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CANADA

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

MINING, METALLURGICAL & CHEMICAL BRANCH

THE

PRIMARY IRON AND STEEL INDUSTRY

IN

CANADA

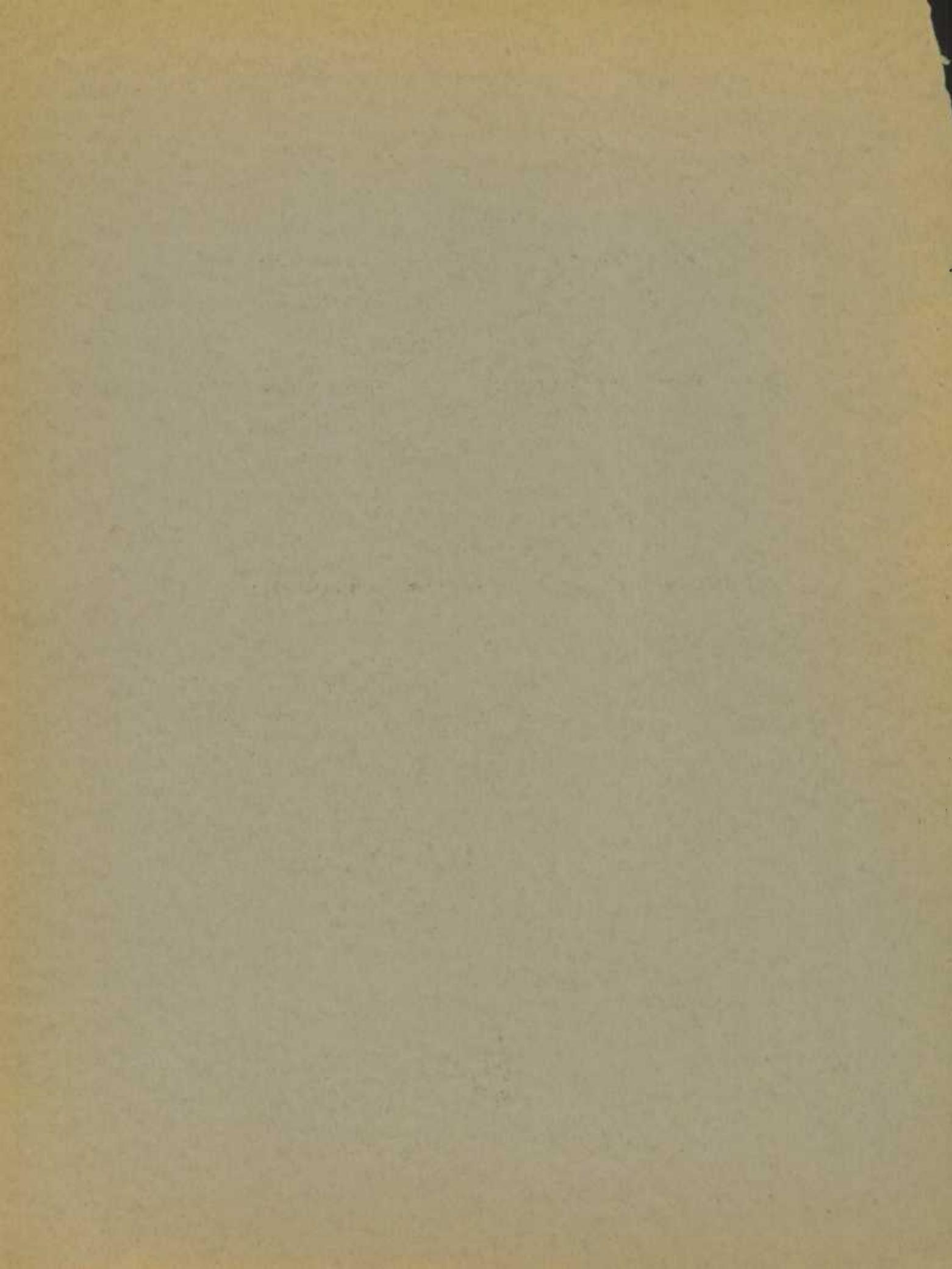
1938

(including pig iron, ferro-alloys, steel ingots
and direct steel castings, and rolled iron
and steel products.)



OTTAWA
1939

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ANNUAL INDUSTRY REPORT

IRON AND STEEL AND THEIR PRODUCTS GROUP

THE PRIMARY IRON AND STEEL INDUSTRY, 1938

Statistics for the Primary Iron and Steel Industry include data for all establishments in Canada which were engaged chiefly in the manufacture of (a) pig iron, (b) ferro-alloys, (c) steel ingots and steel castings, (d) hot rolled iron and steel products, (e) cold rolled or cold drawn steel bars, strips and shapes. Forty firms were included in this industry in 1938 and reports were received for 55 different plants or departments, including 4 blast furnace departments, 4 ferro-alloy plants, 31 steel furnace divisions, and 16 rolling or drawing mills. Separate reports were received for blast furnace departments, steel furnace divisions and rolling mills even when they were really units of a single works.

Factory sales of pig iron, ferro-alloys, steel ingots and castings, and finished rolled products were 21 per cent lower in 1938 than in 1937, the values being \$59,606,150 and \$74,580,669, respectively. The 25 works in Ontario reported sales at \$38,116,667, or 64 per cent of the total for Canada; 6 plants or departments in Nova Scotia accounted for \$11,183,267, or 19 per cent, and 14 works in Quebec for \$8,418,130 or 14 per cent. There were also 4 operating plants in Manitoba, 1 in Alberta, and 5 in British Columbia.

Capital employed in 1938 amounted to \$100,272,104, including \$65,986,098 as the value of land, buildings and plant equipment, \$23,814,192 as the value of inventories of raw and finished materials on hand and in process, and \$10,471,814 as the total of operating capital such as cash, bills and accounts receivable, etc.. For works in Ontario the capital was \$66,698,135; for Nova Scotia, \$18,746,845; for Quebec, \$12,683,812; for Manitoba, \$1,818,738, and for Alberta and British Columbia, \$324,574.

The average number of employees in 1938 was 13,100, a decrease of 7 per cent from the 1937 average of 14,054. About 889 persons worked in the blast furnace departments in 1938, 295 in ferro-alloy plants, 4,609 in steel furnace divisions, and 7,307 in rolling mills. About 61 per cent of the total, or 7,960 were employed in Ontario, 2,425 in Quebec, 2,222 in Nova Scotia, 371 in Manitoba and 122 in Alberta and British Columbia.

Payments in salaries and wages amounted to \$18,256,627 in 1938, a drop of 8 per cent from the 1937 total of \$19,926,498. Salaries increased to \$2,844,190 from \$2,643,902 and wages paid totalled \$15,412,437 compared with \$17,282,596 paid in 1937.

The cost of manufacturing materials was \$24,786,761 in 1938 compared with \$33,805,631 in 1937, and the cost of fuel and electricity was \$5,529,833 against \$6,934,008, a decrease of 27 per cent for materials and 20 per cent for fuel and power.

PIG IRON -

The output of pig iron in 1938 amounted to 705,427 long tons, a decrease of 22 per cent from the 1937 total of 895,855 tons. Production of basic iron was given at 557,578 tons or 79 per cent of the total; malleable iron amounted to 66,761 tons and the foundry grade to 81,088 tons.

Producers' sales of pig iron in 1938 totalled 129,565 long tons valued at \$2,961,639 compared with 225,716 tons at \$5,146,017, a decrease of 43 per cent in quantity and 42 per cent in value.

Imports of pig iron during the calendar year declined to 2,122 long tons from 6,371 tons in 1937 and exports dropped to 10,546 tons from 38,516 tons.

Stocks held by the producers increased to 127,909 tons at the end of 1938 from 112,287 tons at the close of the previous year.

The apparent consumption of pig iron in Canada during 1938, as computed by deducting the exports from the sum of production and imports and allowing for the change in producers' stocks, amounted to 681,781 tons compared with 831,252 tons in 1937 and 678,804 tons in 1936.

Charges to iron blast furnaces during 1938 included 1,234,433 long tons of iron ore, 697,615 short tons of coke, 345,182 short tons of limestone, 66,614 long tons of mill cinder, etc., and 19,123 long tons of scrap.

The four producers of pig iron in Canada have 10 blast furnaces available for use which, if operated at the rated capacity, could produce 1.45 million tons of pig iron per year. Actual production in 1938 at 705,427 tons was about 49 per cent of capacity. Only 6 blast furnaces were used during the year.

FERRO-ALLOYS -

Production of ferro-alloys of all kinds in 1938 amounted to 55,926 long tons compared with 82,072 tons in 1937 and 76,284 tons in 1936.

Ferrosilicon was made by 9 different concerns of which 5 recovered small tonnages as a by-product in the manufacture of fused alumina and 4 made various commercial grades as a primary part of their operations. The total quantity made, all grades, in 1938, was 20,705 long tons with silicon content of 7,612 tons.

Spiegeleisen was made by two companies, ferromanganese by one company only, ferrochrome by two concerns, and ferrophosphorus by only one concern.

STEEL INGOTS AND STEEL CASTINGS -

Steel production declined 18 per cent to 1,155,190 long tons in 1938 from 1,402,822 tons in the previous year, the output of ingots decreasing to 1,103,094 tons from 1,336,228 tons and the production of castings dropping to 52,096 tons from 66,654 tons. Practically all of the ingots were transferred to the producers' rolling mills while most of the castings were made for sale. The factory sales of ingots and castings totalled 43,086 long tons valued at \$7,780,163 compared with 64,907 tons at \$10,616,508 in 1937.

The 31 steel plants which were in operation during 1938 operated 86 furnaces of which 40 were basic open hearth with total rated annual capacity of 1,734,500 long tons, 43 were electric furnaces with total capacity of 252,900 tons, and 3 were converters with total capacity of 2,600 tons. Two steel plants were idle during the year, 1 electric furnace in Ontario and 1 basic open hearth furnace in Alberta, with a combined capacity of about 40,000 tons per year. Steel ingots were made in 9 establishments; 4 made basic open hearth ingots only, 3 made electric ingots only, and 2 made both basic open hearth ingots and electric ingots. Steel castings were made in 27 works; 3 made basic open hearth castings only, 15 made electric castings only, 2 made converter castings only, 3 made both open hearth and electric castings, and 1 made both converter and electric castings.

Steel furnaces in operation in 1938 used 566,893 long tons of pig iron, 667,268 long tons of scrap, 19,286 long tons of ferro-alloys, 74,574 long tons of ore, 106,881 short tons of limestone, 7,128 short tons of fluorspar, 40,540 short tons of dolomite, and 9,219 short tons of magnesite.

ROLLED AND DRAWN STEEL -

In 1938 there were 13 hot rolling mills in operation, 1 cold rolling plant and 2 making cold drawn shapes. Nine of these mills were in Ontario, 3 in Quebec, 3 in Nova Scotia, and 1 in Manitoba. One rolling mill in Ontario and 1 in Alberta were idle throughout 1937.

The value of sales from these works amounted to \$46,050,787 in 1938, a decrease of 15 per cent from the corresponding total of \$54,216,950 for 1937. The main items were - hot rolled bars, 192,705 long tons at \$12,295,300; plates, sheets and strips, 173,746 tons at \$13,050,401; rails and rail fastenings, 131,446 tons at \$6,428,732; semi-finished rolled forms, 110,393 tons at \$4,017,170; structural steel, 60,473 tons at \$3,589,905; wire rods, 69,245 tons at \$3,075,006; cold rolled and cold drawn bars, 10,892 tons at \$1,133,816; and miscellaneous products (not rolled), \$2,202,765.

The net amount of rolled forms produced in 1938 was 842,854 long tons, including 954 tons of iron and 841,900 tons of steel.

Imports of rolling mill products were valued at \$25,470,444 in 1938 compared with \$44,792,419 in 1937. Shipments from the United Kingdom were worth \$9,037,346, and purchases from the United States were appraised at \$15,327,938.

Table 1 - PROVINCIAL DISTRIBUTION OF ACTIVE PLANTS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1938.

Province	No. of firms	PIG	IRON	STEEL	INGOTS	and CASTINGS	Rolling	
		No. of plants	No. of blast furnaces	No. of plants	No. of steel furnaces	and Drawing	Mills	Ferro-alloys (a)
Nova Scotia	4	1	3	2	13		3	...
Quebec	13	...	...	10	17		3	1
Ontario	16	3	7	10	41		9	3
Manitoba	3	...	...	3	4		1	...
Alberta	1	...	...	1	1		...	...
British Columbia ..	5	...	...	5	9		...	...
CANADA	40(b)	4	10	31	86		16	4

(a) Not including artificial abrasive plants which made ferrosilicons as a by-product.

(b) Some firms operate in more than one province.

Table 2 - PRINCIPAL STATISTICS OF THE PRIMARY IRON AND STEEL INDUSTRY, 1929 - 1935.

Years	No. of plants	Capital employed	Average number of employees	Salaries and Wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
		\$		\$	\$	\$	\$
1929	45	109,446,529	11,218	18,534,681	6,691,961	32,514,596	72,231,995
1930	49	112,079,926	9,723	14,934,325	5,182,136	22,765,648	52,588,935
1931	53	104,512,104	8,026	11,072,054	3,757,243	15,291,414	36,911,245
1932	52	96,323,629	4,847	6,131,057	2,367,122	6,289,483	16,197,526
1933	50	96,444,846	5,200	6,049,189	2,699,837	7,598,931	18,492,549
1934	51	90,079,004	7,400	9,009,512	3,969,136	12,673,398	29,101,463
1935	53	86,465,490	9,523	12,279,390	4,845,559	18,539,072	38,700,961
1936	55	92,103,774	11,138	13,830,377	5,440,129	21,424,052	46,636,892
1937	55	96,875,377	14,054	19,926,498	6,934,008	33,805,631	74,580,669
1938 -							
Nova Scotia	6	18,746,845	2,222	2,901,124	1,227,470	5,708,404	11,183,267
Quebec	14	12,683,812	2,425	2,943,864	755,121	3,181,820	8,418,130
Ontario	25	66,698,135	7,960	11,756,505	3,353,829	15,380,617	38,116,667
Manitoba	4	1,818,738	371	482,560	161,308	395,185	1,473,903
Alberta	1)	324,574	122	172,574	32,105	120,735	414,183
British Columbia ..	5)						
CANADA	55	100,272,104	13,100	18,256,627	5,529,833	24,786,761	59,606,150

Table 3 - CAPITAL EMPLOYED, BY PROVINCES, 1937 and 1938.

Province	Number of plants	Present value of lands, buildings, machinery, tools and other equipment	Inventory value of materials on hand, stocks in process, fuel and finished products on hand	Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	TOTAL CAPITAL EMPLOYED
		\$	\$	\$	\$
<u>1937</u>					
Nova Scotia	6	14,854,893	4,621,230	1,861,129	21,337,252
Quebec	14	8,756,059	2,780,288	1,666,205	13,202,552
Ontario	25	41,320,578	12,977,537	5,661,348	59,959,463
Manitoba	4	764,603	916,885	350,706	2,032,194
Alberta	1)	199,881	81,906	62,129	343,916
British Columbia	5)				
CANADA	55	65,896,014	21,377,846	9,601,517	96,875,377
<u>1938</u>					
Nova Scotia	6	8,881,410	7,975,892	1,889,543	18,746,845
Quebec	14	8,964,523	2,571,514	1,147,775	12,683,812
Ontario	25	47,217,252	12,585,025	6,895,858	66,698,135
Manitoba	4	740,312	608,209	470,217	1,818,738
Alberta	1)	182,601	73,552	68,421	324,574
British Columbia	5)				
CANADA	55	65,986,098	23,814,192	10,471,814	100,272,104

Table 4 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1937 and 1938.

Province	Average number of employees				TOTAL EMPLOYEES	Salaries	Wages	TOTAL SALARIES AND WAGES
	On salaries		On wages					
	Male	Female	Male	Female		\$	\$	\$
<u>1937</u>								
Nova Scotia	51	5	2,240	20	2,316	140,645	3,202,075	3,342,720
Quebec	225	52	2,582	7	2,866	562,275	3,028,447	3,590,722
Ontario	548	151	7,646	15	8,360	1,805,680	10,518,290	12,323,970
Manitoba	27	4	355	1	387	102,304	405,321	507,625
Alberta and British Columbia ..	19	2	104	...	125	32,998	128,463	161,461
CANADA	870	214	12,927	43	14,054	2,643,902	17,282,596	19,926,498
<u>1938</u>								
Nova Scotia	55	5	2,138	24	2,222	136,770	2,764,354	2,901,124
Quebec	222	50	2,145	8	2,425	580,804	2,363,060	2,943,864
Ontario	572	140	7,220	28	7,960	1,973,271	9,783,234	11,756,505
Manitoba	30	3	337	1	371	115,747	366,813	482,560
Alberta and British Columbia ..	21	2	99	...	122	37,598	134,976	172,574
CANADA	900	200	11,939	61	13,100	2,844,190	15,412,437	18,256,627

Table 5 - WAGE-EARNERS, BY MONTHS, 1937 and 1938.

Month	1937			1938		
	Male	Female	TOTAL	Male	Female	TOTAL
January	11,040	36	11,076	12,510	58	12,568
February	11,673	36	11,709	12,120	66	12,186
March	12,476	37	12,513	12,783	66	12,849
April	13,212	37	13,249	12,810	67	12,877
May	13,426	37	13,463	13,088	63	13,151
June	13,692	43	13,735	12,609	65	12,674
July	14,117	45	14,162	12,467	61	12,528
August	13,791	50	13,841	11,336	59	11,395
September	13,549	47	13,596	11,124	58	11,182
October	13,132	46	13,178	10,606	57	10,663
November	12,737	50	12,787	10,666	55	10,721
December	12,265	55	12,320	11,138	56	11,194
AVERAGE	12,927	43	12,970	11,939	61	12,000

Table 6 - FUEL AND ELECTRICITY USED, 1937 and 1938.

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
Bituminous coal - Canadian	short ton	214,058	\$ 870,282	193,480	\$ 806,731
Imported	short ton	148,569	737,165	54,659	276,261
Anthracite coal	short ton	73	539	1,750	9,925
Coke (for fuel only)	short ton	65,967	161,141	38,886	109,206
Gasoline	Imp. gal.	87,943	16,467	82,733	16,361
Kerosene or coal oil	Imp. gal.	5,349	961	6,490	1,059
Fuel oil	Imp. gal.	19,702,096	1,183,349	20,538,040	1,091,730
Wood	cord	539	3,079	461	2,700
Gas - Manufactured (x)	M cu. ft.	36,159,341	1,613,567	30,162,764	1,433,225
Natural	M cu. ft.	16,218	8,523	12,744	6,747
Other fuel	\$	...	51,174	...	13,781
Electricity purchased	K. W. H.	566,962,288	2,287,761	376,888,956	1,762,107
TOTAL	\$	...	6,934,008	...	5,529,833
Electricity generated for own use	K. W. H.	6,338,000	...	22,297,961	...

(x) Includes blast furnace gas and coke-oven gas which was used in iron and steel departments.

Table 7 - POWER EQUIPMENT, 1938.

Kinds	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Steam engines and steam turbines	60	47,136	32	6,743
Gasoline, gas and oil engines	11	18,760	2	850
Hydraulic turbines or water wheels	4	1,300	...	...
Total Primary	75	67,196	34	7,593
Electric motors operated by purchased power	3,422	153,221	64	3,138
TOTAL	3,497	220,417	98	10,731
Electric motors operated by power generated by above primary units	1,252	46,874	29	1,412
Total Electric Motors	4,674	200,095	93	4,550
Boilers	117	46,159	2	500

(a) PIG IRON

Table 8 - MATERIALS CHARGED TO IRON BLAST FURNACES, 1937 and 1938.

Materials	Unit of measure	1937		1938	
		Quantity	Cost at furnace	Quantity	Cost at furnace
Foreign iron ore	long ton	1,604,073	\$ 5,372,263	1,234,433	\$ 4,368,325
Mill cinder, roll scales, flue dust, etc.	long ton	119,910	376,162	66,614	153,689
Scrap (net charge)	long ton	16,467	159,825	19,123	175,648
Limestone					
From Canadian quarries	short ton	162,531	207,264	123,078	161,962
From foreign sources	short ton	308,018	284,302	222,104	195,165
Coke	short ton	890,384	4,858,455	697,615	3,914,413
Other materials	\$	...	41,093	...	62,774
TOTAL	\$	...	11,299,364	...	9,031,976

Table 9 - PRODUCTION OF PIG IRON AND SALES BY THE PRODUCERS, 1937 and 1938.

Grades	Total tonnage made	S A L E S	
		Quantity	Income from sales
	Long tons	Long tons	\$
1937			
Basic	721,711	60,945	1,366,695
Foundry	105,409	98,181	2,270,774
Malleable	71,735	66,590	1,508,548
TOTAL	898,855	225,716	5,146,017
1938			
Basic	557,578	26,501	604,790
Foundry	81,088	62,492	1,419,826
Malleable	66,761	40,572	937,023
TOTAL	705,427	129,565	2,961,639

Table 10 - PRODUCTION OF PIG IRON, BY GRADES, 1929 - 1938.

(Long tons)

Years	Basic	Foundry	Malleable	TOTAL
1929	770,478	221,644	88,038	1,080,160
1930	494,231	193,074	59,873	747,178
1931	311,850	80,892	27,296	420,038
1932	105,058	25,246	13,826	144,130
1933	189,428	22,333	15,556	227,317
1934	310,631	50,923	43,441	404,995
1935	468,244	62,294	69,337	599,875
1936	530,929	85,043	62,259	678,231
1937	721,711	105,409	71,735	898,855
1938	557,578	81,088	66,761	705,427

Table 11 - PRODUCTION OF PIG IRON, BY PROVINCES, 1929 - 1938.

(Long tons)

Years	Nova Scotia	Ontario	TOTAL
1929	310,801	769,359	1,080,160
1930	212,636	534,542	747,178
1931	101,393	318,645	420,038
1932	30,697	113,433	144,130
1933	118,514	108,803	227,317
1934	133,360	271,635	404,995
1935	208,002	391,873	599,875
1936	257,148	421,083	678,231
1937	320,318	578,537	898,855
1938	241,856	463,571	705,427

Table 12 - PRODUCTION OF PIG IRON, BY MONTHS, 1934 - 1938.

(Long tons)

Months	1 9 3 4	1 9 3 5	1 9 3 6	1 9 3 7	1 9 3 8
January	30,677	44,416	61,336	66,400	74,862
February	12,199	37,259	55,751	61,995	61,447
March	12,101	44,727	54,009	70,986	66,228
April	27,355	43,388	54,045	68,138	65,644
May	38,189	45,432	58,832	78,147	71,602
June	37,306	44,555	56,362	78,278	64,375
July	36,759	50,513	34,988	79,736	51,238
August	41,485	54,414	38,570	74,578	49,477
September	43,019	54,360	51,892	76,150	49,972
October	46,573	45,521	70,051	80,922	50,657
November	38,968	64,562	74,337	81,463	46,216
December	40,364	70,728	68,058	82,032	53,709
TOTAL	404,995	599,875	678,231	898,855	705,427

Table 13 - PRODUCTION OF PIG IRON, BY GRADES AND BY METHOD OF CASTING OR DELIVERY, 1937 and 1938.
(Long tons)

Grades	Delivered in molten condition	Machine cast	TOTAL
1937			
Basic	589,031	132,680	721,711
Foundry .....	...	105,409	105,409
Malleable .....	...	71,735	71,735
TOTAL	589,031	309,824	898,855
1938			
Basic	480,415	77,163	557,578
Foundry .....	...	81,088	81,088
Malleable .....	...	66,761	66,761
TOTAL	480,415	225,012	705,427

Table 14 - SALES OF PIG IRON BY THE PRODUCERS, 1929 - 1938. (Long tons)

Years	Tonnage sold	Income from sales	Years	Tonnage sold	Income from sales
		\$			\$
1929	324,759	6,544,645	1934	97,440	1,856,284
1930	215,304	4,123,562	1935	131,749	2,650,990
1931	139,620	2,613,511	1936	168,054	3,327,716
1932	55,440	1,028,532	1937	225,716	5,146,017
1933	76,507	1,402,903	1938	129,565	2,961,639

Table 15 - IRON ORE, FUEL AND FLUX CHARGED TO IRON BLAST FURNACES, 1929 - 1938.

Years	Imported iron ore	Mill cinder, scale, etc.	Scrap	Coke	Limestone
	Long tons	Long tons	Long tons	Short tons	Short tons
1929	1,924,579	120,779	61,955	1,171,171	559,032
1930	1,328,929	94,766	35,909	796,040	401,688
1931	745,951	56,525	16,272	448,845	224,786
1932	253,337	16,297	4,145	155,932	77,086
1933	400,290	17,992	10,879	247,974	132,235
1934	718,237	37,043	12,461	415,462	209,104
1935	1,039,234	55,269	30,714	577,355	278,469
1936	1,218,823	49,091	20,386	672,210	345,622
1937	1,604,073	119,910	16,467	890,384	470,549
1938	1,234,433	66,614	19,123	697,615	345,182

Table 16 - IMPORTS INTO CANADA and EXPORTS OF PIG IRON, 1929 - 1938.

Years	I M P O R T S		E X P O R T S	
	Long tons	\$	Long tons	\$
1929	32,548	624,891	7,478	151,967
1930	13,643	270,157	593	12,653
1931	7,912	148,951	2,787	55,183
1932	4,753	78,845	2,029	38,816
1933	2,459	43,298	11,903	214,195
1934	6,419	108,300	9,221	176,093
1935	8,920	143,726	13,759	287,396
1936	3,960	74,589	13,904	304,682
1937	6,371	144,354	38,516	851,701
1938	2,122	62,494	10,546	224,261

Table 17 - STOCKS OF PIG IRON HELD BY PRODUCERS IN CANADA, 1931 - 1938.

Years	Long tons	Years	Long tons
1931	128,222	1935	87,346
1932	113,739	1936	76,329
1933	109,507	1937	112,287
1934	65,537	1938	127,909

Table 18 - APPARENT CONSUMPTION OF PIG IRON IN CANADA, 1929 - 1938. (Long tons)

Years	Production	Add Imports	Deduct Exports	Add or deduct changes in stock	Apparent Consumption
1929	1,080,160	32,548	7,478	not available	1,105,230
1930	747,178	13,643	593	available	760,228
1931	420,038	7,912	2,787		425,163
1932	144,130	4,753	2,029	+ 14,483	161,337
1933	227,317	2,459	11,903	+ 4,232	222,105
1934	404,995	6,419	9,221	+ 43,870	446,059
1935	599,875	8,920	13,759	- 21,709	573,327
1936	678,231	3,960	13,904	+ 10,517	678,804
1937	898,855	6,371	38,516	- 35,458	831,252
1938	705,427	2,122	10,546	- 15,622	681,381

Table 19 - CONSUMPTION OF PIG IRON IN CANADA, BY INDUSTRIES AND BY PROVINCES, 1934 - 1937.
(As reported by consumers)

	1934	1935	1936	1937
(Long tons)				
(a) By Industries				
Steel ingots and castings	352,346	446,271	522,243	667,631
Castings and forgings	52,938	50,670	49,167	72,072
Boilers, tanks and engines	6,579	8,947	10,331	9,974
Agricultural implements	6,750	13,705	16,194	23,238
Machinery	6,608	8,070	9,969	15,066
Automobiles		(Not available)		
Automobile parts	4,105	5,634	6,517	5,991
Railway rolling stock	13,530	12,772	16,362	21,921
Brass and copper products	917	1,498	1,022	1,580
Shipbuilding	...	...	...	126
Hardware and tools	1,418	1,491	2,901	2,781
Miscellaneous iron and steel	242	314	383	437
Heating and cooking apparatus	(a)	14,596	18,721	19,493
Electrical apparatus and supplies	876	1,921	1,496	2,507
TOTAL	446,309	565,889	655,296	842,817
(b) By Provinces				
Prince Edward Island	30	32	30	35
Nova Scotia	171,680	206,717	254,934	296,289
New Brunswick	1,926	1,953	3,073	2,402
Quebec	17,733	19,897	23,479	36,370
Ontario	253,255	335,182	371,241	504,859
Manitoba	880	1,192	1,478	1,632
Saskatchewan	...	...	...	50
Alberta	100	123	109	157
British Columbia	705	793	952	1,023
CANADA	446,309	565,889	655,296	842,817

(a) Included with castings and forgings.

Table 20 - BLAST FURNACES IN CANADA, 1938.

Names of Companies	Location of plants	Number of stacks	Total daily capacity (24 hours)	Number of days in blast		
				1936	1937	1938
Dominion Steel and Coal Corporation Ltd.	Sydney, N. S.	1	350	366	357	165
		1	300	92	...	...
		1	550	228	363	365
TOTAL		3	1,200	...	...	...
Canadian Furnace Company, Limited	Port Colborne, Ont.	1	350	224	245	193
The Steel Company of Canada, Limited	Hamilton, Ont. ...	1	275	165	365	365
		1	550	366	365	365
TOTAL		2	825	...	...	...
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ont.	1	300	...	...	...
		1	300	...	...	...
		1	450	230	365	290
		1	550	...	...	...
TOTAL		4	1,600	...	...	...
TOTAL FOR CANADA		10	3,975	...	...	...

Table 21 - WHOLESALE PRICES OF PIG IRON IN CANADA, BY MONTHS, 1937 and 1938.

Months	No. 1 foundry, base silicon 2.25 max., (price per gross ton, car lots, f.o.b. sellers' works)		Standard malleable base silicon 2.25 max., (price per gross ton, f.o.b. plant)		Basic silicon 1.30 max., (price per gross ton, f.o.b. plant)	
	1937		1938		1937	
	\$	\$	\$	\$	\$	\$
January	21.50	25.50	22.50	23.50	19.00	23.00
February	22.50	25.50	22.50	23.50	21.00	23.00
March	25.50	25.50	22.50	23.50	23.00	23.00
April	25.50	25.50	23.50	23.50	23.00	23.00
May	25.50	25.50	23.50	23.50	23.00	23.00
June	25.50	25.50	23.50	23.50	23.00	23.00
July	25.50	22.50	23.50	20.50	23.00	20.00
August	25.50	22.50	23.50	20.50	23.00	20.00
September	25.50	22.50	23.50	20.50	23.00	20.00
October	25.50	22.50	23.50	20.50	23.00	20.00
November	25.50	22.50	23.50	20.50	23.00	20.00
December	25.50	22.50	23.50	20.50	23.00	20.00
AVERAGE	24.92	24.00	23.25	22.00	22.50	21.50

(b) FERRO-ALLOYS

Table 22 - PRODUCTION OF FERRO-ALLOYS, 1927 - 1938.

Years	Long tons	Years	Long tons
1927	56,230	1933	30,133
1928	44,842	1934	31,921
1929	89,116	1935	56,616
1930	65,223	1936	76,284
1931	46,764	1937	82,072
1932	16,161	1938	55,926

Table 23 - PRODUCERS OF FERRO-ALLOYS IN CANADA, 1938.

Names of Companies	Plant locations	Ferro-alloys made
Abrasive Company of Canada, Limited	Hamilton, Ont.	Ferrosilicon
Canadian Carborundum Company, Limited	Niagara Falls, Ont.	Ferrosilicon
Canadian Furnace Limited	Port Colborne, Ont.	Spiegeleisen
Chromium Mining & Smelting Company of Canada, Limited	Sault Ste. Marie, Ont.	Ferrosilicon and ferrochrome
Electro Metallurgical Company of Canada, Limited	Welland, Ont.	Ferrosilicon, ferrochrome, ferromanganese, silico manganese, spiegeleisen and silico spiegeleisen
Electric Reduction Company of Canada, Limited	Buckingham, P. Q.	Ferrophoschorus
Exolon Company	Thorold, Ont.	Ferrosilicon
Lionite Abrasives Limited	Stamford, Ont.	Ferrosilicon
Norton Company	Chippawa, Ont.	Ferrosilicon
Shawinigan Chemicals Limited	Shawinigan Falls, P.Q.	Ferrosilicon
St. Lawrence Alloys Limited	Beauharnois, P.Q.	Ferrosilicon

Table 24 - IMPORTS INTO CANADA and EXPORTS OF FERRO-ALLOYS, 1937 and 1938.

Items	1937		1938	
	Long tons	\$	Long tons	\$
IMPORTS -				
Ferromanganese, spiegeleisen and other alloys of manganese and iron containing not more than 1 per cent, by weight of silicon	235	26,669	138	16,276
Silico-manganese, silico-spiegeleisen and other alloys of manganese and iron containing more than 1 per cent by weight, of silicon	40	3,609	60	5,305
Ferrosilicon, being an alloy of iron and silicon containing 8 per cent or more, by weight, of silicon and less than 60 per cent	11	611	5	166
Ferrosilicon, being an alloy of iron and silicon containing 90 per cent or more, by weight, of silicon ..	1	38	...	...
Other alloys used in the manufacture of iron or steel.	746	386,877	548	241,409
TOTAL	1,033	417,804	751	263,156
EXPORTS -				
Ferrosilicon	22,321	954,368	12,492	657,359
Ferromanganese and other ferro-alloys	21,074	1,081,711	16,866	648,549
TOTAL	43,395	2,036,079	29,358	1,305,908

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS

Table 25 - MATERIALS USED IN STEEL FURNACES, 1937 and 1938.

Materials	1937		1938	
	Quantity	Cost of purchased materials	Quantity	Cost of purchased materials
		Long tons	\$	Long tons
(a) Metals:				
Pig iron - Own make	633,034	...	555,048	...
Purchased	34,597	773,104	11,845	294,086
Sponge iron	132	7,183	...	...
Spiegeleisen	2,682	88,650	2,518	86,833
Ferromanganese	13,392	629,865	11,710	614,317
Ferrosilicon	6,562	297,912	3,789	195,271
Ferrochrome	867	167,531	739	116,639
Ferrotitanium		Not shown	76	14,547
Ferrotungsten		separately	30	69,806

Table 25 - MATERIALS USED IN STEEL FURNACES, 1937 and 1938 - (concluded)

Materials	1937		1938	
	Quantity	Cost of purchased materials	Quantity	Cost of purchased materials
	Long tons	\$	Long tons	\$
(a) Metals: (concluded)				
Ferrovanadium	26	52,483	11	25,324
Other ferro-alloys	832	275,555	...	83,406
Scrap iron and steel - Own make	327,606	...	254,073	...
Purchased	568,636	8,371,995	413,195	5,782,857
Metals for making alloy steels - Nickel	360	245,608	259	176,534
Other metals	517	193,478	...	214,113
(b) Ores:				
Crude iron ore, imported	86,169	434,120	74,137	462,773
Calcined, roasted, or treated ore, imported ..	85	837	81	774
Manganiferous ore, imported	332	4,949	104	1,300
Chrome ore, imported	579	20,602	252	8,440
(c) Other Materials:				
Limestone - Canadian	96,010	135,697	36,882	64,436
Foreign	29,912	24,733	69,999	59,039
Fluorspar	9,039	139,181	71,128	119,301
Dolomite	53,066	181,146	40,540	137,127
Magnesite	8,994	326,091	9,219	336,811
Coke	4,517	38,190	5,567	46,899
Anthracite coal	384	3,296	482	4,036
Bituminous coal	264	1,913	94	704
Charcoal	27,301	6,194	19,484	5,880
Electrodes .....	...	226,128	...	181,981
Moulding sands	35,224	192,714	34,342	182,211
Sand-blast sand	1,791	14,796	1,781	12,215
Firebrick and fireclay .....	...	638,326	...	521,436
Other materials .....	...	1,314,435	...	1,090,738
TOTAL VALUE OF METALS, ORES AND OTHER MATERIALS USED	...	14,806,712	...	10,909,834

Table 26 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS and SALES BY THE PRODUCERS, 1937 and 1938.

	1937			1938		
	Total tonnage of steel made (all kinds in- cluding alloys)	Quan- tity	SALES Income from sales	Total tonnage of steel made (all kinds in- cluding alloys)	Quan- tity	SALES Income from sales
	Long tons	Long tons	\$	Long tons	Long tons	\$
STEEL INGOTS:						
Basic open hearth	1,274,992	345	11,129	1,047,203	301	9,993
Electric	61,236	...	...	55,891	...	...
Total steel ingots	1,336,228	345	11,129	1,103,094	301	9,993
STEEL CASTINGS:						
Basic open hearth	23,827	21,433	3,376,154	15,525	14,507	2,488,384
Converter	1,016	1,043	222,310	759	780	168,694
Electric	41,811	42,986	7,206,915	35,812	27,498	5,113,092
Total steel castings	66,654	64,562	10,605,379	52,096	42,785	7,770,170
TOTAL STEEL INGOTS and CASTINGS	1,402,882	64,907	10,616,508	1,155,190	43,086	7,780,163
Any other products .....	...	...	11,726	...	...	404,177
TOTAL ALL PRODUCTS .....	...	...	10,628,234	...	...	8,184,340
Alloy steel included in above:						
Ingots	53,370	...	...	38,957	...	...
Castings	9,009	8,861	1,661,944	2,608	2,382	595,348
TOTAL	62,379	8,861	1,661,944	40,665	2,382	595,348

Table 27 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY GRADES, 1929 - 1938.

(Long tons)

Years	STEEL INGOTS		DIRECT STEEL CASTINGS			Total steel ingots and castings
	Open hearth	Electric	Open hearth	Con- verter	Electric	
1929	1,295,162	14,444	35,806	2,590	30,022	1,378,024
1930	925,427	30,051	24,772	2,314	27,014	1,009,578
1931	612,437	25,017	14,760	590	19,305	672,109
1932	308,700	19,670	2,616	846	7,514	339,346
1933	378,666	15,393	5,917	288	10,615	409,979
1934	713,227	23,891	6,457	507	13,700	757,782
1935	872,444	36,742	9,119	645	22,577	941,527
1936	1,037,713	43,836	10,208	575	23,447	1,115,779
1937	1,274,992	61,236	23,827	1,016	41,811	1,402,882
1938	1,047,203	55,891	15,525	759	35,812	1,155,190

Table 28 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY MONTHS, 1934 - 1938.

(Long tons)

Months	1934	1935	1936	1937	1938
January	60,787	59,526	100,225	115,237	112,380
February	57,999	56,006	93,365	111,823	98,980
March	72,923	57,840	101,092	125,104	118,676
April	70,363	68,530	107,220	121,426	116,445
May	71,437	72,811	94,602	120,843	114,859
June	64,013	73,450	82,196	118,744	109,401
July	66,647	86,101	68,793	122,968	83,927
August	63,504	82,488	80,164	126,695	82,781
September	57,489	90,952	86,077	114,622	73,556
October	57,975	95,016	98,330	114,527	76,256
November	57,050	94,074	98,534	110,688	90,120
December	57,595	104,733	105,181	100,205	77,809
TOTAL	757,782	941,527	1,115,779	1,402,882	1,155,190

Table 29 - ANNUAL PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY PROVINCES, 1929 - 1938.

(Long tons)

Years	Nova Scotia	Quebec	Ontario	Manitoba	Alberta	British Columbia	CANADA
1929	407,062	42,212	899,911	27,425	298	1,116	1,378,024
1930	296,552	45,171	639,128	19,121	8,377	1,229	1,009,578
1931	172,529	35,834	442,231	14,020	6,685	810	672,109
1932	68,630	19,010	243,047	6,412	1,880	367	339,346
1933	124,134	18,917	257,615	8,509	206	598	409,979
1934	260,825	27,744	457,497	9,912	388	1,416	757,782
1935	298,769	35,076	589,558	16,254	370	1,500	941,527
1936	379,018	39,792	675,887	19,199	272	1,611	1,115,779
1937	427,104	60,815	887,906	24,536	359	2,162	1,402,882
1938	338,479	48,742	746,951	18,086	374	2,558	1,155,190

Table 30 - SALES OF STEEL INGOTS AND STEEL CASTINGS, BY THE PRODUCERS, 1929 - 1938.

Years	Tonnage sold	Income from sales	Years	Tonnage sold	Income from sales		
						Long tons	\$
1929	61,981	10,283,460	1934	.....	20,139	3,228,451	
1930	48,563	8,013,707	1935	.....	35,392	4,196,922	
1931	30,831	5,143,495	1936	.....	28,030	4,788,296	
1932	11,543	1,913,157	1937	.....	64,907	10,616,508	
1933	14,934	2,365,171	1938	.....	43,086	7,780,163	

Table 31 - METAL, ORE AND FLUX CHARGED TO STEEL FURNACES, 1929 - 1938.

Years	Pig Iron	Ferro-manganese and spiegeleisen	Other ferro-alloys	Scrap iron and steel	Ore	Lime-stone	Fluorspar and dolomite
	Long tons	Long tons	Long tons	Long tons	Long tons	Short tons	Short tons
1929	761,878	11,769	6,189	736,275	95,059	154,238	29,794
1930	520,562	9,087	5,232	573,050	61,223	109,119	19,282
1931	328,063	6,339	3,442	401,450	32,529	74,524	20,742
1932	106,951	3,878	2,363	269,202	8,750	27,706	5,978
1933	156,962	4,157	3,182	308,326	18,151	34,532	9,823
1934	352,346	6,771	4,041	480,679	34,844	77,815	19,303
1935	446,271	10,733	3,867	641,659	50,520	91,412	24,253
1936	522,243	13,448	5,826	693,989	65,190	109,200	51,504
1937	667,631	16,074	8,287	896,242	87,165	125,922	62,105
1938	566,893	14,228	5,058	667,268	74,574	106,881	47,668

Table 32 - STEEL FURNACES IN CANADA, 1938.

Names of companies and location of furnaces	Type	FURNACES		
		Number of Units	Size (in tons per heat)	Total rated annual capacity
		Long tons	Long tons	
J. W. Cumming Manufacturing Company Limited. New Glasgow, N. S.	Electric (Heroult)	1	4	6,000
Dominion Steel and Coal Corporation, Limited. Sydney, N. S.	Basic open hearth	10	50	285,710
	Basic open hearth	2	100	114,290
	Electric	1	10	25,000
Canadian Brake Shoe & Foundry Company Limited. Sherbrooke, P. Q.	Electric (Heroult)	1	1	2,000
	Electric (Heroult)	2	2	2,500
Canadian Car & Foundry Company Limited. Montreal, P.Q.	Basic open hearth	3	22	32,044
	Electric (Volta)	1	3	5,357
Canadian Tube & Steel Products Limited. Montreal, P. Q.	Electric (Volta)	3	4 $\frac{1}{2}$	48,600
Hull Iron & Steel Foundries, Limited. Hull, P. Q.	Electric (Heroult)	1	6	7,500
Joliette Steel Limited. Joliette, P. Q.	Electric (Greaves-Etchell)	1	1 $\frac{1}{2}$	2,400
La Compagnie F. X. Drolet, Quebec, P. Q.	Converter (Baillot)	1	1	300
Lynn MacLeod Engineering Supplies, Limited. Thetford Mines, P. Q.	Electric (Heroult)	1	1	252
Manganese Steel Castings Limited. Sherbrooke, P. Q.	Electric (Heroult)	1	2	600
Shawinigan Chemicals Limited. Shawinigan Falls, P. Q.	Electric (Volta)	1	1	936
	Electric (Volta)	1	2	1,872
Sorel Steel Foundries, Limited. Sorel, P. Q.	Electric (Lectromelt)	1	1 $\frac{1}{2}$	2,500
Algoma Steel Corporation, Limited. Sault Ste. Marie, Ontario	Basic open hearth	8	55	300,000
	Basic open hearth	3	110	250,000

Table 32 - STEEL FURNACES IN CANADA, 1938. (concluded)

Names of companies and location of furnaces	Type	FURNACES		
		Number of Units	Size (in tons per heat)	Total rated annual capacity
		Long tons	Long tons	
Burlington Steel Company Limited, Hamilton, Ont.	Electric (Lectromelt)	1	6	21,000
Canada Electric Castings, Limited, Orillia, Ont.	Electric (Hercult)	1	3	6,000
	Electric (Hercult)	1	1	2,000
Atlas Steels Limited, Welland, Ont.	Electric (Hercult)	1	10	16,800
	Electric (Hercult)	1	4	7,500
Dominion Foundries & Steel, Limited, Hamilton, Ont.	Basic open hearth	2	35	60,000
	Basic open hearth	1	45	40,000
	Electric (Hercult)	2	10	40,000
Fahr alloy Canada Limited, Orillia, Ont.	Electric (Volta)	1	1½	1,500
	Electric (Volta)	1	1½	1,500
Ford Motor Company of Canada, Limited, Windsor, Ont.	Electric (Swindel)	1	3	13,400
	Electric (Swindel)	1	3	6,700
	Electric (Moore)	1	3	6,700
The William Kennedy & Sons, Limited, Owen Sound, Ont.	Converter (Tropenas)	1	2½	2,000
The Steel Company of Canada, Limited, Hamilton, Ont.	Basic open hearth	1	45	27,500
	Basic open hearth	4	90	251,000
	Basic open hearth	3	160	294,000
	Basic open hearth	1	50	40,000
Welland Electric Steel Foundry, Welland, Ont.	Electric (Hercult)	1	1½	5,500
	Electric (Hercult)	1	1½	5,500
	Electric (Hercult)	1	1½	5,500
Manitoba Rolling Mill Company, Limited, Selkirk, Man.	Basic open hearth	2	18½	40,000
Manitoba Steel Foundries Limited, Selkirk, Man.	Electric (Lectromelt)	1	1½	5,000
Vulcan Iron Works Limited, Winnipeg, Man.	Electric (Moore 'Lectromelt)	1	1½	1,700
Riverside Iron Works, Limited, Calgary, Alta.	Electric (Greene)	1	1½	3,000
Britannia Mining & Smelting Company, Britannia Beach, B. C.	Electric (Greene)	1	1½	1,500
Consolidated Mining & Smelting Company Ltd., Trail, B. C.	Electric (Greene)	1	3½	4,500
Reliance Foundry Company Limited, Vancouver, B. C.	Electric	1	1½	500
	Electric	1	1½	1,000
Vancouver Engineering Works, Limited, Vancouver, B. C.	Converter	1	1	300
	Electric (Greaves- Etchall)	1	1½	450
	Electric (Arnold)	1	1	150
Wallace Foundry Company Limited, Vancouver, B. C.	Electric (Greene)	1	1	700
	Electric (Greene)	1	5	3,000

Table 33 - SUMMARY OF STEEL FURNACE CAPACITY IN CANADA, 1938.

Type of furnace	Number of furnaces	Total rated annual capacity (Long tons)
Basic open hearth	40	1,734,500
Electric	43	252,900
Converter	3	2,600
TOTAL	86	1,990,000

Table 34 - MATERIALS USED IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1937 and 1938.

Materials	Companies' own make	PURCHASED		
		Quantity	Cost at works	\$
<u>1937</u>				
Steel, crude and semi-finished (ingots, blooms, billet, slabs)	1,400,569	72,817	2,773,147	
Rails, old	473	35,943	725,491	
Axles, old .....	...	5,655	111,354	
Other iron and steel scrap	2,957	706	11,962	
Hot rolled steel bars for cold rolling or drawing.	...	26,988	1,631,932	
All other iron and steel .....	...	...	...	...
All other materials .....	...	...	612,994	
TOTAL .....	...	...	5,866,880	
<u>1938</u>				
Steel ingots	1,114,728	305	10,617	
Steel billets	24,094	46,977	1,759,250	
Steel bars .....	...	18,454	1,125,583	
Rails, old	1,100	26,124	501,092	
Axles, old .....	...	3,209	69,279	
Scrap iron and steel, other	1,657	966	15,621	
All other materials and supplies .....	...	...	375,102	
TOTAL .....	...	...	3,856,544	

Table 35 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1937 and 1938.

Products	Total Tonnage made	FACTORY SALES		
		Tonnage sold in Canada or for export	Income from Tonnage sold	\$
<u>1937</u>				
Semi-finished rolled forms of iron and steel -				
Blooms, billets and slabs, except those for forging, but including sheet and tinplate bars	1,250,931	162,242	5,128,779	
Muck and scrap bar	1,077	...	...
Blooms, billets and axle blanks, for forging purposes only, excluding all those intended for further rolling	37,259	24,828	1,171,260	
Total semi-finished rolled forms	1,289,267	187,070	6,300,039	
Rails and rail fastenings -				
Rails	77,618	77,245	3,422,501	
Splice bars or fish plates	6,362	6,411	430,204	
Tie plates	20,789	21,780	1,123,923	
Total rails and rail fastenings	104,769	105,436	4,976,628	
Wire rods of iron or steel, including chain rods	216,154	86,177	3,568,873	
Structural steel shapes (including angles over 3 inches by 3 inches; beams, channels, tees, sheet piling, etc., but excluding plates and bars)	83,285	84,340	4,605,796	

Table 35 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1937 and 1938. (continued)

Products	Total Tonnage made	FACTORY SALES		
		Long tons	Long tons	\$
<u>1937 (concluded)</u>				
<u>Bars of iron or steel -</u>				
Bars, hot rolled, of all grades in rounds, squares, flats and angles up to and including 3 inches by 3 inches but omitting all bars reported under the items immediately below	232,441	211,498	12,327,100	
Bars rolled from alloy steel	27,317	27,372	2,929,659	
Bars for concrete reinforcing, including twisted and other deformed bars, except bars rolled from old rails and axles	20,716	20,473	1,240,749	
Bars rolled from old rails or axles	25,785	24,654	1,338,785	
Long angle splice bars, tie plate bars and all other long rail joint bars	27,194	...	...
All other bars, including spike rods, bolt stock, horseshoe bars, toe calk steel and all other finished rolled forms not elsewhere specified	13,567	3,070	230,145	
Total hot rolled bars	347,020	287,067	18,066,438	
Cold rolled and cold drawn bars	15,030	15,022	1,632,606	
<u>Plates, all kinds (iron or steel flats over 1/4 inches in width, and thicker than No. 7 U.S. standard gauge)</u>	85,359	85,044	4,673,959	
<u>Sheets, hoops, band and strips, including plain sheets, hot rolled strips, cold rolled strips, and galvanized sheets(x) and tinplate (x)</u>	104,109	104,536	8,887,562	
Total plates and sheets	189,468	189,580	11,261,521	
<u>Miscellaneous products (not rolled) made in rolling mills, including horseshoes, grinding balls, washers, forged axles, railway spikes, pressed spikes, etc. .....</u>	...	...	2,505,049	
TOTAL VALUE OF PRODUCTION .....	...	...	54,216,950	
<u>1938</u>				
<u>Semi-finished rolled forms of iron and steel -</u>				
Blooms, billets and slabs, except those for forging, but including sheet and tinplate bars	775,074	89,204	3,037,373	
Muck and scrap bar	178	...	...
Blooms, billets and axle blanks, for forging purposes only, excluding all those intended for further rolling	23,617	21,189	979,797	
Total Semi-finished rolled forms	798,869	110,393	4,017,170	
<u>Rails and rail fastenings -</u>				
Rails	112,928	108,582	5,002,610	
Splice bars or fish plates	4,949	4,445	335,396	
Tie plates	19,813	18,419	1,090,726	
Total rails and rail fastenings	137,690	131,446	6,428,732	
<u>Wire rods of iron or steel, including chain rods</u>	171,253	69,245	3,075,006	
<u>Structural steel shapes (including angles over 3 inches by 3 inches; beams, channels, tees, sheet piling, etc., but excluding plates and bars)</u>	58,601	60,473	3,589,905	
<u>Bars of iron or steel -</u>				
Bars, hot rolled, of all grades in rounds, squares, flats and angles up to and including 3 inches by 3 inches but omitting all bars reported under the items immediately below	147,995	136,002	8,060,867	
Bars rolled from alloy steel	19,315	18,722	2,008,180	
Bars for concrete reinforcing, including twisted and other deformed bars, except bars rolled from old rails or axles	21,295	20,789	1,233,635	
Bars rolled from old rails or axles	17,955	15,935	908,026	

Table 35 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1937 and 1938. (concluded)

Products	Total Tonnage made	FACTORY SALES		
		Long tons	Long tons	\$
<u>1938 (concluded)</u>				
Bars of iron or steel - (concluded)				
Long angle plice bars, tie plate bars and all other long rail joint bars	29,674	...	...	...
All other bars, including spike rods, bolt stock, horseshoe bars, toe calk steel and all other finished rolled forms not elsewhere specified	11,787	1,257	84,572	
Total hot rolled bars	248,021	192,705	12,295,300	
Cold rolled and cold drawn bars	10,719	10,892	1,133,816	
Platee, all kinds (iron or steel flats over 14 inches in width, and thicker than No. 7 U.S. standard gauge)	70,899	70,562	3,590,846	
Sheets, hoops, band and strips, including plain sheets, hot rolled strips, cold rolled strips, and galvanized sheets(x) and tinplate (x)	106,865	103,184	9,459,555	
Total plates, sheets, hoops, bands and strips	177,764	173,746	13,050,401	
Other rolled forme including mine arches, steel tubing, etc.	4,376	4,176	247,692	
Miscellaneous products (not rolled) made in rolling mills, including horseshoes, grinding balls, washers, forged axles, railway spikes, preesed spikes, etc. ....	...	...	2,202,765	
TOTAL VALUE OF PRODUCTION .....	...	...	46,040,787	
Net tonnage of hot rolled iron and steel products made during 1938 -	Iron	954 Long tons		
	Steel	841,900 Long tons		
	Total ...	842,854 Long tons		

(x) Includes only the tonnages of galvanized sheets and tinplate made in rolling mills. These tonnages included in sales figures only.

Table 36 - AVERAGE WHOLESALE PRICES FOR PIG IRON, STEEL BILLETS and CERTAIN ROLLING MILL PRODUCTS, 1935, 1936, 1937 and 1938.

Commodities	Unit	Average price 1935	Average price 1936	Average price 1937	Average price 1938
		\$	\$	\$	\$
Pig iron, No. 1 foundry	per gross ton, f.o.b. works	20.50	20.58	24.92	24.00
Pig iron, malleable	per gross ton, f.o.b. works	19.00	19.08	23.25(a)	22.00
Pig iron, basic	per gross ton, f.o.b. works	18.10	18.08	22.50	21.50
Steel billets, mild, 4x4 and larger..	per gross ton, f.o.b. works	34.00	34.17	41.17(b)	40.00
Steel bars, structural grade	per 100 pounds, f.o.b. works ...	2.15	2.16	2.56	2.53
Merchant bars, mild steel	per 100 pounds, f.o.b. works ...	2.25	2.26	2.66	2.63
Steel rails, open hearth	per gross ton, f.o.b. plant	43.00	43.17	46.67	47.00
Steel tank plates	per 100 pounds, f.o.b. Pittsburgh	1.81	1.86	2.22	2.19
Light cold rolled sheets, No. 20, U.S.G.	per 100 pounds, f.o.b. Pittsburgh	2.97	3.02	3.50	3.34
Galvanized corrugated iron sheets					
No. 28, U.S.G.	per 100 sq.ft., f.o.b. destination	4.85	5.06	6.19	6.23
Hot rolled and annealed steel sheets,					
No. 24, U.S.G.	per 100 pounds, f.o.b. Montreal.	3.39	3.54	4.60	4.58
Hot rolled and annealed sheets,					
No. 10, U.S.G.	per 100 pounds, f.o.b. Montreal.	3.23	3.28	4.18	3.97
Mild steel tank plates, 1/4" - 1/8"					
thickness	per 100 pounds, f.o.b. Montreal.	3.15	3.16	3.88	3.76
Steel sheets, black, No. 10, U.S.G.	per 100 pounds, f.o.b. Montreal.	3.40	3.46	4.40	4.26
Iron boiler plate, 1/2 inch thickness	per pound net, f.o.b. Montreal.	0.03	0.03	0.04	0.04
Tinplate, standard coke	per box, f.o.b. Montreal car lots		6.08	6.10	7.19
Structural shapes, open hearth	per 100 pounds, f.o.b. works ...	2.00	2.01	2.49	2.43

(a) New grade base silicon 2.25 max.

(b) New classification base 6 x 6 to 9 x 9 since 1937.

Table 37 - PRODUCTION AND FACTORY SALES OF STEEL RAILS, 1927 - 1938.

Years	Tonnage made	Factory Sales		
		Tonnage sold		Income from sales \$
		Long tons	Long tons	
1927	235,683	234,521		10,494,441
1928	349,189	349,007		16,109,847
1929	383,002	381,634		17,543,906
1930	233,432	232,414		10,504,700
1931	140,145	135,975		6,238,208
1932	45,090	46,220		2,123,150
1933	67,835	69,052		2,899,750
1934	96,689	88,023		3,660,274
1935	109,198	109,240		4,484,594
1936	116,192	117,154		4,885,388
1937	77,618	77,245		3,422,501
1938	112,928	108,582		5,002,610

Table 38 - PRODUCTION OF FINISHED RAIL FASTENINGS, 1927 - 1938.

Years	Quantity made	TIE PLATES			FISH PLATES AND SPLICE BARS		
		Factory Sales		Quantity made	Factory Sales		Quantity made
		Quantity	Income from sales		Long tons	Long tons	
Long tons	Long tons	\$	Long tons	Long tons	Long tons	\$	Long tons
1927	50,632	49,864	2,623,839	9,159	9,282	594,939	
1928	70,613	71,523	3,910,522	17,549	15,179	957,447	
1929	60,191	59,323	3,168,851	18,626	18,853	1,188,486	
1930	42,205	43,017	2,359,710	12,245	13,277	849,507	
1931	30,402	31,661	1,691,098	8,616	9,357	591,407	
1932	7,047	6,982	353,714	2,120	1,574	103,241	
1933	4,071	4,074	229,942	4,903	1,085	78,047	
1934	16,003	16,482	834,258	3,190	3,499	224,457	
1935	18,232	18,438	944,342	5,458	5,370	344,711	
1936	23,418	22,831	1,136,175	5,030	5,189	333,712	
1937	20,789	21,780	1,123,923	6,362	6,411	430,204	
1938	19,813	18,419	1,090,726	4,949	4,445	335,396	

Table 39 - PRODUCTION AND FACTORY SALES OF WIRE RODS, OF IRON OR STEEL, 1927 - 1938.

Years	Total tonnage made	Factory Sales		
		Tonnage sold		Income from sales \$
		Long tons	Long tons	
1927	115,245	24,184		1,040,956
1928	144,309	45,032		1,765,168
1929	142,589	33,632		1,316,546
1930	108,992	24,889		987,405
1931	78,133	18,839		726,442
1932	76,589	26,668		1,022,315
1933	88,692	29,111		1,104,532
1934	175,585	76,992		2,705,167
1935	183,469	68,395		2,412,244
1936	206,185	87,825		3,132,811
1937	216,154	86,177		3,568,873
1938	171,553	69,245		3,075,006

Table 40 - PRODUCTION AND FACTORY SALES OF BLOOMS, BILLETS AND SLABS, 1929 - 1938.

Years	EXCEPT FOR FORGING (x)			FOR FORGING		
	Total tonnage made	FACTORY SALES	Total tonnage made	FACTORY SALES	Income from sales	
	Long tons	Tonnage sold	Long tons	Tonnage sold	\$	
1929	1,159,045	74,402	2,488,945	9,058	4,558	192,304
1930	756,778	60,171	2,017,747	12,142	6,964	320,673
1931	484,437	50,499	1,601,299	3,821	2,148	92,372
1932	220,576	12,464	412,049	1,243	931	56,562
1933	224,458	8,733	260,978	1,497	1,159	69,457
1934	505,304	54,771	1,440,318	3,133	2,027	110,118
1935	667,442	71,711	1,899,030	5,460	3,305	173,298
1936	704,023	110,637	2,902,013	6,232	4,962	249,554
1937	1,250,931	162,242	5,128,779	37,259	24,828	1,171,280
1938	775,074	89,204	3,037,373	23,617	21,189	979,797

(x) Includes sheet and tinplate bars and muck and scrap bar for 1933 to 1937.

Table 41 - PRODUCTION OF HOT ROLLED BARS OF ALL KINDS, 1931 - 1938.

Years	Total tonnage made		FACTORY SALES	
	Total	made	Tonnage sold	Income from sales
	Long tons	Long tons	Long tons	\$
1931	209,802		144,968	7,508,040
1932	89,877		69,423	3,629,007
1933	84,007		74,530	4,121,813
1934	165,368		118,811	6,642,341
1935	217,477		133,665	9,032,553
1936	252,809		193,251	10,374,417
1937	347,020		287,067	18,066,438
1938	248,021		192,705	12,295,300

Table 42 - PRODUCTION OF STRUCTURAL STEEL SHAPES, OF ALL KINDS, 1931 - 1938.

Years	Total tonnage made		FACTORY SALES	
	Total	made	Tonnage sold	Income from sales
	Long tons	Long tons	Long tons	\$
1931	33,867		32,010	1,627,545
1932	14,290		12,896	671,702
1933	16,153		15,974	740,200
1934	23,070		23,258	1,104,324
1935	37,972		39,068	1,937,695
1936	37,087		36,426	1,835,257
1937	83,285		84,340	4,605,796
1938	58,601		60,473	3,589,905

DIRECTORY OF FIRMS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1938.

Names of Firms

(a) PIG IRON

Dominion Steel & Coal Corporation, Limited.
 Algoma Steel Corporation, Limited.
 Canadian Furnace Company Limited.
 Steel Company of Canada, Limited.

Location of Plants

Sydney, N. S.
 Sault Ste. Marie, Ont.
 Port Colborne, Ont.
 Hamilton, Ont.

(b) FERRO-ALLOYS (f)

Canadian Furnace Company Limited,
 Chromium Mining & Smelting Company of Canada, Limited,
 Electro Metallurgical Company of Canada, Limited,
 St. Lawrence Alloys, Limited.

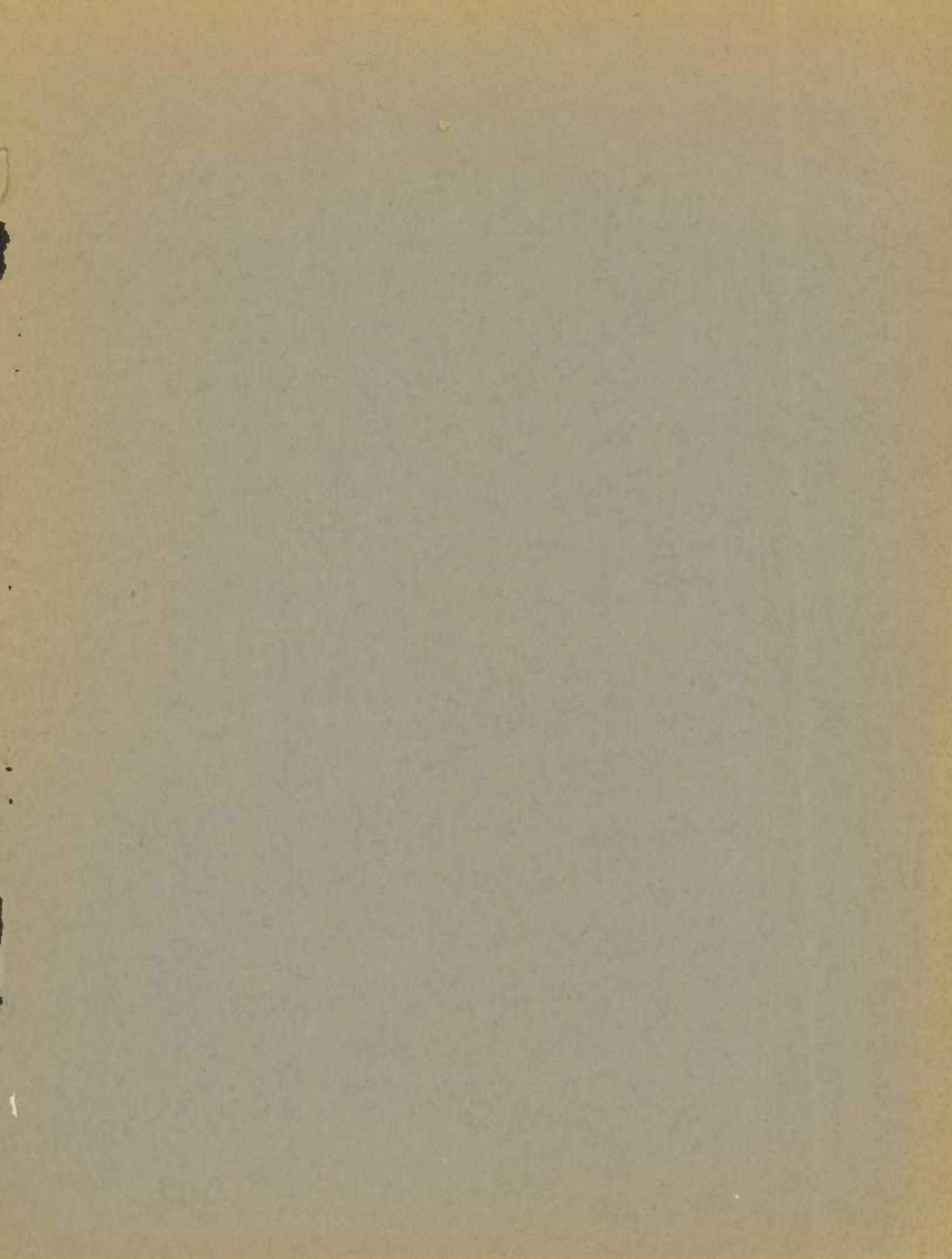
Port Colborne, Ont.
 Sault Ste. Marie, Ont.
 Welland, Ont.
 Beauharnois, P.Q.

(f) Not including the firms which made ferro-alloys as secondary products.

DIRECTORY OF FIRMS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1938.

Names of Firms	Location of Plants
(c) STEEL INGOTS AND DIRECT STEEL CASTINGS	
Cumming, J. W., Manufacturing Company Limited,	Glasgow Street, New Glasgow, N. S.
Dominion Steel & Coal Corporation, Limited,	Sydney, N. S.
Canadian Brake Shoe & Foundry Company Limited,	101 Belvidere Street, Sherbrooke, P. Q.
Canadian Car & Foundry Company Limited,	Longue Pointe, Montreal, P. Q.
Canadian Tube & Steel Products, Limited,	5900 St. Patrick Street, Montreal, P. Q.
Hull Iron & Steel Foundries, Limited,	207 Montcalm Street, Hull, P. Q.
Joliette Steel, Limited,	Laval Street, Joliette, P. Q.
La Compagnie F. X. Drolet,	206 rue du Pont, Quebec, P. Q.
Lynn MacLeod Engineering Supplies, Limited.	Notre Dame Street, Thetford Mines, P. Q.
Manganese Steel Castings Limited,	Abenaquis Street, Sherbrooke, P. Q.
Shawinigan Chemicals Limited, (Stainless Steel and Alloys Division)	Shawinigan Falls, P. Q.
Sorel Steel Foundries Limited,	7 Limoges Street, Sorel, P. Q.
Algoma Steel Corporation, Limited,	Sault Ste. Marie, Ont.
Atlas Steels Limited,	East Main Street, Welland, Ont.
Burlington Steel Company Limited,	Sherman Avenue North, Hamilton, Ont.
Canada Electric Castings Limited,	West Street, Orillia, Ont.
Dominion Foundries & Steel Limited,	Depew Street, Hamilton, Ont.
Fahr alloy, Canada, Limited,	Barrie Road, Orillia, Ont.
Ford Motor Company of Canada, Limited,	Windsor, Ont.
Kennedy, William & Sons, Limited,	Second Avenue West, Owen Sound, Ont.
Steel Company of Canada, Limited,	Wilcox Street, Hamilton, Ont.
Welland Electric Steel Foundry	123 Victoria Street, Welland, Ont.
Manitoba Rolling Mills Company Limited,	Selkirk, Man.
Manitoba Steel Foundries Limited,	Selkirk, Man.
Vulcan Iron Works Limited,	Pt. Douglas Avenue, Winnipeg, Man.
Riverside Iron Works, Limited,	803 .. 24th Avenue S.E., Calgary, Alta.
Britannia Mining and Smelting Company Limited,	Britannia Beach, B. C.
Consolidated Mining & Smelting Company of Canada, Limited,	Tadanac, B. C.
Reliance Foundry Company Limited,	149 Fourth Avenue West, Vancouver, B. C.
Vancouver Engineering Works Limited,	519 Sixth Avenue West, Vancouver, B. C.
Wallace Foundry Company Limited,	Granville Island, Vancouver, B. C.
(d) HOT ROLLED IRON AND STEEL	
Canadian Car & Foundry Company Limited,	Amherst, N. S.
Dominion Steel & Coal Corporation, Limited,	Sydney, N. S.
Nova Scotia Steel & Coal Company Limited,	Trenton, N. S.
Canadian Tube & Steel Products Limited,	5900 St. Patrick Street, Montreal, P. Q.
Peck Rolling Mills Limited,	851 Mill Street, Montreal, P. Q.
The Steel Company of Canada, Limited,	Notre Dame Street West, Montreal, P. Q.
Algoma Steel Corporation, Limited,	Sault Ste. Marie, Ont.
Atlas Steels Limited,	Welland, Ont.
Burlington Steel Company Limited,	Sherman Avenue North, Hamilton, Ont.
Dominion Foundries & Steel Limited,	Depew Street, Hamilton, Ont.
The Steel Company of Canada, Limited,	Queen Street North, Hamilton, Ont.
The Steel Company of Canada, Limited,	Wilcox Street, Hamilton, Ont.
Manitoba Rolling Mill Company Limited,	Selkirk, Man.
(e) COLD ROLLED STEEL	
Stanley Steel Company Limited,	Hamilton, Ont.
(f) COLD DRAWN STEEL	
Canadian Drawn Steel Company Limited,	Gerrard Street, Hamilton, Ont.
Union Drawn Steel Company Limited,	Victoria Avenue South, Hamilton, Ont.

NOTE - Detailed statistics of imports and exports of iron and steel products are published annually and quarterly in the Trade of Canada, which may be obtained on application to the Dominion Bureau of Statistics, Ottawa, Canada.



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