DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

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THE CLAY AND CLAY PRODUCTS INDUSTRY, 1939

The Clay and Clay Products Industry in Canada is classified into two divisions: (1) production from domestic clays, which covers the manufacture from Canadian clays of refractories, building brick, structural tile, floor tile, roofing tile, drain tile, sewer pipe, and pottery, and (2) production from imported clays, which covers the manufacture of porcelain insulators, refractories, earthenware, pottery, ceramic floor and wall tile and other products from clays imported from other countries.

A total of 169 plants representing a total capital investment of $22,602,563 operated in the domestic and imported clay products industries in Canada during 1939. These two industries provided employment for 3,262 persons during the year; their earnings totalled $3,312,400. The combined production in 1939 was valued at $8,123,215 compared with $7,584,972 in 1938.

1. PRODUCTION FROM DOMESTIC CLAYS, 1939

The gross value of Canadian producers' sales of domestic clays and products made from same totalled $5,151,236 in 1939 compared with $4,536,084 in 1938 and $13,904,643, the all-time high record established in 1929. Commercial production of domestic clay products in 1939 was reported from every province except Prince Edward Island; no output of these materials has as yet been recorded for the Yukon and Northwest Territories. Of the total value of sales in 1939, Ontario and Quebec firms contributed $2,346,638 and $1,274,776 respectively.

Sales of building brick in 1939 totalled 165,024 thousand, valued at $2,676,634. Sewer pipe shipments aggregated $813,208; hollow blocks, roofing and floor tile $734,488; drain tile, $353,973 and pottery, including earthenware, $230,420.

Fireclay was mined in Nova Scotia, Saskatchewan and British Columbia and sales of this material totalled 10,045 short tons valued at $30,824. Firebrick made from Canadian clays in 1939 numbered 2,331 thousand worth $119,346. Bentonite shipments during the year under review amounted to 988 short tons valued at $3,441.

The number of firms reported as active in the Canadian domestic clay products industry totalled 141 in 1939, of which 82 were located in Ontario, 18 in Quebec, 11 in British Columbia, 10 in Alberta and the balance in Nova Scotia, New Brunswick, Saskatchewan and Manitoba. Capital employed by the industry as a whole was reported at $17,940,742; employees numbered 2,165 and salaries and wages paid amounted to $2,161,688. Fuel and electricity used during 1939 were appraised at

$396,685 and chemicals and various other process supplies consumed were valued at $108,815.

Imports into Canada in 1939 of clay and its products, in all forms, were valued at $7,934,630 compared with $7,657,202 in 1938. Of the 1939 imports, $3,610,731 came from the United Kingdom and $3,887,187 from the United States. Exports in 1939 of Canadian clays and products made from Canadian clays were appraised at $542,788 against $546,005 in the preceding year.

The following information relating to Canadian clays is from a report prepared by the Bureau of Mines, Ottawa ..... "Common clays suitable for the production of building brick and tile are found in all the provinces of Canada. The largest producing area in Canada of stoneware clays or semi-fireclays lies in the vicinity of Eastend and Willows in Saskatchewan; stoneware clays and moderately refractory fireclays occur near Shubenacadie and Musquodoboit, Nova Scotia. Stoneware clays, or low-grade fireclays, are also known to occur near Williams Lake, Quesnel and Chimney Creek Bridge in British Columbia; in the Cypress Hills of Alberta; and near Swan River, Manitoba. Fireclay refractories are manufactured from domestic clay at two large and a few small plants in Canada; near Vancouver, B.C., a high grade, moderately plastic fireclay is obtained by underground mining from the clay beds in the Sumas mountains. At another plant at Claybank, Saskatchewan, the highly plastic refractory clays recovered by selective mining from the "white mud" beds of Southern Saskatchewan are used. Small quantities of the most refractory clay in the deposits near Shubenacadie, N. S., are mined for refractory use and the Musquodoboit clay is utilized to some extent for the production of stove linings.

"China clay has been produced commercially in Canada only from the vicinity of St. Remi d'Amherst, Papineau County, Quebec. Important deposits of high-grade plastic white burning clays, and buff-burning clays, occur on the Mattagami, Abitibi, and Missinaibi Rivers in Northern Ontario; some may be classed as china clays, some as fireclays and others as ball clays. They have attracted considerable interest but have not yet been developed commercially, owing to their remoteness from industrial centres, and to a lack of transportation facilities. In British Columbia, along the Fraser River, about 25 miles above Prince George, is an extensive deposit of high-grade clay, parts of which yield a grade of china clay comparing favourably with the best found on this continent. Ball clays of high bond strength occur in the white mud beds of southern Saskatchewan".

In a summary review of the industry in 1939, L. H. Cole of the Bureau of Mines states ..... "Few new developments occurred and a large proportion of ceramic products is still produced in Canada from imported raw materials. Progress was made at the plant of the Canadian China Clay Company at St. Remi d'Amherst, Amherst township, Papineau county, Quebec, and it is hoped to have the plant in production early in 1940 producing china clay and high-grade silica sand. The market for ball clays in Canada is not large but is growing, and there are also good prospects of developing a profitable export market for Canadian ball clays from deposits in Saskatchewan to the United States.

"Each year bentonite finds a wider variety of uses, dependent in large measure on the variable physical characteristics of the material. Bentonitic clays may be conveniently classed as (a) swelling and (b) non-swelling when wetted; the former find their principal use in foundry work as a bonding ingredient for moulding sand, for rejuvenating spent sand, and in core washes, as well as in pharmaceutical preparations and in many other products and processes. The non-swelling bentonites

are used (chiefly in the activated form treatment with sulphuric acid) for bleaching in the petroleum and other industries, as well as in oil-well drilling, in which clay serves to stabilize the viscosity of the mud column, acting as a suspending medium for the barite or other heavy mineral used to weight the column against gas pressure, and to float up the drillings, as well as to seal the wall pores of the drill hole.

"Deposits of clay of the bentonitic character occur in Canada in the cretaceous beds of the Prairie Provinces, as well as in the tertiary beds of the Princeton-Merritt area in British Columbia. There was continued production from the deposits at and near Drumheller, Alberta, as well as small production from the British Columbia and Manitoba deposits. A deposit has been discovered near Rockglen, Saskatchewan, material from which has been processed through the laboratories of the University of Saskatchewan, at Saskatoon, and also of the National Research Council at Ottawa, and it is reported to be excellent. This deposit is now being examined with a view to production."

Table 1 - PRINCIPAL STATISTICS OF THE DOMESTIC CLAY PRODUCTS INDUSTRY IN CANADA, 1938 and 1939

		1938	1939
Number of plants		152	149
Capital employed	$	18,068,542	17,940,742
Number of employees - On salary		278	261
On wages		1,964	1,904
Total		2,242	2,165
Salaries and wages - Salaries	$	525,502	526,960
Wages	$	1,584,731	1,634,728
Total	$	2,110,233	2,161,688
Selling value of products (gross)	$	4,536,084	5,151,236
Cost of fuel and purchased electricity	$	939,190	998,683
Cost of process supplies	$	114,659	108,815
Net value of sales	$	3,482,235	4,043,738

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, DOMESTIC CLAY PRODUCTS INDUSTRY, 1935 - 1939

Province and year	Number of firms	Capital employed	Number of employees	Salaries and wages paid	Cost of process supplies used	Cost of fuel and electricity	Net value of sales
		$		$	$	$	$
NOVA SCOTIA -							
1935	5	808,602	110	98,921	906	50,264	219,308
1936	5	908,162	125	107,871	603	58,773	295,878
1937	5	971,394	164	141,754	2,514	73,200	331,132
1938	5	928,933	146	136,443	2,948	64,121	273,184
1939	6	933,708	142	129,870	3,270	62,994	273,688
NEW BRUNSWICK -							
1935	4	247,150	47	30,517	345	10,523	51,610
1936	5	266,027	77	46,713	480	20,652	81,124
1937	5	263,458	79	54,692	1,209	26,710	95,957
1938	5	253,124	80	55,667	2,069	25,409	96,147
1939	3	245,928	64	46,356	2,069	29,906	98,010

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, DOMESTIC CLAY PRODUCTS INDUSTRY, 1935 - 1939

Province and year	Number of firms	Capital employed	Number of employees	Salaries and wages paid	Cost of process supplies used	Cost of fuel and electricity	Net value of sales
		$		$	$	$	$
QUEBEC -							
1935	22	5,525,727	350	268,774	29,978	141,901	421,283
1936	19	5,504,590	423	313,882	15,967	169,803	505,995
1937	19	5,910,736	532	481,861	23,776	247,074	782,303
1938	19	4,579,040	491	458,737	33,030	235,148	754,016
1939	18	4,307,156	498	503,480	43,686	293,610	937,480
ONTARIO -							
1935	75	9,838,136	749	593,769	25,789	339,248	1,005,188
1936	80	9,416,389	727	649,477	46,924	357,874	1,169,138
1937	78	9,439,675	1,027	971,782	66,738	571,058	1,396,049
1938	84	8,349,292	956	905,432	66,691	493,118	1,523,687
1939	82	8,303,580	884	930,217	49,936	497,052	1,799,650
MANITOBA -							
1935	4	223,515	70	50,634	125	17,700	56,930
1936	4	219,279	47	39,256	667	8,813	46,084
1937	5	206,549	58	38,708	390	14,348	80,793
1938	4	258,534	68	56,375	460	23,278	81,596
1939	5	265,876	63	46,780	390	13,337	65,165
SASKATCHEWAN -							
1935	4	961,362	44	38,933	673	10,472	87,005
1936	3	871,074	33	37,147	776	11,429	83,379
1937	5	836,706	43	46,062	1,157	13,419	100,754
1938	6	825,968	33	38,901	824	10,882	107,007
1939	6	818,889	41	55,774	1,282	11,536	135,956
ALBERTA -							
1935	9	1,944,234	198	174,924	2,201	17,027	307,451
1936	9	1,873,767	204	180,999	3,533	27,973	284,271
1937	10	1,895,534	214	186,961	3,103	30,919	304,616
1938	10	1,941,991	269	261,974	2,267	25,891	349,179
1939	10	2,153,477	263	249,081	1,725	32,077	427,277
BRITISH COLUMBIA							
1935	9	953,280	160	131,452	566	31,860	184,210
1936	8	804,143	139	122,803	2,403	39,684	238,804
1937	10	903,180	170	172,972	4,681	56,027	288,932
1938	12	931,660	199	196,704	6,370	61,343	297,419
1939	11	912,128	210	200,130	6,457	58,171	306,512
CANADA -							
1935	132	20,502,006	1,728	1,387,924	60,583	618,995	2,332,985
1936	133	19,863,431	1,775	1,498,148	71,353	695,001	2,704,673
1937	137	20,427,232	2,287	2,094,792	103,568	1,032,755	3,380,536
1938	145	18,068,542	2,242	2,110,233	114,659	939,190	3,482,235
1939	141	17,940,742	2,165	2,161,688	108,815	998,683	4,043,738
1926	194	28,152,062	4,395	4,346,687	(a)	2,080,054	(a)

(a) Information not available.

Table 3 - AVERAGE NUMBER OF WAGE-EARNERS, BY MONTHS, 1937 - 1939

Month	1937	1938	1939	
			Pit	Plant
January	891	893	46	792
February	919	823	31	712
March	1,150	941	57	933
April	1,540	1,561	81	1,277
May	2,484	2,567	285	2,001
June	2,827	2,940	415	2,326
July	2,388	2,837	441	2,438
August	2,938	2,638	369	2,392
September	2,661	2,553	275	2,153
October	2,438	2,179	160	1,887
November	2,011	1,837	143	1,832
December	1,481	1,501	102	1,470

Table 4 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS SPECIFIED, DURING ONE WEEK IN MONTH OF NORMAL EMPLOYMENT

Hours	1939	Hours	1939
	No.		No.
30 hours or less	48	51 - 54 hours	431
31 - 43 hours	202	55 hours	81
44 hours	183	56 - 64 hours	936
45 - 47 hours	104	65 hours and over	150
48 hours	426	GRAND TOTAL	2,883
49 - 50 hours	322	Total wages paid in that week	$55,389

Table 5 - FUEL AND ELECTRICITY USED, 1938 and 1939

Kind	Unit of measure	1938		1939	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal - Canadian	short ton	24,635	150,909	22,023	142,851
Imported	short ton	67,090	458,436	77,161	537,821
Anthracite coal - From United States	short ton	2,694	18,776	692	4,675
Other	short ton	17	208	381	2,367
Lignite coal	short ton	505	2,361	1,483	2,907
Coke	short ton	391	3,544	540	4,639
Gasoline	Imp. gal.	49,679	11,923	69,854	14,825
Kerosene or coal oil	Imp. gal.	1,050	240	6,687	1,557
Fuel oil	Imp. gal.	51,340	4,691	45,988	4,717
Wood	Cord	36,079	127,832	34,566	120,767
Gas - Natural	M cu. ft.	532,374	22,204	598,311	24,253
Manufactured	M cu. ft.	16,528	4,699	...	...
Electricity purchased	K. W. H.	9,939,962	133,334	9,771,973	137,175
Other fuel	$	...	33	...	129
TOTAL	$	...	939,190	...	998,683
Electricity generated for own use	K. W. H.	612,411	...	508,412	...

Table 6 - POWER EQUIPMENT IN THE DOMESTIC CLAY PRODUCTS INDUSTRY, 1939

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 ...	67	5,539	2	160
Diesel engines	4	495	7	815
Gasoline, gas and oil engines, other than diesel engines	47	1,250	9	130
Hydraulic turbines or water wheels..	...	...	...	...
Electric motors -				
(a) Operated by purchased power ..	544	14,818	60	2,568
TOTAL	662	22,102	78	3,673
(b) Operated by power generated by the establishment	29	437	1	10
Boilers	54	5,003	9	645

(x) According to manufacturers' rating.

Table 7 - PRODUCTION (SALES) OF DOMESTIC CLAY AND CLAY PRODUCTS IN CANADA, 1938 and 1939

Products	Unit of measure	SALES OR SHIPMENTS 1938 Quantity	1938 $	1939 Quantity	1939 $
Clay - Fullers' earth	ton	...	...	...	...
Bentonite	ton	1,179	3,659	988	3,441
Fireclay	ton	2,344	17,243	10,045	30,824
Kaolin (china clay)	ton	...	...	...	...
Other clay	ton	13,797	18,053	3,114	9,412
Fireclay blocks and shapes	$	...	73,512	...	95,256
Firebrick	M	2,213	113,581	2,331	119,346
Brick - Soft mud process - Face	M	10,838	208,610	10,927	182,376
Common	M	24,104	313,082	26,652	372,116
Stiff mud process- Face	M	34,179	671,471	45,993	941,696
(wire cut) Common	M	50,734	681,744	51,114	692,224
Dry press - Face	M	13,125	266,039	12,263	242,518
Common	M	15,536	192,741	17,790	236,597
Fancy or ornamental brick (including special shapes, embossed and enamelled brick)	M	63	4,175	68	4,601
Sewer brick	M	228	3,581	217	4,506
Paving brick	M	1	34	157	6,089
Structural tile -					
Hollow blocks (including fireproofing and load-bearing tile)	ton	70,648	591,416	86,120	714,291
Roofing tile	no.	150,504	5,196	148,291	4,964
Floor tile (quarries)	Sq. ft.	100,958	15,330	90,812	15,233
Ceramic or glazed floor and wall tile.	$	...	...	...	...
Drain tile	M	12,862	322,774	14,361	353,973
Sewer pipe (including copings, flue linings, etc.) (a)	$	...	778,107	...	813,208
Pottery, glazed or unglazed (including coarse earthenware, sanitary ware, stoneware, flower pots, and all other pottery)	$	...	235,890	...	282,712
Other products	$	...	19,846	...	(b)25,853
TOTAL	$	...	4,536,084	...	5,151,236

(a) Includes value of clay conduits. (b) Includes crucibles.

For Footnote - see page 7.

Footnote to Table 7 - In addition to the clays recorded in this table, there were 105,982 tons of ordinary clay consumed in Canada during 1939 in the production of Portland cement; the corresponding consumption in 1938 was 143,421 short tons. Also consumed by the Canadian cement industry in 1939 were 27,241 short tons of shale.

Table 8 - PRODUCTION (TOTAL SALES) OF CLAY PRODUCTS FROM DOMESTIC CLAYS, 1913-1939

Year	$	Year	$
1913	9,504,314	1927	11,173,189
1914	6,871,957	1928	12,381,718
1915	3,914,488	1929	13,904,643
1916	4,120,805	1930	10,593,578
1917	4,779,038	1931	7,841,288
1918	4,583,489	1932	3,650,218
1919	7,906,366	1933	2,262,835
1920	10,664,929	1934	2,680,410
1921	8,857,818	1935	3,012,563
1922	11,458,456	1936	3,471,027
1923	10,483,016	1937	4,516,859
1924	9,215,077	1938	4,536,084
1925	9,529,691	1939	5,151,236
1926	10,357,323		

In 1913 there were 455 active firms in the Canadian domestic clay products industry, men employed numbered 11,193 and $4,682,801 were distributed in salaries and wages. In 1918 the number of active firms was 230 and $2,131,614 were paid in wages to 3,423 employees.

Table 9 - PRODUCTION (TOTAL SALES) OF CLAY PRODUCTS, BY PROVINCES, 1936 - 1939

Province	1936	1937	1938	1939
	(Gross values)			
	$	$	$	$
Nova Scotia	355,254	406,846	340,253	339,952
New Brunswick	102,256	123,876	123,625	129,985
Quebec	691,765	1,053,153	1,022,194	1,274,776
Ontario	1,573,936	2,033,845	2,083,496	2,346,638
Manitoba	55,564	95,531	105,334	78,892
Saskatchewan	95,584	115,330	118,713	148,774
Alberta	315,777	338,638	377,337	461,079
British Columbia	280,891	349,640	365,132	371,140
CANADA	3,471,027	4,516,859	4,536,084	5,151,236

Table 10 - PRODUCTION (SALES) OF BUILDING BRICK (a) - DOMINION TOTALS FOR YEARS SPECIFIED, 1905 - 1936

Year	M	$	Average value per M (b)	Year	M	$	Average value per M (b)
			$				$
1905 (x).	523,820	3,933,925	7.51	1930	319,638	5,581,501	17.45
1914	551,149	4,769,417	8.65	1931	237,143	4,289,119	18.09
1925	351,186	5,944,163	16.92	1932	100,477	1,779,334	17.71
1926	358,348	6,525,565	18.21	1933	67,700	1,124,517	16.61
1927	398,439	6,941,131	17.42	1934	86,072	1,383,929	16.08
1928	421,301	7,281,777	17.28	1935	100,538	1,555,167	15.47
1929	458,630	8,003,358	17.45	1936	115,732	1,748,772	15.11

(a) Totals comparable with those in Table 12. (x) Quantity not recorded prior to 1905.
(b) Based on shipments of all grades and the value per M should be interpreted as the value of pressed, common and other varieties 'en masse' and not the value of any one particular type of brick.

Table 11 - PRODUCTION OF BUILDING BRICK IN CANADA - PER CAPITA OF POPULATION FOR YEARS SPECIFIED

Year	M per capita	Year	M per capita
1905	0.087	1934	0.008
1914	0.070	1935	0.009
1929	0.046	1936	0.010
1930	0.031	1937	0.014
1932	0.010	1938	0.013
1933	0.006	1939	0.015

Table 12 - PRODUCTION (SALES) OF BUILDING BRICK (a) IN CANADA, BY PROVINCES, 1937, 1938 and 1939

	1937		1938		1939	
Province	M	$	M	$	M	$
Nova Scotia	5,282	74,860	5,102	69,185	4,975	74,489
New Brunswick	4,529	66,409	4,870	77,810	5,371	78,074
Quebec	53,853	825,596	48,249	766,379	59,452	935,051
Ontario	66,363	1,113,521	65,038	1,092,072	71,691	1,270,978
Manitoba	5,533	85,421	6,146	95,190	4,099	69,353
Saskatchewan	371	5,793	504	8,700	982	16,633
Alberta	11,556	94,326	11,151	108,330	11,907	124,358
British Columbia ..	6,283	109,350	7,747	123,777	6,547	107,698
CANADA	153,770	2,375,276	148,807	2,341,443	165,024	2,676,634
Average value per M		$ 15.45		$ 15.73		$ 16.22

(a) Includes fancy and sewer brick.

Table 13 - VALUE (b) OF DRAIN TILE AND SEWER PIPE PRODUCED (SALES) IN CANADA, BY PROVINCES, 1937, 1938 and 1939

Province	1937	1938	1939
	$	$	$
Nova Scotia	282,127	219,497	202,730
New Brunswick	17,616	9,400	1,588(x)
Quebec	57,365	89,033	103,323
Ontario	572,153	594,993	652,396
Manitoba	3,524(x)	4,196(x)	3,690(x)
Saskatchewan	...	...	200(x)
Alberta	87,690	96,623	114,605
British Columbia	68,705	87,139	88,649
CANADA	1,089,180	1,100,881	1,167,181

(b) Includes value of copings, flue linings, etc. (x) Drain tile only.

Table 14 - VALUE (b) OF DRAIN TILE AND SEWER PIPE PRODUCED IN CANADA FOR YEARS SPECIFIED

Year	Value	Year	Value	Year	Value
	$		$		$
1910	1,144,118	1920	2,111,742	1928	2,379,698
1912	1,242,503	1922	2,173,735	1929	2,726,203
1914	1,470,839	1924	2,003,649	1933	577,287
1916	1,075,674	1926	1,876,794	1935	686,895
1918	1,199,114				

(b) Includes value of copings, flue linings, etc.

Table 15 - PRODUCTION (SALES) OF FIRECLAY BLOCKS AND SHAPES AND FIREBRICK, BY PROVINCES, 1939

Province	FIRECLAY(x)		FIRECLAY BLOCKS and SHAPES	FIREBRICK	
	Short tons	$	$	M	$
Nova Scotia	2,522	7,720	813	3	123
New Brunswick	...	...	...	...	...
Saskatchewan	6,931	15,020	73,990	474	26,300
Alberta	...	...	...	30	1,297
British Columbia ...	592	8,084	20,453	1,824	91,626
CANADA	10,045	30,824	95,256	2,331	119,346

(x) Does not include the entire quantity of clay shipped from Saskatchewan to Alberta for the manufacture of clay products.

Table 16 - PRODUCTION (SALES) OF FIRECLAY, FIRECLAY BLOCKS AND SHAPES, and FIREBRICK FROM DOMESTIC CLAY, 1930 - 1939

Year	FIRECLAY		FIRECLAY BLOCKS and SHAPES	FIREBRICK	
	Short tons	$	$	M	$
1930	2,870	25,975	147,309	3,789	177,608
1931	1,233	14,857	83,039	2,248	107,597
1932	990	11,826	75,209	1,580	71,757
1933	1,421	11,273	80,625	1,547	73,226
1934	1,043	12,598	62,388	2,109	101,218
1935	2,272	15,574	71,344	1,817	90,149
1936	2,437	17,639	65,171	2,548	118,923
1937	4,123	26,081	75,431	2,950	142,327
1938	2,344	17,243	73,512	2,213	113,581
1939	10,045	30,824	95,256	2,331	119,346

NOTE: Firebrick and fireclay blocks and shapes are made also from imported clays; see Table 39.

Table 17 - PRODUCTION (SALES) OF POTTERY FROM DOMESTIC CLAYS FOR YEARS SPECIFIED

Year	Value $	Year	Value $
1888	27,750	1928	356,093
1898	214,675	1929	323,194
1908	200,541	1930	294,866
1913	53,533	1931	257,125
1918	130,242	1932	244,861
1923	229,547	1933	202,500
1924	238,242	1934	223,733
1925	267,255	1935	220,711
1926	320,135	1936	218,402
1927	307,057	1937	232,209

Table 18 - PRODUCTION (SALES) OF POTTERY FROM DOMESTIC CLAYS, BY PROVINCES, 1938 and 1939

Province	1938	1939
	$	$
New Brunswick	28,580	30,593(x)
Ontario	59,092	60,692
Saskatchewan	...	50
Alberta	138,519	180,017
British Columbia	9,699	11,360
CANADA	235,890	282,712

(x) Includes value of sanitaryware.

Table 19 - PRODUCTION OF STRUCTURAL TILE IN CANADA, BY PROVINCES, 1939

Province	HOLLOW BLOCKS (x) Short tons	$	ROOFING TILE No.	$	FLOOR TILE (QUARRIES) Sq.ft.	$
Nova Scotia	5,385	50,713	...	...	...	...
New Brunswick	2,377	19,341	...	...	...	...
Quebec	27,230	235,581	...	...	...	...
Ontario	41,856	329,951	110,869	3,589	90,292	15,163
Manitoba	551	5,258	...	...	...	...
Saskatchewan	790	7,835	...	...	...	...
Alberta	4,989	37,952	...	...	...	...
British Columbia ...	2,942	27,660	37,422	1,365	520	70
CANADA	86,120	714,291	148,291	4,964	90,812	15,233

(x) Including fireproofing and load-bearing tile.

Table 20 - PRODUCTION OF STRUCTURAL TILE IN CANADA, 1930 - 1939

Year	HOLLOW BLOCKS (x) Short tons	$	ROOFING TILE No.	$	FLOOR TILE (QUARRIES) Sq.ft.	$
1930	165,359	1,667,783	3,056	356	179,786	56,230
1931	105,635	1,046,634	6,935	720	107,499	31,415
1932	48,118	421,672	48,939	3,900	94,316	21,502
1933	26,747	160,059	20,469	1,136	91,495	14,297
1934	31,136	244,122	44,115	1,852	80,356	17,491
1935	(a)47,195	344,608	82,015	3,669	51,765	7,629
1936	58,501	467,860	52,730	2,139	97,738	13,798
1937	64,526	533,843	60,542	3,302	73,191	12,169
1938	70,648	591,416	150,504	5,196	100,958	15,330
1939	86,120	714,291	148,291	4,964	90,812	15,233

(x) Including fireproofing and load-bearing tile.
(a) In addition, there was produced $315 worth of ceramic tile.

Table 21 - PRODUCTION (SALES) OF BENTONITE AND KAOLIN IN CANADA, BY PROVINCES, 1928 - 1939

Year	BENTONITE (x) Tons	$	KAOLIN (a) Tons	$
1928	20	100	5	25
1929	...	...	...	...
1930	74	1,396	...	...
1931	187	935	...	...
1932	7	176	...	...
1933	55	1,363	...	...
1934	63	1,578	48	504
1935	41	781	170	1,520
1936	120(b)	180	...	...
1937	163	1,971	...	...
1938	1,179	3,659	...	...
1939	988	3,441	...	...

(x) All from British Columbia 1928 - 1936 inclusive; in 1937 includes 132 tons at $1,154 produced in Manitoba and 31 tons at $817 in British Columbia. Sales in 1938 included 1,136 tons worth $3,444 from Alberta and 43 tons at $215 from British Columbia, and in 1939 there were 99 tons worth $591 from Manitoba and 889 tons valued at $2,850 from Alberta.
(a) All from Quebec.
(b) Partly for experimental purposes.

It was reported in 1938 that bentonite films may be processed to afford a successful substitute for mica in various important uses and may come on the market as insulating tapes for wrapping wires and telephone cables. The films are said to be fireproof, waterproof, chemically inert, transparent, flexible and fairly tough and their employment for a variety of uses where dielectric properties are not required is suggested.

Table 22 - FULLER'S EARTH USED IN CANADA IN THE MANUFACTURE OF SOAPS AND WASHING COMPOUNDS AND IN THE PETROLEUM PRODUCTS INDUSTRY, 1930-1938

Year	Petroleum Products Industry		Soaps and Washing Compounds	
	Pounds (x)	$	Pounds	$
1930	20,102,387	241,793	Data not available	
1931	16,157,582	201,361	492,174	6,264
1932	19,642,179	258,934	507,807	7,444
1933	22,811,655	314,515	588,434	8,501
1934	18,588,514	239,357	508,316	6,562
1935	18,487,148	260,885	660,018	13,694
1936	18,907,295	243,164	1,328,219	20,601
1937	18,843,458	240,309	1,167,768	20,393
1938	19,687,467	281,668	1,195,208	19,575

(x) Includes all clay.

The United States Bureau of Mines report that International trade in Fuller's earth is confined largely to the exports of American earth to mineral-oil refineries and of English earth to refineries treating edible oils and mineral fats. Experiments with bauxite began in 1937, for decolorizing oils by percolation processes and at least three companies in the United States are now offering it as a substitute for Fuller's earth.

With the opening up of new clay deposits, the use of the United States clays for treating edible products increased until 1938, when shipments to vegetable and animal oil refineries also decreased sharply, probably because of competition from artificially activated or acid-treated earths. Activated material is now made in California and Mississippi from bentonites having virtually no decolorizing power in the raw state.

Table 23 - CHINA CLAY (KAOLIN) USED IN THE MANUFACTURE OF PAPER IN CANADA, 1930-1938

Year	Tons	Value $	Year	Tons	Value $
1930	13,024	218,423	1935	33,766	422,584
1931	11,484	173,660	1936	39,165	520,121
1932	14,432	205,068	1937	41,738	578,223
1933	20,048	267,014	1938	34,968	488,147
1934	27,550	357,286			

Table 24 - CLAYS AND EARTHS USED IN CANADIAN RUBBER INDUSTRY, 1933 - 1938

Year	Tons	Value $	Year	Tons	Value $
1933	1,391	32,361	1936	3,017	70,709
1934	2,391	54,368	1937	3,614	79,300
1935	2,639	63,553	1938	2,942	81,935

Table 25 - FIREBRICK AND FIRECLAY USED IN THE MANUFACTURE OF IRON AND STEEL AND THEIR PRODUCTS IN CANADA, 1931 - 1938

Year	FIREBRICK		FIRECLAY		OTHER FIRECLAY, FIREBRICK and CUPOLA BLOCKS
	Number	Value	Tons	Value	
		$		$	$
1931	4,326,000	197,684	7,631	64,300	45,393
1932	5,409,000	123,532	5,910	52,492	36,395
1933	1,846,016	141,784	7,615	62,602	11,623(b)
1934	2,590,452	192,538	8,248	75,906	21,488
1935	(a)	451,604	11,510	101,601	28,064
1936	(a)	(a)	$ 779,014(c)	(a)	(a)
1937	(a)	(a)	$1,058,787(c)	(a)	(a)
1938	(a)	(a)	$ 838,012 (c)	(a)	(a)

(a) Not published separately.
(b) From 1933 includes only cupola blocks.
(c) Combined value for firebrick, fireclay and other fireclay, etc.
NOTE - Corresponding data for 1939 are not yet complete.

Table 26 - FULLER'S AND INFUSORIAL EARTH USED IN SPECIFIED CANADIAN INDUSTRIES, 1932 - 1938

Year	Sugar Refineries		Vegetable oil mills	
	Pounds	$	Pounds	$
1932	(a)	(a)	102,650	1,773
1933	(a)	(a)	126,880	2,730
1934	(a)	(a)	115,120	2,171
1935	(a)	(a)	88,980	2,425
1936	59,200(b)	1,730	243,720	10,044
1937	4,586,786(c)	95,532	212,997(*)	9,349
1938	4,908,597(c)	101,473	190,253	9,063

(a) Not recorded.
(b) Fuller's earth.
(c) Infusorial earth.
(*) Includes other earth.
NOTE - In addition to the consumption recorded, there is a considerable quantity of fuller's earth used by the slaughtering industry.

Table 27 - CONSTRUCTION CONTRACTS AWARDED IN CANADA(x) FOR YEARS SPECIFIED

Type	1929	1932	1937	1938	1939
	$	$	$	$	$
Residential ...	128,901,300	28,692,600	56,207,000	55,025,600	67,451,200
Business	190,161,700	39,399,200	55,288,800	63,327,100	54,945,200
Industrial	62,968,800	7,820,400	33,779,800	15,982,200	22,753,000
Engineering ...	194,620,000	56,760,200	78,781,100	52,943,000	42,029,100
TOTAL	576,651,800	132,872,400	224,056,700	187,277,900	187,178,500

(x) Compiled by MacLean Building Reports Ltd., Toronto.

Table 28 - IMPORTS INTO CANADA AND EXPORTS OF CLAY AND CLAY PRODUCTS, 1938 and 1939

	Unit of measure	1938 Quantity	1938 $	1939 Quantity	1939 $
Imports -					
Building brick	ton	1,801	22,075	1,908	27,236
Building blocks	...	...	48,310	...	30,098
Clays - China	cwt.	758,794	324,933	877,425	376,750
Fire	cwt.	1,083,493	181,221	1,060,786	162,925
Pipe	...	...	7,999	...	8,083
Other clays, n.o.p.	...	...	203,587	...	(*)192,521
Zirconium silicate	...	...	1,847	...	5,589
Zirconium oxide	...	...	24,983	...	40,096
Drain tile, unglazed	...	...	54	...	729
Drain, sewer pipe and earthenware fittings therefor, chimney linings or vents, chimney tops or inverted blocks, glazed or unglazed	...	...	12,950	...	15,768
Tiles or blocks of earthenware or stone prepared for mosaic flooring	...	...	53,233	...	56,209
Tiles, earthenware, for roofing purposes	...	...	3,152	...	10,731
Tiles, earthenware, n.o.p.	...	...	131,990	...	123,689
Insulators, electric, porcelain	...	...	88,344	...	75,231
Pottery and chinaware	...	...	4,005,735	...	3,432,744
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.	...	...	69,440	...	75,894
Brick, fire, n.o.p. for use exclusively in the construction or repair of a furnace, kiln, or other equipment of a manufacturing establishment	...	...	321,850	...	494,396
Firebrick, n.o.p.	...	...	666,359	...	841,071
Firebrick, chrome	...	...	47,885	...	88,367
Magnesite brick	...	...	571,910	...	677,011
Silica brick (containing not less than 90 per cent silica)	...	...	240,184	...	312,413
Paving brick	ton	1,695	12,798	816	6,801
Artificial teeth, not mounted.	...	...	367,864	...	439,102
Baths, bath tubs, basins, laundry tubs, etc., of earthenware, cement or clay, n.o.p.	...	...	119,164	...	147,976
Crucibles, clay or sand	...	...	29,139	...	40,259
Other manufactures of clay	...	...	62,526	...	95,957
TOTAL	...	...	7,617,522	...	7,778,346

Table 28 - IMPORTS INTO CANADA AND EXPORTS OF CLAY AND CLAY PRODUCTS, 1938 and 1939 (Concluded)

	Unit of measure	1938 Quantity	1938 $	1939 Quantity	1939 $
Exports					
Building brick	M	1,134	77,544	1,303	22,826
Clay - Unmanufactured	cwt.	919	2,652	1,427	2,065
Manufactured	...	...	53,104	...	65,046
Earthenware	...	...	15,808	...	14,919
Porcelain insulators	...	...	456,897	...	437,932
TOTAL	...	...	606,005	...	542,788

(x) In addition, $130,231 worth of activated clay was imported by oil refiners.

PRICES - (a)

BENTONITE - per ton, carload lots, f.o.b. Wyoming mines, dried and crushed, in bulk, $8; in bags, $10; f.o.b. Chicago, selected air-floated, $25.

CHINA CLAY (KAOLIN) - per ton, f.o.b. South Carolina and Georgia mines, in bulk: saggar clays, $2.50 to $3.50; tailings, $4.50 to $5.00. No. 2 grades, $5.50 to $6.00; No. 1 grades, air-floated, crude, $6.75 to $8.00; No. 1 washed, $8.00. Florida: washed, crushed, $11.75; air-floated and washed, $14 to $15. Maryland: ball clays, shredded bulk, $3.75 to $8.25; air-floated, in paper bags, $15 to $18.25. New Jersey: Plastic kaolin, pulverized, in paper bags, $10. Insecticide clay, $11.50 to $16.50. Imported English, per long ton, C and F. American ports: lump, $20.00 to $25.00 in bulk; air-floated, $35 to $60.

FULLER'S EARTH - per ton, f.o.b. Colorado, $9; f.o.b. Georgia or Florida, 30 to 60 mesh, $14.50; 15 to 30, $14; 200 and up, $10; 100 and up $7.

(b) FULLER'S EARTH - English, carlots, tons, to $29.00; Georgian, carlots - to $21.00.

(c) CHINA CLAY - Imported, carlots - bulk - ton $20.00 to $25.00. Pigment clay for rubber - carlots - bags - ton - $20.00 to $25.00, less carlots, to $23. KAOLIN (refined grades) lb. 4 cents - 12 cents.

(a) Engineering and Mining Journal's "Metal and Mineral Markets" - New York, December, 1939.
(b) "Canadian Chemistry and Metallurgy" - Toronto, November, 1939.
(c) Engineering and Mining Journal's "Metal and Mineral Markets" - New York, August, 1940.

LIST OF OPERATORS SHIPPING BRICK, TILE, SEWER PIPE, etc., MADE FROM DOMESTIC CLAYS, 1939

Name of Firm	Head Office Address	Plant Location
NOVA SCOTIA -		
Brooks, Stephen, & Sons (a)	Box 159, New Glasgow	New Glasgow
MacIntyre, A. D. (a)	Sydney	Sydney
McCurdy, Henry (a)	Middle Musquodoboit	Musquodoboit
Miller, Archie E.	Elmsdale	Lantz Siding
Shaw, L. E., Ltd. (a)	8 Prince St., Halifax	Lantz Siding
Standard Clay Products Ltd.	St. Johns, P.Q.	New Glasgow
NEW BRUNSWICK -		
Ryan, M., & Son, Ltd.	Fredericton	Fredericton
Shaw, L. E. Ltd. (a)	8 Prince St., Halifax, N.S.	Chipman
Tondreau, Adelard	Bathurst	Bathurst
QUEBEC -		
Ascot Tile & Brick Co. Ltd.	Ascot Corner	Richmond Co.
Begin, Olivier	R.R. 1, Petite Riviere	Petite Riviere
Canada China Clay Ltd.	St. Remi d'Amherst	St.Remi d'Amherst
Castonguay, H.	Deschaillons	Deschaillons
Champlain Brick Ltd.	323 Blvd. Charest, Quebec	Beauport-Est
Citadel Brick Ltd.	14 St. Joseph St., Quebec	L'Islet Station Boischatel
Cote, Albert	Victoriaville	Victoriaville
Crite, Freddy	St. Tite	St. Tite
Desmarais, S. E., & Co.	Richmond	Richmond
Duquette, Isidore	Box 626, East Angus	Westbury
Gaulin, E. (c)	Princeville	Princeville
Hodgins, David T.	Shawville	Shawville
LaPrairie Co. Inc.	660 St. Catharine St. W., Montreal	LaPrairie and Delson
Lotbiniere Brick Co.	Deschaillons	Deschaillons
Montreal Terra Cotta Ltd.	1010 St. Catharine St. W., Montreal	Lakeside
Parrot, M. H.	Deschaillons	Deschaillons
Potvin, Alphonse	Deschaillons	Deschaillons
St. Lawrence Brick Co. Ltd.	1010 St. Catharine St. W., Montreal	LaPrairie
Scott Brick Co.	Scott Junction	Dorchester Co.
Standard Clay Products Ltd.(a)	St. Johns	St. Johns
Tremblay, Jules R.	272 rue Racine, Chicoutimi	Chicoutimi
ONTARIO -		
Barnes, Wm. R., Company Ltd.	243 Cumberland Ave., Hamilton	Hamilton
Belle River Brick & Tile Co.	Belle River	Essex County
Brampton Pressed Brick Co. Ltd.	Brampton	Peel County
Broadwell, B., & Son	Kingsville	Essex County
Canadian Ceramic Co. Ltd. (a)	Rm. 608 .. 159 Bay St., Toronto	Acton
Canadian Pressed Brick Co. Ltd.	195 Ottawa St. S., Hamilton	Hamilton
Central Tile Brick Corp. Ltd.	Box 25, Tilbury	Kent Co.
Chapman Bros.	145 Dawes Road, Toronto	E. York Tp.

LIST OF OPERATORS SHIPPING BRICK, TILE, SEWER PIPE, ETC., MADE FROM DOMESTIC CLAYS, 1939 (Continued)

Name of Firm	Head Office Address	Plant Location
ONTARIO - (Continued) -		
Construction Materials Ltd.	Drawer 70, New Toronto	Etobicoke Tp.
Cooksville Co. Ltd.	46 Bloor St. W., Toronto	Cooksville
Cornhill, James & Sons Ltd.	Box 36, Chatham	Kent County
Coultis, Geo. & Son	Thedford	Lambton County
Cowell, Geo. Wesley	Box 361, Tilsonburg	Oxford County
Curtin, F., Estate	R.R. 4, Lindsay	Victoria County
Curtis Bros.	Box 809, Peterborough	Otonabee Tp.
Deller, A., & Son	Brownsville	Oxford County
Deller, Wm. H.	Thorndale, R.R. 4	W. Nissouri Tp.
Dochard Brick, Tile & Terra Cotta Works	Arnprior	Arnprior
Donaldson, Thos. Geo.	R.R. 1, Greenock	Culross Tp.
Douglas, John R.	Wilkesport	Lambton County
Dover Brick and Tile Works	Chatham	Dover Tp.
Elliott, Chas.	Bluevale	Huron County
Elliott, Jas., Jr.	Sault Ste. Marie	Korah Tp.
Elliott, Wm.	Glenarnan	Bruce County
Ferguson, A. W.	95 Rectory St., London	London
Fletcher Brick and Tile	Fletcher	Kent Co.
Fort William Brick Co.	Fort William	Fort William
Frid Bros. Ltd.	Main West and Macklin Sts., Hamilton	Hamilton
Gamage, C. R.	R.R. 2, Dresden	Lambton County
Georgian Bay Building Products	Owen Sound	Shallow Lake
Godfrey, Thos., & Co.	Carleton Place	Lanark County
Gomall Brick & Tile Works	Powassan	S.Himsworth Tp.
Grimsby Brick & Tile Co.	Grimsby	Grimsby
Haist, W. R.	Crediton	Crediton
Hamilton Pressed Brick Co. Ltd.	211 Kensington Ave. S., Hamilton	Wentworth County
Harper Brick Works	348 Greenwood Avenue, Toronto	Toronto
Hill, Aaron	Essex	Essex
Hill, Albert W.	R.R. 1, Coatsworth	Tilbury E. Tp.
Hitch, D. A.	Ridgetown	Howard Tp.
Hodder, Mrs. J. H., & Sons	Dutton	Elgin County
Howlett, Fred W., & Sons, Ltd.	Box 849, Petrolia	Petrolia
Huntsville Brick Works	Box 308, Huntsville	Muskoka
Interprovincial Brick Co. Ltd.	46 Bloor St. W., Toronto	Chinquacousy Tp. Nassagaweya Tp.
Jackson, W. B., Brick & Tile	Brantford	Brantford
Jamieson Lime Co.	Renfrew	Renfrew
Janes, D. A.	Mt. Brydges	Middlesex Co.
Jasperson Brick & Tile Co.	Kingsville	Coatsworth
Jervis, W. J.	R.R. 3, Dorchester	N. Dorchester
Kerr, C., Estate of	R.R. 4, Goderich	Huron County
Koebel Bros.	St. Clements	St. Clements
Lindsay, Earl & Sons	R.R. 2, Wallaceburg	Kent County
McComb, Chester	R.R. 2, London	Middlesex Co.
McCormick, Thos. L.	R.R. 5, Watford	Lambton County
McFarlane, W. J.	Forest	Lambton County

LIST OF OPERATORS SHIPPING BRICK, TILE, SEWER PIPE, ETC., MADE FROM DOMESTIC CLAYS, 1939 (Continued)

Name of Firm	Head Office Address	Plant Location
ONTARIO (Concluded) -		
McFarren, F. B. Ltd.	34 Toronto St., Toronto	Streetsville
Milton Brick Co. Ltd.	170 Bloor St. W., Toronto	Milton
Moulton's Tile & Brick Yard	R.R. 2, Holyrood	Greenock Tp.
Napanee Brick & Tile Works	R.R. 3, Napanee	Lennox County
National Fireproofing Co. of Canada, Ltd.	96 Bloor St. W., Toronto 5	Wentworth Co.
National Sewer Pipe Co. Ltd.	Aldershot	E. Flamboro Tp. Aldershot, Hamilton, Swansea
New Liskeard Brick Works	Box 74, New Liskeard	New Liskeard
Norwich Brick &-Tile Works	R.R. 2, Norwich	Oxford County
Ontario Brick & Tile Plant (Government)	Parliament Bldgs., Toronto	Mimico
O'Reilly, T. E.	320 Bay St., Ottawa	Carleton County
Ottawa Brick & Terra Cotta Co. Ltd.	Box 131, Billings Bridge	Carleton County
Owen Sound Brick Co. Ltd. (c)	Owen Sound	Owen Sound
Paxton, Fred R.	St. Catharines	St. Catharines
Phinn, Geo. A.	St. James Park, London	Middlesex County
Phippen & Son	390 Dawes Road, Coleman	E. York Tp.
Richardson, J. & Son	Kerwood	Kerwood
Rollins, D. W.	R.R. 4, Belleville	Thurlow Tp.
Seegmiller Brick and Tile Company	525 Wendell Ave., Kitchener	Kitchener
Snelgrove, A., Estate of	Beaverton	Beaverton
Sproat & Sproat	R.R. 4, Seaforth	Tuckersmith Tp.
Standard Brick Co.	500 Greenwood Ave., Toronto	Toronto
Superior Brick & Tile Co. Ltd.	Fort William	Paipoonge Tp.
Thomson, Ralph	R.R. 4, Atwood	S. Grey Tp.
Toronto Brick Co. Ltd.	897 Bay St., Toronto	Toronto, York Tp., Milton
Wagstaff Brick & Tile Co.	32 Simcoe St., Lindsay	Victoria County
Wallace, Kenneth	92 First Ave. E., North Bay	Widdifield Tp.
Wein, Aaron	Crediton	Huron County
Weitzel Bros.	R.R. 1, Tavistock	Zora Tp.
Wright, Geo., & Sons	Box 56, Comber	Comber
MANITOBA -		
Alsip Brick, Tile & Lumber Co. Ltd.	537 Portage Ave., Winnipeg	Winnipeg
Snyder Brick Yards Ltd.	Portage la Prairie	Portage la Prairie
Spencer and Sons (b)	R.R. 1, Morden	Morden
Wardrop, D. M.	Whitemouth	Whitemouth
Western Clay Products Ltd.	507 Somerset Bldg., Winnipeg	Edrans
SASKATCHEWAN -		
Alberta Clay Products Co. Ltd.(a)	Medicine Hat, Alberta	Willows, Ravenscrag and Eastend
Bruno Clay Works Ltd.	Saskatoon	Bruno

LIST OF OPERATORS SHIPPING BRICK, TILE, SEWER PIPE, etc., MADE FROM DOMESTIC CLAYS, 1939 (Concluded)

Name of Firm	Head Office Address	Plant Location
SASKATCHEWAN (Concluded)		
Dominion Fire Brick and Clay Products Ltd. (a)	Box 99, Moose Jaw	Claybank
International Clay Products Ltd.	Box 399, Estevan	Estevan, Readlyn, Knollys and Prince Albert
Midland, H.	Perona, Mont., U.S.A.	Willow Bunch
Medalta Potteries Ltd.	366 .. 7th Ave. W., Calgary, Alta.	Willows
ALBERTA -		
Aetna Coal Co. (b)	East Coulee	Tp.23 Rge.19 W4th
Acme Brick Co. Ltd.	125 Alberta Block, Edmonton	Cannell
Alberta Clay Products Co. Ltd.	Box 672, Medicine Hat	Medicine Hat, Dunmore (a)
Gunderson Brick & Coal Co. Ltd.	Redcliff	Redcliff
Kidd, Gordon L. (b)	Box 230, Drumheller	Sec.14-29-20 W.4
Little, J. B., & Sons Ltd.	9120 .. 100th Ave., Edmonton	Edmonton
Medicine Hat Brick & Tile Co. Ltd.	Box 1,000, Medicine Hat	Medicine Hat
Redcliff Pressed Brick Co. Ltd.(a)	Box 87, Redcliff	Redcliff
Redcliff Premier Brick Co. Ltd.	Redcliff	Redcliff
BRITISH COLUMBIA -		
Baker Brick & Tile Co. Ltd.	3191 Douglas St., Victoria	Victoria
Clayburn Co. Ltd. (a)	850 W. Hastings St., Vancouver	Kilgard
Champion and White Ltd.	1075 Main St., Vancouver	Bazan Bay Road
Fairey & Company (a)	661 Taylor St., Vancouver	Williams Lake
Gabriola Shale Products Ltd.	1304 Broad St., Victoria	Gabriola Island
Gorse, Percy A.	Salmon Arm	Enderby
Haug, Wm., & Son	Box 220, Kelowna	Kelowna
Port Haney Brick Co. Ltd.	846 Howe St., Vancouver	Haney
Richmond, Geo. W., & Co. (a)	2635 W. 15th Ave., Vancouver	Kilgard
Vancouver Brick & Tile Ltd.	Ft. Columbia Ave., Vancouver	New Westminster, Sullivan

(a) Includes production of refractories.
(b) Produces bentonite.
(c) No production reported in 1939.

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CANADIAN PRODUCERS OF STONEWARE AND POTTERY FROM DOMESTIC CLAYS, 1939

Name of Firm	Head Office Address	Plant Location
NEW BRUNSWICK -		
The Foley Pottery Ltd. (a)	Saint John	Saint John, Middle Musquodoboit
ONTARIO -		
Ferguson, A. W.	95 Rectory St., London	London
The Foster Pottery Co.	Main St. W., Hamilton	Hamilton
Maple Leaf Potteries	601 Merton St., Toronto	Toronto
McMaster Pottery	Dundas Co.	Wentworth Co.
ALBERTA -		
Alberta Clay Products Co.	Medicine Hat	Medicine Hat
Medalta Potteries Ltd.	336 .. 7th Ave. W., Calgary	Medicine Hat
SASKATCHEWAN -		
Canadian Claycraft Co.	1301 Main St., Saskatoon	Saskatoon
BRITISH COLUMBIA -		
Baker Brick & Tile Co. Ltd.	3191 Douglas St., Victoria	Victoria
B. C. Clay Products Co.	3439 Euclid Ave., Vancouver	Vancouver

(a) Includes production of refractories.

II. - PRODUCTS FROM IMPORTED CLAYS, 1939

This industry covers the operations of Canadian plants which were occupied chiefly in making ceramic products from imported clays. Products made in these plants during 1939 included high tension insulators, vitreous china sanitary ware, china dinnerware, firebrick, sewer pipe, floor and wall tile, refractory cements, electrical porcelains, etc.

Twenty plants reported in this group for 1939 and their output was valued at $2,971,979, against last year's total of $3,048,888 and the 1937 figure of $3,599,181. Capital employed amounted to $4,661,821. The average number of workers was 1,097 and payments for salaries and wages totalled $1,150,712. Fuel and electricity cost $237,718 and materials for use in manufacturing processes cost $792,767.

Table 31 - PRINCIPAL STATISTICS OF THE IMPORTED CLAY PRODUCTS INDUSTRY, 1938 and 1939

		1938	1939
Number of plants		21	20
Capital employed	$	4,690,306	4,661,821
Average number of employees		1,163	1,097
Salaries and wages	$	1,194,509	1,150,712
Cost of fuel and electricity	$	229,517	237,718
Cost of materials at works	$	795,956	792,767
Gross selling value of products at works	$	3,048,888	2,971,979

NOTE - Profits or losses cannot be calculated from above figures as data are not available for general expense items such as interest, rent, depreciation, taxes, insurance, advertising, etc.

Table 32 - CAPITAL EMPLOYED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, BY PROVINCES, 1938 and 1939

Province	Present value of land, buildings, machinery and tools	Inventory value of materials and finished products on hand and stocks in process	Operating capital (cash bills and accounts receivable, etc.)	TOTAL CAPITAL EMPLOYED
	$	$	$	$
1938				
Ontario	1,630,019	675,969	757,621	3,063,609
Quebec, Saskatchewan	1,159,749	353,186	113,762	1,626,697
CANADA	2,789,768	1,029,155	871,383	4,690,306
1939				
Ontario	1,664,201	662,960	670,100	2,997,261
Quebec, Saskatchewan	1,127,212	243,679	293,669	1,664,560
CANADA	2,791,413	906,639	963,769	4,661,821

Table 33 - EMPLOYEES, SALARIES AND WAGES IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, BY PROVINCES, 1938 and 1939

Province	Average Number of Employees					Salaries	Wages	TOTAL SALARIES and WAGES
	On Salaries		On Wages		TOTAL			
	Male	Female	Male	Female				
						$	$	$
1938								
Ontario	88	36	620	167	911	226,428	664,991	891,419
Quebec, Saskatchewan	29	9	205	9	252	76,691	226,399	303,090
CANADA	117	45	825	176	1,163	303,119	891,390	1,194,509
1939								
Ontario	84	36	577	160	857	225,173	652,765	877,938
Quebec, Saskatchewan	31	7	193	9	240	70,817	201,957	272,774
CANADA	115	43	770	169	1,097	295,990	854,722	1,150,712

Table 34 - WAGE-EARNERS, BY MONTHS, IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1938 and 1939 (On the last working day of each month)

Month	1938			1939		
	Male	Female	TOTAL	Male	Female	TOTAL
January	822	176	998	767	149	916
February	793	178	971	745	147	892
March	814	175	989	730	151	881
April	820	174	994	754	150	904
May	849	192	1,041	757	164	921
June	853	184	1,037	762	168	930
July	835	166	1,001	749	164	913
August	823	173	996	752	169	921
September	816	176	992	783	181	964
October	833	179	1,012	810	188	998
November	847	191	1,038	838	197	1,035
December	819	159	978	830	204	1,034
AVERAGE	825	176	1,001	770	169	939

Table 35 - FUEL AND ELECTRICITY USED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1938 and 1939

Kind	Unit of measure	1938 Quantity	1938 Cost at works	1939 Quantity	1939 Cost at works
			$		$
Coal, anthracite	short ton	6	91	7	109
Coal, bituminous - Canadian	short ton	504	2,881	574	3,287
Imported	short ton	17,830	123,462	18,291	126,037
Coke	short ton	818	6,994	1,040	8,320
Gasoline	Imp. gal.	8,870	1,971	7,692	1,770
Kerosene	Imp. gal.	685	104	130	17
Fuel oil	Imp. gal.	561,454	41,665	545,320	37,076
Wood	cord	85	454	38	224
Gas - Manufactured	M cu. ft.	303	273	341	305
Natural	M cu. ft.	36,332	25,704	45,194	36,233
Other fuel	xxx	...	157	...	...
Electricity purchased	K. W. H.	1,834,757	25,761	1,785,240	24,340
TOTAL	$	...	229,517	...	237,718
Electricity generated for own use	K. W. H.	661,700	...	660,800	...

Table 36 - POWER EQUIPMENT IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1938 and 1939

	1938 Number of units	1938 Total rated horse power	1939 Number of units	1939 Total rated horse power
Steam engines	3	465	3	465
Gasoline, gas and oil engines	1	40	1	40
Total Primary Equipment	4	505	4	505
Electric motors run by purchased power	427	2,039	462	2,135
TOTAL	431	2,544	466	2,640
Electric motors run by above primary units	24	284	33	365
Stationary boilers	16	1,149	15	1,128

Table 37 - MATERIALS USED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1938 and 1939

Material	1938 Short tons	1938 Total cost at works	1939 Short tons	1939 Total cost at works
		$		$
Imported clays - Ball clay	2,531	46,766	2,970	48,994
China clay	2,573	52,927	2,973	51,427
Fireclay	20,717	118,875	21,721	127,663
Saggar clay	462	4,376	453	4,909
Other imported clays	640	7,517	1,125	18,000
Canadian clays - Fireclay	202	1,879	192	1,722
Other clays	3,491	2,699	95	645
Feldspar	1,890	35,979	2,021	38,840
Silica and ground quartz	2,576	38,441	1,968	27,161
Talc	160	2,119	178	2,502
Other glazing materials	...	15,793	...	25,796
Insulator hardware	...	219,367	...	206,221
Shipping containers and packing materials	...	75,186	...	100,155
All other materials	...	174,032	...	138,732
TOTAL	...	795,956	...	792,767

Table 38 - PRODUCTS MADE IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1938 and 1939

Products	1938 Gross selling value at works	1939 Gross selling value at works
	$	$
Firebrick and stove linings - Rigid	271,711	403,893
Plastic	83,736	83,095
High temperature cements	36,040	36,280
High tension porcelain insulators, china sanitary ware, clay sewer pipe, floor and wall tile, pottery, china tableware, etc. ..... (Separate figures cannot be shown for these items as there were only one or two producers in each case)	2,657,401	2,448,711
TOTAL	3,048,888	2,971,979

NOTE - Clay firebrick, floor tile, sewer pipe and pottery are also made in Canada from domestic clays (See Tables 7 and 39). High temperature cements and refractory bricks are made also by concerns in other industries. (See Tables 39 and 40).

Table 39 - TOTAL PRODUCTION IN CANADA OF REFRACTORY SHAPES, 1929 - 1939

Year	From domestic clays: Fireclay blocks and shapes	Firebrick		Silica brick		Other (x): Rigid fire-brick and stove linings	TOTAL
	$	M	$	M	$	$	$
1929 ...	130,411	5,196	251,043	3,951	173,581	362,360	917,395
1930 ...	147,309	3,789	177,608	2,418	97,379	298,945	721,241
1931 ...	83,039	2,248	107,597	900	35,746	280,588	506,970
1932 ...	75,209	1,580	71,757	93	4,304	212,838	364,108
1933 ...	80,625	1,547	73,226	636	23,185	220,484	397,520
1934 ...	62,388	2,109	101,219	2,528	85,945	275,472	525,024
1935 ...	71,344	1,817	90,149	2,461	96,194	314,825	572,512
1936 ...	65,171	2,548	118,923	2,393	97,285	330,602	611,981
1937 ...	75,431	2,950	142,827	3,744	181,126	441,341	840,725
1938 ...	73,512	2,213	113,581	1,788	100,403	448,494	735,990
1939 ...	95,256	2,331	119,346	2,493	124,807	640,376	979,785

(x) Includes shapes made from imported clays, from magnesite, etc.

Table 40 - TOTAL PRODUCTION IN CANADA OF REFRACTORY CEMENTS AND PLASTICS, 1932-1939
(From all industries)

Year	Short tons	Selling value at works
		$
1932	...	118,402
1933	1,405	101,488
1934	2,119	142,290
1935	3,506	179,161
1936	3,784	212,607
1937	5,303	260,883
1938	7,155	377,687
1939	5,094	271,106

LIST OF FIRMS INCLUDED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1939

Names of Firms and Location of Plants	Products Made, 1939
Canada Firebrick Company Ltd., 4741 St. Ambroise St., Montreal, P.Q.	Firebrick
Canada Vitrified Products Limited, 675 Talbot St. E., St. Thomas, Ont.	Sewer pipe; flue linings
Canadian General Electric Co. Ltd., 262 Townsend St., Peterborough, Ont.	Porcelain sockets, plugs, etc.; moulded textolite; high tension insulators
Canadian Ohio Brass Company Ltd., Niagara Falls, Ont.	High tension insulators
Canadian Porcelain Company Ltd., Paradise Road, Hamilton, Ont.	High tension insulators
Canadian Potteries Ltd., St. Johns, P.Q.	Vitreous china sanitaryware
Dominion Fire Brick & Clay Products Ltd., Moose Jaw, Sask.	Firebrick; high temperature cements
Frontenac Floor and Wall Tile Co. Ltd., Kingston, Ont.	Floor and wall tile; ground feldspar; porcelain balls, etc.
Georgetown Clay Products, Ltd., Georgetown, Ont.	Firebrick
Green, A. P., Fire Brick Co. Ltd., Leaside, Ont.	Plastic firebrick; high temperature cements
Hamilton Potteries Limited, 100 Locke St. S., Hamilton, Ont.	Porcelain sockets, plugs, etc.; firebrick, porcelain dies
National Refractories Limited, Port Robinson, Ont.	Firebrick
Ontario Refractories Limited, Fort Erie, Ont.	Firebrick
Plibrico Jointless Firebrick, Ltd., Lake Shore Rd., New Toronto, Ont.	Plastic firebrick; high temperature cements; stove lining
Robinson Clay Product Co. of Canada, Ltd., 127 Shaftesbury Ave., Toronto, Ont.	High temperature cements
Smith Potteries (Estate of), 353 King St. W., Oshawa, Ont.	Art pottery

LIST OF FIRMS INCLUDED IN THE IMPORTED-CLAY PRODUCTS INDUSTRY, 1939
(Concluded)

Names of Firms and Location of Plants	Products Made, 1939
Sovereign Potters, Ltd., 282 Sherman St. N., Hamilton, Ont.	China dinnerware
Standard Clay Products Ltd., St. Johns, P.Q.	Sewer pipes; firebrick
Turner, C. B., & Co. Reg'd., Mimico, Ont.	Plastic firebrick
Walker-Hind-Sutherland Refractories Ltd., 309 St. Ferdinand St., Montreal, P.Q.	Refractory cements; firebrick.

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