	219	6	255	67,024	257,933	324,957
Ontario ....	43	21	449	73	586	180,538	546,791	727,329
CANADA.....	70	24	668	79	841	247,562	804,724	1,052,286







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TABLE 3 - FUEL AND ELECTRICITY USED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY IN CANADA, 1929 and 1930.

Kinds	Unit of measure	1 9 2 9		1 9 3 0	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Coal, anthracite.....	short ton	24	355	21	311
Coal, bituminous, Canadian.....	short ton	2,700	17,955	1,000	8,000
Coal, bituminous, imported.....	short ton	25,476	171,773	21,066	148,206
Coke .....	short ton	447	3,895	442	3,758
Kerosene .....	imp. gal.	...	...	237	52
Fuel oil .....	imp. gal.	1,707	189	67,618	3,937
Wood .....	cord	82	783	82	719
Gas, natural .....	M cu.ft.	15,728	7,655	26,426	12,467
Other fuel .....	-	...	188	...	228
Electricity purchased .....	k.w.h.	1,252,285	18,117	1,311,137	18,457
TOTAL .....	-	...	220,910	...	196,135

TABLE 4 - POWER EMPLOYED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY IN CANADA, 1929 and 1930.

	1 9 2 9		1 9 3 0	
	Number of units	Total h.p. according to manufacturers' rating	Number of units	Total h.p. according to manufacturers' rating
Steam engines.....	2	85	3	380
Gasoline, gas and oil engines...	1	4	1	4
Total primary power.....	3	89	4	384
Electric motors run by purchased power.....	101	771	147	895
Total power employed.....	104	860	151	1,279
Electric motors run by primary power in same plant.....	12	127	12	127
Total electric power.....	113	898	159	2,022
Boilers .....	14	940	12	975

TABLE 5 - MATERIALS USED IN MANUFACTURING IN THE IMPORTED-CLAY PRODUCTS INDUSTRY IN CANADA, 1929 and 1930.

Materials	Unit of measure	1 9 2 9		1 9 3 0	
		Quantity	Cost at works	Quantity	Cost at works
			\$		\$
Clay .....	ton	21,559	285,972	16,533	240,532
Feldspar .....	ton	1,929	37,756	2,254	51,211
Fireclay .....	ton	14,293	96,386	11,457	74,621
Flint .....	ton	4,591	45,321	3,169	37,072
Glazing materials .....	-	...	11,201	...	8,036
Hardware .....	-	...	332,019	...	270,104
Containers .....	-	...	63,443	...	59,911
All other materials .....	-	...	120,052	...	92,694
TOTAL .....	-	...	992,150	...	834,181

TABLE 6 - PRODUCTS MADE IN THE IMPORTED-CLAY PRODUCTS INDUSTRY IN CANADA, 1929 and 1930.

Products	1 9 2 9		1 9 3 0	
	Selling value at works		Selling value at works	
	\$		\$	
Firebrick and stove linings .....	362,360		298,945	
Porcelain insulators .....	2,065,404		1,957,523	
Pottery .....	69,140		41,800	
All other products (x) .....	876,134		679,875	
TOTAL .....	3,373,038		2,978,143	

(x) Includes the products of 1 or 2 firms such as sanitary ware, sewer pipe, floor tile, tanks, boiler linings, etc.







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 DIRECTORY OF PLANTS INCLUDED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY  
 IN CANADA, 1930.

<u>Name</u>	<u>Address</u>
<u>QUEBEC -</u>	
Canada Firebrick Co. Ltd.	4741 St. Ambrose St., Montreal
Canadian Potteries Ltd.	Cor. George and Longueuil Sts., St. Johns
Dominion Sanitary Pottery Co. Ltd.	347 St. James St., St. Johns
Standard Clay Products Ltd.	St. Johns
<u>ONTARIO -</u>	
Bell Fire Brick Co.	1347 Dufferin St., Toronto
Canadian General Electric Co. Ltd.	Townsend St., Peterboro
Canadian Ohio Brass Co. Ltd.	Niagara Falls
Canadian Porcelain Co. Ltd.	Paradise Road, Hamilton
Frontenac Floor and Wall Tile Co. Ltd.	Kingston
Hamilton Potteries Ltd.	100 Locke St. S., Hamilton
National Refractories Ltd.	321 Albany Ave., Toronto, and Port Robinson.
Smith Potteries, The	353 King St. W., Oshawa
Smith & Stone Ltd.	Georgetown
Turner & Co. Reg'd., C. B.	Audley St., Mimico

IMPORTS AND EXPORTS OF CLAY AND CLAY PRODUCTS

Canada's imports of clay and clay products during 1930 were valued at \$10,196,681 as compared with \$12,159,566 during the preceding year; the 1930 importations from the United States were valued at \$4,450,331; from the United Kingdom, \$3,966,890; from Japan, \$123,155; from Czech-Slovakia, \$381,495; from Germany, \$381,277; from France, \$339,514; and minor amounts from other countries. Pottery and chinaware imports accounted for 32.1 per cent of the total clay and clay products importations; refractory brick, 20.3 per cent; clays, 6.8 per cent; sanitary ware, 5.6 per cent; building bricks and blocks, 3.8 per cent; porcelain insulators, 3.5 per cent.

Exports from Canada of clays, building bricks, porcelain insulators, earthenware and other clay manufactures were valued at \$449,120 as compared with \$375,306 in 1929. The United Kingdom received 33.2 per cent of these exportations.

IMPORTS INTO CANADA AND EXPORTS OF CLAY AND CLAY PRODUCTS, 1930.

	<u>Quantity</u>	<u>Value</u>
<u>IMPORTS -</u>		
Building brick .....	M 11,707	255,515
Building blocks .....	"...	131,569
Clays -		
China .....	Cwt. 462,245	278,757
Fire .....	Cwt. 1,147,337	240,293
Pipe .....	"...	9,262
Other clays .....	"...	155,650
Zirconium silicate .....	"...	6,092
Zirconium oxide .....	"...	9,706
Drain tile, unglazed .....	"...	2,076
Drain, sewer pipe and earthenware fittings therefor, chimney linings or vents, chimney tops or inverted blocks, glazed or unglazed .....	"...	73,872
Insulators, electric, porcelain .....	"...	355,033
Earthenware and chinaware .....	"...	5,313,858
Brick, fire, other, valued at not less than \$100 per M, rectangular shaped; the dimensions of each not to exceed 125 cubic inches for use exclusively in the construction or repair of a furnace kiln, etc. ....	"...	64,042
Brick, fire, n.o.p., for use exclusively in the construction or repair of a furnace, kiln or other equipment of a manufacturing establishment .....	"...	1,297,778
Firebrick, n.o.p. ....	"...	53,682
Firebrick, chrome .....	"...	73,761
Magnesite brick .....	"...	270,180
Silica brick (containing not less than 90 per cent silica) -	"...	315,039
Paving brick .....	M 4,522	102,387
Other clay manufactures .....	"...	1,186,156
TOTAL .....	"...	10,196,681
<u>EXPORTS -</u>		
Building brick .....	M 1,822	26,150
Clay -		
Unmanufactured .....	Cwt. 9,688	5,900
Manufactures .....	"...	36,606
Earthenware .....	"...	30,931
Porcelain insulators .....	"...	349,533
TOTAL .....	"...	449,120



