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CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS

+++ *Industry and Merchandising Division* +++

MINING, METALLURGICAL & CHEMICAL SECTION

THE
PRIMARY IRON AND STEEL INDUSTRY

IN

CANADA

1947

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



OTTAWA
1949



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Annual Industry ReportIron and Steel and Their Products GroupTHE PRIMARY IRON AND STEEL INDUSTRY, 1947

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-five firms were included in this industry in 1947 and reports were received for 58 different plants or departments, including 4 blast furnace departments, 1 electric pig iron plant, 4 ferro-alloy plants, 35 steel furnace divisions, and 15 rolling or drawing mills. Separate reports were received for blast furnace departments, for steel furnace divisions and for rolling mills even when all three were units of a single works.

Factory sales of pig iron, ferro-alloys, steel ingots and castings and finished rolled products were 41.3 per cent higher in 1947 than in 1946, the values being \$216,275,618 and \$153,082,616 respectively. Twenty-six works in Ontario accounted for 76 per cent of the total for Canada, or \$164,756,235; 5 plants in Nova Scotia accounted for 9.8 per cent or \$21,175,210; 13 plants in Quebec for 11.6 per cent or \$24,743,928; while the remaining \$5,600,245 or 2.6 per cent was accounted for by 4 plants in Manitoba, 8 in British Columbia and 2 in Alberta.

In 1947 an average of 26,933 people were employed in this industry, this being an increase of 11.3 per cent over the 1946 average of 24,196. Sixty-six per cent of the employees, or 17,658, worked in plants in Ontario, 3,804 in Quebec, 4,340 in Nova Scotia, 754 in Manitoba and 377 in Alberta and British Columbia. Payments in salaries and wages during 1947 amounted to \$60,285,368, an increase of 19.3 per cent over the previous year's total of \$50,515,897. Salaries advanced to \$8,689,952 from \$7,413,359 and wages increased to \$51,595,416 from \$43,102,538.

Materials used in manufacturing processes cost \$104,532,334 in 1947 compared with \$68,468,433 in 1946, and the cost of fuel and electricity was \$18,863,396 as against \$13,032,123, an increased expenditure of 51.5 per cent for materials, fuel and power.

Pig Iron - Output of 1,962,848 net tons of pig iron in 1947 was 39.6 per cent more than the 1,406,252 tons reported for the previous year. Production of basic iron amounted to 1,587,254 tons or 81 per cent of the total; foundry iron amounted to 234,612 tons, and malleable iron to 140,982 tons.

Producers' sales of pig iron totalled 458,300 tons at \$14,172,493 in 1947 compared with 320,525 tons at \$8,087,403 in 1946.

Charges to iron blast furnaces during the year included 3,420,890 tons of imported iron ore; 252,085 tons of Canadian ore; 1,903,419 tons of coke; 590,558 tons of imported limestone and 190,042 tons of Canadian limestone.

Imports of pig iron during the calendar year decreased to 8,893 from 12,125 in 1946, and exports increased to 1,475 from 939 tons.

Producers' stocks of pig iron at the end of 1947 totalled 44,976 tons compared with 52,112 tons at the end of the previous year.

The apparent consumption of pig iron in Canada, as calculated by deducting the exports from the sum of the production and imports, and allowing for changes in producers' stocks, amounted to 1,977,402 tons in 1947 or 42.3 per cent more than in 1946 when the apparent domestic supply was 1,390,519 tons.

Producers of pig iron in Canada had 14 blast furnaces at the end of 1947 which could produce 2.75 million net tons a year if operated at rated capacity. Actual production of 1,962,848 net tons in 1947 showed an operating rate of about 72 per cent. Twelve furnaces were in blast during the year.

Note: This report was prepared by J. J. Parchelo, Statistician, Metal and Chemical Products.

Ferro-alloys - Ferro-alloys were made in 1947 by 10 different concerns, 5 of which recovered ferrosilicon as a by-product in the manufacture of abrasives. Output of ferro-alloys in 1947 amounted to 227,123 net tons, an increase of 63 per cent over the 139,392 reported for 1946.

Altogether, ferrosilicon was made in nine different plants, spiegeleisen in one, ferrochrome in two and silicomanganese in two. Other alloys produced by one firm only included ferromanganese, silicospiegel, ferrozirconium, calcium silicon, calcium manganese silicon, chrom-sil-x and ferrophosphorus.

Steel Ingots and Castings - Steel production increased 26.6 per cent to 2,945,952 tons in 1947 from 2,327,285 tons in 1946, the output of steel ingots going to 2,854,779 tons from 2,251,741 tons, and steel castings to 91,173 tons from 75,544 tons. Factory sales of ingots and castings totalled 152,113 tons at \$25,260,293.

Thirty-five steel plants were in operation during the year. At the end of 1947 these plants had 130 furnaces, including 49 basic open hearth with an annual rated capacity of 2,801,876 tons, 78 electric furnaces rated at 747,275 tons, and 3 converters at 10,100 tons. There were 11 makers of steel ingots with capacity of 3,214,090 net tons per annum. The total annual steel capacity of all plants, including ingots and castings, was 3,559,251 tons at the year end.

Operating steel furnaces in 1947 used 1,542,040 net tons of pig iron, 1,671,676 tons of scrap iron or steel, 155,621 tons of iron ore, 231,990 tons of limestone, 95,683 tons of dolomite, 53,374 tons of lime, 51,341 tons of silica sand, 15,293 tons of magnesite, and 38,819 tons of ferro-alloys.

Rolled and Drawn Steel - In 1947 there were 12 mills occupied chiefly in hot rolling of steel products and 3 mills making only cold drawn and cold rolled shapes. Ten of these mills were in Ontario, 2 in Nova Scotia, 2 in Quebec and 1 in Manitoba.

Rolling mill sales advanced 38 per cent to \$155,955,401 from \$112,761,591 in 1946. The main items sold during the year under review were 473,430 tons of hot rolled bars at \$38,949,914; 188,580 tons of plates at \$11,566,700; 683,428 tons of sheets, hoops, bands and strips at \$54,376,477; 291,854 tons of rails and rail fastenings at \$16,556,828; 264,871 tons of semi-finished rolled forms, such as blooms, billets, etc. at \$11,278,574; 175,386 tons of structural shapes at \$10,995,147; and 108,512 tons of wire rods at \$5,310,661.

Note: In comparing data for the year under review as shown in this report with 1946 it should be borne in mind that figures for the latter reflect the results of the 1946 steel strike. This strike, which took place at the plants of the three largest producers of iron and steel, seriously curtailed production during the months of July, August and September, and to a lesser extent during the months of October, November and December.

Table 1 - PROVINCIAL DISTRIBUTION OF ACTIVE PLANTS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1947

Province	Number of firms	Pig Iron		Steel Ingots and Castings		Rolling and drawing mills	Ferro- alloys (a)
		Number of plants	Number of blast furnaces	Number of plants	Number of steel furnaces		
Nova Scotia	3	1	4	2	17	2	...
Quebec	12	...	...	10	23	2	1
Ontario	17	3	10	11	72	10	3
Manitoba	3	...	...	3	5	1	...
Alberta	2	...	...	2	2	...	...
British Columbia	8	1	1(c)	7	11	...	...
CANADA	45(b)	5	15	35	130	15	4

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

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

(c) Not actually a blast furnace; produced pig iron by an electric furnace process.

Table 2 - PRINCIPAL STATISTICS OF THE PRIMARY IRON AND STEEL INDUSTRY, 1937-1947

Year	Average Number of plants	Number of em- ployees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross sell- ing value of products at works
1937	55	14,054	19,926,498	6,934,008	33,805,631	74,580,669
1938	55	13,100	18,256,627	5,529,833	24,786,761	59,606,150
1939	54	13,827	20,410,517	6,069,661	29,629,376	75,934,481
1940	54	17,774	29,207,036	9,582,791	54,045,692	114,598,409
1941	60	23,735	45,037,095	13,888,384	78,824,366	164,566,392
1942	61	33,245	60,874,818	18,734,178	110,551,516	232,105,755
1943	63	34,222	65,654,468	18,985,135	101,413,749	223,951,059
1944	64	30,763	60,837,031	17,276,424	92,214,866	212,509,681
1945	63	29,378	57,862,489	16,002,441	86,417,375	192,279,159
1946	59	24,196	50,515,897	13,032,123	68,468,433	153,082,616
1947 -						
Nova Scotia	5	4,340	7,118,964	1,958,578	11,948,534	21,175,210
Quebec	13	3,804	8,105,153	2,081,108	7,877,675	24,743,928
Ontario	26	17,658	42,691,676	14,292,345	83,204,961	164,756,235
Manitoba	4	754	1,596,059	422,714	1,209,410	4,191,019
Alberta	2)	377	773,516	108,651	291,754	1,409,226
British Columbia	8)					
CANADA	58	26,933	60,285,368	18,863,396	104,532,334	216,275,618
Per cent change, 1947 from 1946	...	+ 11.3	+ 19.3	+ 44.7	+ 52.7	+ 41.3

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 3 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1946 and 1947

Province	Average Number of Employees				Total employ- ees	Salaries	Wages	Total Salaries and Wages				
	On Salaries		On Wages									
	Male	Female	Male	Female								
<u>1946</u>												
Nova Scotia	176	64	4,137	...	4,377	593,125	7,159,057	7,752,182				
Quebec	398	122	3,159	12	3,691	1,200,600	5,778,334	6,978,934				
Ontario	1,159	601	13,136	182	15,078	5,340,160	28,724,830	34,064,990				
Manitoba	45	18	725	...	788	190,013	1,067,019	1,257,032				
Alberta	36	10	216	...	262	89,461	373,298	462,759				
British Columbia)												
CANADA	1,814	815	21,373	194	24,196	7,413,359	43,102,538	50,515,897				
<u>1947</u>												
Nova Scotia	335	62	3,940	3	4,340	1,006,566	6,112,398	7,118,964				
Quebec	391	97	3,308	8	3,804	1,280,069	6,825,084	8,105,153				
Ontario	1,289	633	15,483	253	17,658	6,039,254	36,652,422	42,691,676				
Manitoba	52	19	683	...	754	232,304	1,363,755	1,596,059				
Alberta	43	8	326	...	377	131,759	641,757	773,516				
British Columbia)												
CANADA	2,110	819	23,740	264	26,933	8,689,952	51,595,416	60,285,368				

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Table 4 - WAGE-EARNERS, BY MONTHS, 1946 and 1947 (On the last work-day of each month)

Month	1946			1947		
	Male	Female	Total	Male	Female	Total
	(Number)					
January	22,877	295	23,172	22,769	258	23,027
February	23,193	219	23,412	22,912	272	23,184
March	23,421	193	23,614	23,080	281	23,361
April	23,529	189	23,718	23,309	264	23,573
May	23,637	191	23,828	23,986	277	24,263
June	23,262	195	23,457	24,032	271	24,303
July	18,016	172	18,188	23,865	275	24,140
August	15,542	170	15,712	24,066	276	24,342
September	15,588	164	15,752	23,989	266	24,255
October	22,472	183	22,655	24,091	267	24,358
November	22,472	180	22,652	24,337	247	24,584
December	22,400	173	22,573	24,396	249	24,645
AVERAGE	21,373	194	21,567	23,740	264	24,004

Table 5 - FUEL AND ELECTRICITY USED, 1946 and 1947

Kind	Unit of measure	1946		1947	
		Quantity	Cost at works	Quantity	Cost at works
Bituminous coal: Canadian	ton	198,472	1,190,284	234,969	1,620,472
Imported	ton	65,290	536,935	65,360	576,406
Sub-bituminous coal (from Alberta mines only)	ton	1,108	10,862	174	1,983
Anthracite coal	ton	13,384	121,021	11,676	102,973
Lignite coal	ton	1,121	4,531	732	2,515
Coke (for fuel only)	ton	44,211	165,257	39,565	134,862
Gasoline	Imp.gal.	174,646	42,688	256,176	77,515
Kerosene or coal oil	Imp.gal.	26,803	3,848	55,282	7,945
Fuel oil	Imp.gal.	61,442,517	3,855,113	74,990,073	6,525,030
Wood	cord	598	6,624	771	2,094
Gas: Manufactured (*)	M cu.ft.	55,760,689	2,580,291	79,248,691	3,610,234
Natural	M cu.ft.	27,214	15,312	10,933	6,668
Other fuel .....	...	...	23,732	...	110,265
Electricity purchased	K.W.H.	1,111,914,510	4,473,625	1,607,040,812	6,084,434
TOTAL .....	...	...	13,032,123	...	18,863,396
Electricity generated for own use	K.W.H.	88,427,528	...	101,212,477	...

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

Table 6 - POWER EQUIPMENT, 1946 and 1947

Kind	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
<u>1946</u>				
Steam engines and steam turbines	71	50,006	13	2,052
Diesel engines	9	1,871	1	95
Gasoline, gas and oil engines	18	19,500	4	1,950
Hydraulic turbines or water wheels	1	150	1	150
Total Primary	99	71,527	19	4,247
Electric motors operated by purchased power	8,500	227,686	398	6,149
TOTAL	8,599	299,213	417	10,396
Electric motors operated by power generated by above primary units	1,579	55,088	10	315
Stationary power boilers	104	109,721	5	990
Motor-generator sets	156	100,986 k.v.a.	9	359 k.v.a.

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Table 6 - POWER EQUIPMENT, 1946 and 1947 (Concluded)

Kind	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
1 9 4 7				
Steam engines and steam turbines	90	59,611	30	4,841
Diesel engines	11	2,206	1	95
Gasoline, gas and oil engines	18	19,500	6	2,175
Hydraulic turbines or water wheels	2	1,000	...	...
Total Primary	121	82,317	37	7,111
Electric motors operated by purchased power	9,853	278,859	534	8,310
TOTAL	9,974	361,176	571	15,421
Electric motors operated by power generated by above primary units	874	9,437	...	...
Stationary power boilers	101	109,331	4	950
Motor-generator sets	166	102,761 k.v.a.	10	810 k.v.a.

(a) Pig Iron

Table 7 - MATERIALS CHARGED TO IRON BLAST FURNACES, 1946 and 1947

Material	1 9 4 6		1 9 4 7	
	Quantity	Cost at furnace	Quantity	Cost at furnace
		Net tons		Net tons
Iron ore: Canadian (crude)	82,461	368,506	19,177	97,149
Imported (crude)	1,644,113	6,764,781	2,780,818	11,818,785
Canadian (beneficiated)	275,712	1,208,210	232,908	1,132,678
Imported (beneficiated)	523,787	2,141,401	640,072	2,736,397
Mill cinder, roll scale, flue dust, etc.	161,679	643,321	154,595	465,275
Scrap (net charge)	23,070	271,000	39,474	338,631
Limestone: From Canadian quarries	189,794	280,911	190,042	279,917
From foreign sources	433,153	559,384	590,558	775,582
Dolomite	20,955	27,056	99,507	135,172
Coke	1,320,620	13,422,208	1,903,419	21,106,752
Other materials .....	...	309,841	...	296,261
TOTAL .....	...	25,996,619	...	39,182,599

Table 8 - PRODUCTION OF PIG IRON AND SALES BY PRODUCERS, 1946 and 1947

Grade	Delivered in molten condition	Machine cast	Total tonnage made	Sales	
	Net tons	Net tons	Net tons	Quantity	Income from sales
1 9 4 6					
Basic	1,012,842	95,953	1,108,795	26,202	617,806
Foundry .....	...	151,225	151,223	148,119	3,565,819
Malleable .....	...	146,234	146,234	146,204	3,903,778
TOTAL	1,012,842	393,410	1,406,252	320,525	8,087,403
1 9 4 7					
Basic	1,459,811	127,443	1,587,254	88,565	2,676,561
Foundry .....	...	234,512	234,612	229,018	6,736,077
Malleable .....	...	140,982	140,982	140,717	4,759,855
TOTAL	1,459,811	503,037	1,962,848(x)	458,300	14,172,493

Note: Silvery pig iron has been included with ferro-alloys.

(x) Includes 1,272 tons produced in British Columbia by an electric furnace process.

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Table 9 - PRODUCTION OF PIG IRON, BY GRADES, 1937-1947.

Year	Basic	Foundry	Malleable	T O T A L
	(Net tons)			
1937	808,316	118,059	80,343	1,006,718
1938	624,487	90,818	74,772	790,078
1939	734,227	80,314	51,877	846,418
1940	1,091,584	120,875	96,640	1,309,099
1941	1,272,171	115,791	140,091	1,528,053
1942	1,646,001	159,724	169,289	1,975,014
1943	1,456,549	148,653	153,067	1,758,269
1944	1,534,140	143,763	174,725	1,852,628
1945	1,420,205	198,244	159,500	1,777,949
1946	1,108,795	151,223	146,234	1,406,252
1947	1,587,254	234,612	140,982	1,962,848 (x)

(x) Includes 1,272 tons produced in British Columbia by an electric furnace process.

Table 10 - PRODUCTION OF PIG IRON, BY PROVINCES, 1937-1947

Year	Nova Scotia	Ontario	T O T A L
	(Net tons)		
1937	358,756	647,961	1,006,718
1938	270,879	519,199	790,078
1939	290,232	556,186	846,418
1940	441,741	867,358	1,309,099
1941	421,296	1,106,757	1,528,053
1942	467,951	1,507,063	1,975,014
1943	345,722	1,412,547	1,758,269
1944	395,802	1,456,826	1,852,628
1945	374,302	1,403,647	1,777,949
1946	317,180	1,089,072	1,406,252
1947	354,789	1,606,787	1,962,848 (x)

(x) Includes 1,272 tons produced in British Columbia by an electric furnace process.

Table 11 - PRODUCTION OF PIG IRON, BY MONTHS, 1946 and 1947

Month	1 9 4 6			1 9 4 7		
	For own use	For sale	Total	For own use	For sale	Total
	(Net tons)				(Net tons)	
January	114,389	29,296	143,685	131,072	46,241	177,313
February	117,340	25,831	143,171	114,046	36,586	150,632
March	120,677	37,259	157,936	129,808	34,595	164,403
April	114,086	28,154	142,240	120,292	40,457	160,749
May	127,635	31,466	159,101	114,902	45,328	160,230
June	95,410	34,480	129,890	121,040	38,786	159,826
July	51,796	12,676	64,472	126,155	30,998	157,153
August	34,027	12,467	46,494	123,097	43,781	166,878
September	31,900	13,178	45,078	126,029	43,601	169,630
October	50,634	24,324	74,958	130,018	33,317	163,335
November	103,216	32,053	135,269	138,944	35,203	174,147
December	124,617	39,341	163,958	129,145	29,407	158,552
TOTAL	1,085,727	320,525	1,406,252	1,504,548	458,300	1,962,848 (x)

(x) Includes 1,272 tons produced in British Columbia by an electric furnace process.

Table 12 - SALES OF PIG IRON BY THE PRODUCERS, 1937-1947

Year	Tonnage sold	Income from sales	Year	Tonnage sold	Income from sales
	\$	\$		\$	\$
1937	252,802	5,146,017	1943	387,109	8,328,322
1938	145,113	2,961,639	1944	400,010	8,641,495
1939	192,614	3,757,573	1945	428,902	9,527,026
1940	277,311	5,868,769	1946	320,525	8,087,403
1941	338,066	7,080,242	1947	458,300	14,172,493
1942	387,997	8,366,936			

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Table 13 - IRON ORE, FUEL AND FLUX CHARGED TO IRON BLAST FURNACES, 1937-1947

Year	Iron Ore	Mill cinder, scale, etc.	Scrap	Coke	Limestone	Dolomite
			(Net tons)			
1937.....	1,796,562	134,299	18,443	890,384	470,549	Not
1938.....	1,382,565	74,608	21,418	697,615	345,182	
1939.....	1,476,106	119,654	21,204	775,869	357,377	avail-
1940.....	2,342,717	130,171	28,691	1,223,173	579,451	
1941.....	2,709,089	136,698	47,271	1,362,530	648,565	able
1942.....	3,612,692	177,343	64,624	1,795,875	860,793	
1943.....	3,258,451	125,477	43,032	1,646,191	785,938	32,064
1944.....	3,493,189	96,243	27,604	1,687,967	754,192	57,822
1945.....	3,033,454	281,189	37,067	1,631,852	757,178	39,418
1946.....	2,526,073	161,679	23,070	1,320,620	622,947	20,955
1947.....	3,672,975	154,595	39,474	1,903,419	780,600	99,507

Table 14 - IMPORTS INTO CANADA AND EXPORTS OF PIG IRON, 1937-1947

Year	Imports		Exports	
	Net tons	\$	Net tons	\$
1937	7,135	144,354	43,138	851,701
1938	2,377	62,494	11,811	224,261
1939	657	15,176	12,015	221,787
1940	29,703	672,489	4,113	101,126
1941	4,729	131,112	380	10,090
1942	1,536	42,718	427	12,175
1943	7,118	173,598	438	11,163
1944	8,516	235,666	5,698	123,681
1945	7,589	231,062	21,854	493,159
1946	12,125	344,529	939	23,673
1947	8,893	252,054	1,475	55,610

Table 15 - STOCKS OF PIG IRON HELD BY PRODUCERS IN CANADA, 1937-1947

Year	Net Tons	Year	Net Tons
1937	125,761	1943	28,230
1938	143,258	1944	49,615
1939	69,174	1945	25,193
1940	76,560	1946	52,112
1941	27,049	1947	44,976
1942	87,955		

Table 16 - APPARENT SUPPLY OF PIG IRON IN CANADA, 1937-1947

Year	Production	Add imports	Deduct exports	Add or deduct changes in producers' stocks (Δ)	Apparent supply (x)
		(Net tons)			
1937	1,006,718	7,135	43,138	- 39,713	931,002
1938	790,078	2,377	11,811	- 17,497	763,147
1939	846,418	657	12,015	+ 74,083	909,143
1940	1,309,099	29,703	4,113	- 7,385	1,327,304
1941	1,528,053	4,729	380	+ 49,511	1,581,913
1942	1,975,014	1,536	427	- 60,906	1,915,217
1943	1,758,269	7,118	438	+ 59,725	1,824,674
1944	1,852,622	8,516	5,698	- 21,385	1,834,061
1945	1,777,949	7,589	21,854	+ 24,422	1,788,106
1946	1,406,252	12,125	939	- 26,919	1,390,519
1947	1,962,848	8,893	1,475	+ 7,136	1,977,402

(x) No allowance made for changes in consumers' stocks of which there is no record.

(Δ) In this column the + indicates a decline in stocks or that this tonnage was released for consumption; the - sign indicates an increase in stocks or that this amount was withheld from consumption.

Table 17 - CONSUMPTION OF PIG IRON IN CANADA, BY INDUSTRIES AND BY PROVINCES, 1944-1947 (as reported by consumers)

	1944	1945	1946	1947
	(Net tons)			
(a) By Industries				
Steel ingots and castings	1,513,586	1,416,844	1,085,005	1,542,040
Iron castings	171,397	173,185	173,557	208,927
Boilers, tanks and platework	27,897	36,476	36,002	39,363
Agricultural implements	17,511	26,521	27,288	29,931
Machinery	21,170	22,149	25,784	26,680
Automobiles	5,197	5,197	7,372	8,921
Automobile parts	35,540	10,641	9,740	14,132
Railway rolling stock	31,638	28,234	21,526	24,734
Brass and copper products	1,104	2,170	3,851	3,097
Shipbuilding	1,749	3,488	939	974
Hardware and tools	2,205	3,223	3,480	3,024
Miscellaneous iron and steel	673	775	1,167	1,449
Heating and cooking apparatus	23,087	26,321	22,393	25,815
Electrical apparatus and supplies	2,954	4,426	2,782	3,764
TOTAL	1,855,708	1,759,650	1,420,886	1,932,851
(b) By Provinces				
Prince Edward Island	80	97	45	40
Nova Scotia	393,008	393,291	295,705	366,367
New Brunswick	3,450	4,413	3,786	4,772
Quebec	73,022	101,107	74,961	92,327
Ontario	1,378,233	1,245,198	1,031,843	1,451,851
Manitoba	2,770	7,679	11,347	13,495
Saskatchewan	115	58	70	70
Alberta	76	164	221	422
British Columbia	4,954	7,643	2,908	3,507
CANADA	1,855,708	1,759,650	1,420,886	1,932,851

Table 18 - BLAST FURNACES IN CANADA, 1945-1947

Name of Company	Location of Plant	Number of stacks	Total annual capacity	Number of days in blast		
				1945	1946	1947
Dominion Steel and Coal Corporation, Ltd.	Sydney, Nova Scotia	1	224,840	365	365	331
		1	235,060	365	365	365
		1	135,050	...	156	219
		1	135,050	...	...	...
		4	730,000	...	...	...
Canadian Furnace Company, Limited	Port Colborne, Ontario	1	170,090	296(★)	336½(★)	321
		1	53,655	...	...	...
		2	223,745	...	...	...
The Steel Company of Canada, Limited	Hamilton, Ontario	1	132,860	364	266	364
		1	265,720	364	328	365
		1	357,700	364	219	365
Total		3	756,280	...	...	...
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ontario	1	120,000	...	...	134
		1	120,000	...	209	353
		1	246,000	358	257	351
		1	189,000	200	40	364
		1	360,000	361	265	338
Total		5	1,035,000	...	...	...
TOTAL FOR CANADA (x)		14	2,745,025	...	...	...

(★) For making pig iron; ferro-alloys also made in this furnace.

(x) Does not include one electric furnace in British Columbia.

Table 19 - WORLD PRODUCTION OF PIG IRON AND FERRO-ALLOYS BY COUNTRIES (Figures taken from "Annual Statistical Report" published by the American Iron and Steel Institute, New York, U.S.A.)

Country	1943	1944	1945	1946	1947
(Thousands of Net tons)					
United States	62,770	62,866	54,919	46,515	60,117
Canada	1,930	2,012	1,976	1,525	2,152
United Kingdom	8,049	7,545	7,960	8,692	8,457
Belgium	1,801	780	802	2,393	3,108
Luxembourg	2,526	1,481	344	1,505	2,004
France	5,424	3,189	1,304	3,796	5,383
Netherlands .....	...	...	...	128	180
Hungary	460	326	1	176	339
Germany	17,606	14,737	1,550	2,425	2,469
Saar	2,411	1,634	...	271	721
Austria .....	...	...	...	64	306
Czechoalovakia	1,878	1,746	635	1,058	1,569
Poland	290	271	252	800	944
Yugoslavia .....	...	...	...	...	...
Rumania .....	...	...	...	...	...
Russia	11,100	16,800	18,800	16,800	18,000
Italy	802	341	83	226	425
Spain	643	607	519	540	551
Sweden	874	941	839	771	779
Japan [†]	5,089	3,434	556	202	391
TOTAL	123,655	118,709	90,540	87,887	107,896

[†] Home Islands, Korea and Manchuria in 1944 and previous years.

(b) Ferro-alloys

Table 20 - PRODUCTION OF FERRO-ALLOYS, 1937-1947

Year	Net tons	Year	Net tons
1937	91,921	1943	197,094
1938	62,637	1944	171,323
1939	85,540	1945	171,642
1940	149,394	1946	139,392
1941	204,354	1947	227,123
1942	209,017		

Table 21 - PRODUCERS OF FERRO-ALLOYS IN CANADA, 1947

Name of Company	Plant Location	Kind of Ferro-alloy Made
Simonds Canada Abrasive Co. Limited	Arvida, Quebec	Ferrosilicon (by-product)
Canadian Carborundum Company, Limited	Niagara Falls, Ontario	Ferrosilicon (by-product)
Canadian Furnace, Limited	Port Colborne, Ontario	Silvery ferrosilicon
Chromium Mining & Smelting Corp., Limited	Sault Ste. Marie, Ontario	Ferrosilicon, sil-x,chrom-x, ferrochrome, chrom-sil-x
Electro Metallurgical Company of Canada, Limited	Welland, Ontario	Ferrosilicon, ferrochrome, ferromanganese, silicomanganese, spiegeleisen, silico-spiegeleisen
Electro Reduction Company of Canada, Limited	Buckingham, Quebec	Ferrophosphorus
Exolon Company	Thorold, Ontario	Ferrosilicon (by-product)
Lionite Abrasives, Limited	Stamford, Ontario	Ferrosilicon (by-product)
Norton Company	Chippawa, Ontario	Ferrosilicon (by-product)
St. Lawrence Alloys and Metals, Limited	Beauharnois, Quebec	Ferrosilicon, ferrozirconium and silicomanganese

(c) Steel Ingots and Direct Steel Castings

Table 22 - MATERIALS USED IN STEEL FURNACES, 1946 and 1947

Material	1946		1947	
	Quantity	Cost of purchased materials	Quantity	Cost of purchased materials
Pig iron - Own make	1,062,013	\$...	1,513,502	\$...
Purchased	22,992	587,308	28,538	830,336
Scrap iron or steel - Own make	723,365	\$...	882,958	\$...
Purchased	793,649	14,701,571	788,718	19,426,124
Spiegeleisen	3,319	166,156	131	6,818
Silicospiegeleisen	130	11,019	438	36,434
Ferrocolumbium	(x)		4	11,366
Ferromanganese - High carbon	4,088	495,606	11,014	1,355,643
Medium carbon	9,285	1,185,983	7,817	1,019,556
Low carbon	450	80,393	283	61,831
Silicomanganese	5,131	580,570	7,399	981,499
Sil-x	(x)		1,041	113,262
Ferrosilicon - 15%	2,225	103,669	430	19,678
25%	95	5,500	107	7,174
50%	4,845	311,148	5,929	418,585
75%	94	11,215	109	9,915
85-90%	153	24,459	210	36,204
Ferrochrome (including chrom-x) - High carbon	752	137,701	1,259	240,962
Low carbon	879	316,225	1,026	353,570
Ferromolybdenum	166	186,271	101	110,037
Ferrophosphorus	310	26,717	486	37,566
Ferroselenium	2	3,196	...	88
Ferrotitanium	416	73,485	500	86,228
Ferrotungsten	260	402,174	566	888,904
Ferrovanadium	46	139,197	72	219,031
Ferrozirconium	34	2,617	3	729
Calcium silicon	22	6,431	264	82,515
Calcium manganese silicon	299	95,986	297	79,289
Other ferro-alloys .....	...	40,476	...	30,715
Aluminum ingot and shot	678	160,925	786	215,655
Copper ingots, cakes, shot, etc.	264	59,054	354	132,616
Nickel	577	340,552	752	483,917
Other metals .....	...	28,824	...	45,508
Ore, iron	152,613	1,094,071	155,621	1,333,298
Ore, manganese	2	125	13	647
Ore, chrome	424	22,591	429	21,129
Ore, tungsten	1	278	39	55,717
Bentonite	2,786	64,912	3,095	77,412
Coal - Anthracite	340	4,428	586	7,223
Bituminous	437	4,332	239	2,976
Coke	6,919	82,029	6,008	78,290
Charcoal	111	4,634	64	3,040
Dolomite - Crude	66,262	203,328	88,935	221,953
Calcined	3,788	66,473	6,748	124,107
Fluorspar	13,805	456,443	18,768	612,929
Ganister	3,783	13,179	7,117	24,610
Graphite	811	80,312	775	74,125
Lime	50,936	344,619	53,374	414,464
Limestone - Canadian	79,863	136,054	96,357	165,249
Imported	101,577	126,376	135,633	171,732
Magnesite	12,311	503,298	15,293	607,889
Electrodes .....	...	755,375	...	1,024,862
Silica sand - For moulds	53,967	358,899	50,988	346,677
For sand blasting	3,906	41,593	353	13,315
Other foundry sands .....	...	32,722	...	67,569
Sulphur	(x)		86	5,112
Firebrick, fireclay and other refractories .....	...	1,433,935	...	1,947,651
Calcium molybdate	26	26,352	36	36,458
Molybdenum trioxide (molybdic oxide) briquettes	55	52,347	97	85,372
All other materials .....	...	1,154,431	...	1,855,369
TOTAL VALUE OF METALS, ORES AND OTHER MATERIALS USED	...	27,347,564	...	36,718,924

(x) Not available separately.

Table 23 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS AND SALES BY THE PRODUCERS, 1946 and 1947

	1946			1947		
	Total tonnage of steel made (all kinds) including alloys	Sales Quantity	Income from sales	Total tonnage of steel made (all kinds) including alloys	Sales Quantity	Income from sales
	Net tons	Net tons	\$	Net tons	Net tons	\$
Steel Ingots -						
Basic open hearth ...	1,897,960	38,903	1,496,658	2,438,569	63,746	2,296,576
Electric	353,781	3,685	815,617	416,210	2,850	629,200
Total Steel Ingots ..	2,251,741	42,588	2,312,275	2,854,779	66,596	2,925,776
Steel Castings -						
Basic open hearth ...	24,566	23,482	5,153,218	24,100	22,093	5,025,675
Converter	600	620	197,491	741	741	249,985
Electric	50,378	51,173	13,306,597	66,332	62,683	17,058,857
Total Steel Castings.	75,544	75,275	18,657,306	91,173	85,517	22,334,517
TOTAL STEEL INGOTS AND CASTINGS	2,327,285	117,863	20,969,581	2,945,952	152,113	25,260,293
Any other products .....	...	...	893	...	...	712,484
TOTAL ALL PRODUCTS ..	...	...	20,970,474	...	...	25,972,747
Alloy steel included in above -						
Ingots	100,016	533	80,000	134,339	348	90,000
Castings	10,697	10,335	2,855,062	13,558	13,158	4,668,327
TOTAL	110,713	10,868	2,935,062	147,897	13,506	4,758,327

Table 24 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY GRADES, 1937-1947

Year	Steel Ingots		Steel Castings			Total steel ingots and castings
	Open hearth	Electric	Open hearth	Con- verter	Electric	
	(Net tons)					
1937	1,427,991	68,584	26,686	1,138	46,828	1,571,227
1938	1,172,867	62,598	17,388	850	40,109	1,293,812
1939	1,410,339	79,718	17,473	934	42,590	1,551,054
1940	2,041,947	135,633	21,085	2,268	52,786	2,253,769
1941	2,394,098	199,414	29,401	3,371	85,867	2,712,151
1942	2,623,853	335,053	26,627	6,515	117,803	3,109,851
1943	2,484,544	362,192	28,895	4,003	124,490	3,004,124
1944	2,517,894	353,974	35,032	2,470	104,792	3,016,162
1945	2,399,858	357,291	31,216	942	88,620	2,877,927
1946	1,897,960	353,781	24,566	600	50,378	2,327,285
1947	2,438,569	416,210	24,100	741	66,332	2,945,952

Table 25 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY MONTHS, 1943-1947

Month	1943	1944	1945	1946	1947
	(Net tons)				
January	207,008	242,186	268,722	244,623	249,798
February	245,588	229,852	250,464	233,893	229,222
March	270,962	275,539	277,461	249,117	269,732
April	264,357	260,825	274,213	247,519	252,156
May	271,737	263,431	267,643	259,626	244,076
June	240,501	240,750	257,115	214,861	238,297
July	251,508	234,418	229,161	135,914	232,341
August	247,820	246,755	224,928	88,729	233,754
September	242,255	242,725	198,508	76,564	234,188
October	272,976	272,775	205,846	123,841	256,461
November	260,444	266,174	207,981	222,644	255,372
December	228,968	240,732	215,885	229,954	250,555
TOTAL	3,004,124	3,016,162	2,877,927	2,327,285	2,945,952

Table 26 - ANNUAL PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY PROVINCES, 1937-1947

Year	Nova Scotia	Quebec	Ontario	Manitoba	Alberta	British Columbia	CANADA
	(net tons)						
1937	478,356	68,113	994,455	27,480	402	2,421	1,571,227
1938	379,096	54,591	836,585	20,256	419	2,865	1,293,812
1939	451,314	56,702	1,014,003	25,043	445	3,547	1,551,054
1940	623,021	73,631	1,512,495	39,789	381	4,452	2,253,769
1941	633,203	138,721	1,872,345	54,489	7,400	5,993	2,712,151
1942	637,993	180,637	2,207,208	55,067	22,264	6,682	3,109,851
1943	576,578	157,662	2,182,802	55,555	22,217	9,310	3,004,124
1944	578,346	117,638	2,253,685	42,149	18,085	6,259	3,016,162
1945	590,365	108,779	2,116,066	44,284	13,156	5,277	2,877,927
1946	425,863	63,763	1,781,701	52,064	430	3,464	2,327,285
1947	563,377	67,540	2,253,854	55,367	615	5,199	2,945,952

Table 27 - SALES OF STEEL INGOTS AND STEEL CASTINGS BY THE PRODUCERS, 1937-1947

Year	Tonnage sold	Income from sales	Year	Tonnage sold	Income from sales
	Net tons			Net tons	
1937	72,696	10,616,508	1943	151,924	30,057,984
1938	48,256	7,780,163	1944	171,072	34,848,365
1939	63,354	9,169,097	1945	148,247	28,121,723
1940	143,927	12,616,483	1946	117,863	20,969,581
1941	333,855	22,508,948	1947	152,113	25,260,293
1942	286,007	38,014,454			

Table 28 - PRODUCTION OF ALLOY STEEL INGOTS AND CASTINGS, 1940-1947

Year	Ingots		Castings (Net tons)	TOTAL
	Pig iron	Ferro-manganese and spiegeleisen		
1940		95,150	9,876	105,026
1941		207,631	11,219	218,850
1942		374,457	25,879	400,336
1943		393,491	19,992	413,483
1944		328,640	19,263	347,903
1945		305,542	14,022	319,564
1946		100,016	10,697	110,713
1947		134,339	13,558	147,897

Table 29 - METAL, ORE AND FLUX CHARGED TO STEEL FURNACES, 1937-1947

Year	Pig iron	Ferro-	Other ferro- alloys	Scrap	Iron ore	Limestone	Dolomite	Fluorspar
		manganese and spiegeleisen		iron and steel				
(Net tons)								
1937	747,747	18,003	9,281	1,003,791	97,625	125,922	53,066	9,039
1938	634,920	15,935	5,665	747,340	83,523	106,881	40,540	7,128
1939	733,096	18,761	8,885	927,018	91,650	121,007	55,450	7,972
1940	1,083,190	21,385	14,686	1,327,510	145,658	165,975	81,233	15,307
1941	1,340,441	26,566	25,063	1,599,124	155,273	202,609	92,695	17,054
1942	1,615,396	22,101	28,632	1,826,911	198,890	243,608	101,641	20,133
1943	1,518,548	19,463	19,800	1,751,779	171,040	242,032	89,056	20,790
1944	1,513,586	21,932	16,891	1,642,250	154,415	237,167	85,601	20,024
1945	1,416,844	23,600	23,244	1,741,895	106,614	217,499	77,206	19,462
1946	1,085,005	17,142	15,859	1,517,014	132,613	181,440	70,050	13,805
1947	1,542,040	27,082	11,737	1,671,676	155,621	231,990	95,683	18,768

Table 30 - STEEL FURNACES IN CANADA, DECEMBER 31, 1947

	Type	Number of units	Size (net tons)	Total annual capacity (net tons)
<u>Nova Scotia -</u>				
Dominion Steel & Coal Corp. Ltd., Sydney	O.H.	10	56	320,000
	O.H.	5	112	402,400
	Elec.	1	11	28,000
Total .....	...	16	...	750,400
Maritime Steel Foundries Ltd., New Glasgow	Elec.	1	4	3,000
<u>Quebec -</u>				
Canadian Brake Shoe & Foundry Co. Ltd., Montreal	Elec.	2	2	1,800
Canadian Car & Foundry Co. Ltd., Montreal	O.H.	3	28	51,576
	Elec.	1	3 $\frac{1}{2}$	7,728
	Elec.	1	23	40,320
Total .....	...	5	...	99,624
Canadian Tube & Steel Products Ltd., Montreal ...	Elec.	1	5	13,400
	Elec.	2	5	31,200
Total .....	...	3	...	44,600
Joliette Steel Limited, Joliette	Elec.	2	1 $\frac{1}{2}$	6,000
	Elec.	1	2	8,000
Total .....	...	3	...	14,000
La Compagnie F. X. Drolet Ltd., Quebec	Conv.	1	1	300
Lynn MacLeod Metallurgy Ltd., Thetford Mines	Elec.	1	1 $\frac{1}{2}$	1,800
Manganese Steel Castings Ltd., Sherbrooke	Elec.	1	2	1,500
Shawinigan Chemicals Ltd., Shawinigan Falls	Elec.	1	1 $\frac{1}{2}$	468
	Elec.	1	2	1,872
	Elec.	1	1	936
Total .....	...	3	...	3,276
Sorel Industries Limited, Sorel	Elec.	1	8	11,200
	Elec.	1	4	5,600
	Elec.	1	20	28,000
Total .....	...	3	...	44,800
Sorel Steel Foundries Ltd., Sorel	Elec.	1	6 $\frac{1}{2}$	5,000
<u>Ontario -</u>				
Algoma Steel Corp. Ltd., Sault Ste. Marie	O.H.	8	66	400,000
	O.H.	4	123	360,000
Total .....	...	12	...	760,000
Atlas Steels Limited, Welland	Elec.	1	10	12,000
	Elec.	4	25	120,000
Total .....	...	5	...	132,000
Burlington Steel Company Ltd., Hamilton	Elec.	1	6	24,000
Canada Electric Castings Ltd., Orillia	Elec.	2	2	6,000

Table 30 - STEEL FURNACES IN CANADA, DECEMBER 31, 1947 (Continued)

	Type	Number of units	Size (net tons)	Total annual capacity (Net tons)
<u>Ontario (Concluded)</u>				
Dominion Foundries & Steel Ltd., Hamilton	O.H.	2	55	108,900
	O.H.	1	50	49,450
	O.H.	1	45	44,550
	Elec.	2	10	26,400
	Elec.	1	25	24,750
	Elec.	1	50	55,000
	Elec.	1	2 ¹ ₂	9,000
Total .....	...	9	...	318,050
Fahralloy Canada Ltd., Orillia	Elec.	1	1 ¹ ₂	1,524
	Elec.	1	1 ¹ ₂	2,286
	Elec.	1	2	3,048
Total .....	...	3	...	6,858
Quality Steels (Canada) Ltd., London	Elec.	2	6	13,140
Ford Motor Co. of Canada Ltd., Windsor	Elec.	1	1 ¹ ₂	625
	Elec.	1	5	10,500
	Elec.	16	4	94,000
	Elec.	1	1 ¹ ₂	750
Total .....	...	19	...	105,875
William Kennedy & Sons Ltd., Owen Sound	Conv.	1	2	4,800
	Elec.	1	4	9,000
Total .....	...	2	...	13,800
Steel Company of Canada, Hamilton	O.H.	1	45	38,500
	O.H.	3	55	139,500
	O.H.	4	100	292,000
	O.H.	5	180	550,000
	Elec.	1	70	85,500
Total .....	...	14	...	1,105,500
Welland Electric Steel Foundry Ltd., Welland ...	Elec.	1	1 ¹ ₂	
	Elec.	1	1 ¹ ₂	5,400
	Elec.	1	1 ¹ ₂	
Total .....	...	3	...	5,400
<u>Manitoba -</u>				
Manitoba Rolling Mill Co. Ltd., Selkirk	O.H.	2	20	40,000
	Elec.	1	6	20,000
Total .....	...	3	...	60,000
Manitoba Steel Foundries Ltd., Selkirk	Elec.	1	5	4,000
Vulcan Iron Works Ltd., Winnipeg	Elec.	1	3	2,664
<u>Alberta -</u>				
Riverside Iron Works Ltd., Calgary	Elec.	1	1	900
Foothills Steel Foundry & Iron Works, Calgary ..	Elec.	1	1 ¹ ₂	384
<u>British Columbia -</u>				
A-1 Steel and Iron Foundry, Vancouver	Elec.	1	1 ¹ ₂	1,975
Britannia Mining & Smelting Co. Ltd., Britannia Beach	Elec.	1	5	4,200

Table 30 - STEEL FURNACES IN CANADA, DECEMBER 31, 1947 (Concluded)

	Type	Number of units	Size (net tons)	Total annual capacity (Net tons)
<u>British Columbia (Concluded)</u>				
Consolidated Mining & Smelting Co. of Canada, Trail	Elec.	1	4	2,250
Reliance Foundry Co. Ltd., Vancouver	Elec.	1	1	430
	Elec.	1	1 ¹	2,600
Total .....	...	2	...	3,030
Vancouver Engineering Works Ltd., Vancouver ...	Elec.	1	2	3,500
	Elec.	1	1	3,500
	Conv.	1	2	4,500
Total .....	...	3	...	11,500
Victoria Machinery Depot Co. Ltd., Victoria ...	Elec.	1	1 ¹	625
Westland Iron & Steel Foundries Ltd., Vancouver	Elec.	1	2 ¹	5,000
	Elec.	1	1 ¹	2,000
Total .....	...	2	...	7,000

Table 31 - SUMMARY OF STEEL FURNACE CAPACITY, DECEMBER 31, 1947

	Number of furnaces	Total annual capacity (net tons)
Basic open hearth	49	2,801,876
Electric	78	747,275
Converter	3	10,100
TOTAL	130	3,559,251
Steel ingots - Basic open hearth .....	...	2,750,300
Electric .....	...	463,790
TOTAL .....	...	3,214,090
Steel castings .....	...	345,161
TOTAL INGOTS AND CASTINGS .....	...	3,559,251

Table 32 - WORLD INGOT AND CASTINGS PRODUCTION BY COUNTRIES (Figures taken from "Annual Statistical Report" published by the American Iron and Steel Institute, New York, U.S.A.)

Country	1943	1944	1945	1946	1947
	(Thousands of net tons)				
United States	88,837	89,642	79,702	66,603	84,894
Canada	2,872	2,930	2,803	2,293	2,902
United Kingdom	14,595	13,599	13,243	14,220	14,246
Belgium	1,839	701	812	2,518	3,188
Luxemburg	2,368	1,389	291	1,426	1,888
Hungary	856	766	142	389	658
France	5,651	3,408	1,822	4,859	6,338
Italy	1,905	1,138	437	1,270	1,874
Russia	13,300	15,400	19,800	20,000	22,600
Germany	22,012	20,192	322 ¹	2,963 ¹	3,290 ¹
Saar	2,636	1,974	...	321	776
Austria .....	...	...	189	207	394
Czechoslovakia	2,831	2,778	1,045	1,843	2,520
Poland	870	755	546	1,344	1,731
Spain	721	546	617	656	581
Sweden	1,338	1,320	1,327	1,335	1,311
Japan (x)	9,676	7,032	1,177	608	1,041
TOTAL	172,305	163,569	124,274	122,853	150,231

* - American, British and French zones.

(X) - Home Islands, Korea and Manchuria in 1944 and previous years.

Table 33 - MATERIALS USED FOR ALL PURPOSES IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1946 and 1947.

Material	Companies' own make	Purchased	
		Quantity Net tons	Cost at works \$
<u>1946</u>			
Steel ingots	2,189,808	...	...
Steel blooms	58,397	...	...
Steel slabs .....	...	71,704	2,959,941
Steel billets	75,749	18,864	685,212
Steel bars	577	34,653	2,324,291
Rails, old .....	...	47,867	1,041,473
Axles, old .....	...	2,014	40,810
Scrap iron and steel, other	2,188	692	13,777
Tin .....	...	1,479	1,864,159
Zinc spelter .....	...	3,890	395,268
Ammonium chloride .....	...	259	30,000
Sulphuric acid, 66° Be .....	...	14,907	250,332
Silica sand .....	...	631	4,237
All other materials and supplies .....	...	...	777,061
TOTAL .....	...	...	10,386,581
<u>1947</u>			
Steel ingots	2,679,771	28,315	897,302
Steel blooms	8,346	6,416	285,487
Steel slabs .....	...	143,228	5,783,547
Steel billets	85,979	60,231	2,478,698
Steel bars .....	...	44,676	3,401,516
Rails, old	1,110	51,228	1,182,008
Axles, old .....	...	1,711	42,104
Scrap iron and steel, other	7,279	...	...
Tin .....	...	2,184	3,156,568
Zinc spelter .....	...	5,872	1,202,666
Ammonium chloride .....	...	406	54,282
Sulphuric acid, 66° Be .....	...	12,091	174,553
Silica sand .....	...	645	4,106
All other materials and supplies .....	...	...	958,714
TOTAL .....	...	...	19,621,552

Table 34 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1946 and 1947

Product		Factory Sales		
		Total tonnage made	Tonnage sold in Canada or for export	Income from tonnage sold
		Net tons	Net tons	\$
<u>1946</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	1,589,256	188,224	7,979,155	
Blooms, billets and axle blanks, for forging purposes only, excluding all those intended for further rolling	45,599	37,635	2,248,394	
Total Semi-finished Rolled Forms	1,634,855	225,859	10,227,549	
<u>Rails and rail fastenings -</u>				
Rails	206,374	210,020	10,716,361	
Splice bars or fish plates	11,918	11,988	876,209	
Tie plates, rail joints, frogs, etc.	38,778	41,097	2,474,231	
Total Rails and Rail Fastenings	257,070	263,105	14,066,801	
Wire rods of iron or steel, including chain rods	210,548	82,006	3,670,356	
<u>Structural steel shapes (including angles with a side of 3 inches and over, beams, channels, tees, etc., but excluding plates and bars) -</u>				
Over 35 pounds per yard	57,855	58,933	3,374,615	
Up to, and including, 35 pounds per yard	74,039	72,967	4,322,428	
Total Structural Steel Shapes	131,894	131,900	7,697,043	

Table 34 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1946 and 1947 (continued)

Product	Total tonnage made	Factory Sales		
		Tonnage sold in Canada or for export	Income from tonnage sold	
Net tons \$				
1946 (concluded)				
Bars of iron or steel -				
Bars, hot rolled, of all grades and of all sections, including light angles with sections of less than 3 inches, but omitting all bars reported under the items immediately below	393,365	328,188	25,308,031	
Bars for concrete reinforcing, including twisted and other deformed bars	50,675	49,062	3,140,467	
Long angle splice bars, tie plate bars and all other long rail joint bars	48,813	...	...
Total Hot Rolled Bars	492,853	377,250	28,448,498	
Cold rolled and cold drawn bars				
Plates, all kinds (iron or steel flats over 14 inches in width, and 3/16 inches or thicker)	25,666	25,919	3,525,220	
Sheets, hoops, bands and strips, including plain sheets, hot rolled strips, cold rolled strips, galvanized sheets (#), tinplate (#), terne plate (#) and bonded plate (#)	170,043	165,356	9,480,384	
Total Plates, Sheets, Hoops, Bands and Strips	295,720	291,576	26,667,286	
Other rolled forms, including mine arches, sheet piling, etc.	465,763	456,932	36,147,670	
Total VALUE OF PRODUCTION	44,472	22,654	1,370,489	
(*) Includes the tonnages made in rolling mills only.	...	...	7,707,965
	...	...	112,861,591
1947				
Semi-finished rolled forms of iron and steel -				
Blooms, billets, slabs and sheet bars, except those for forging and omitting hot strip mill sheet	1,980,914	264,871	11,278,574	
Blooms, billets and axle blanks, for forging purposes only, excluding all those intended for further rolling, but including blanks or pierced billets for seamless tubes	138,034	128,654	7,075,691	
Total Semi-finished Rolled Forms	2,118,948	393,525	18,354,265	
Rails and rail fastenings -				
Rails	250,049	242,729	13,236,588	
Splice bars or fish plates	10,124	9,666	747,608	
Tie plates, rail joints, frogs, etc.	39,175	39,459	2,572,632	
Total Rails and Rail Fastenings	299,348	291,854	16,556,828	
Wire rods, No.5 gauge to 47/64 inch in diameter (excluding straight lengths over 5/16 inch in diameter)	284,795	108,512	5,310,661	
Structural steel shapes (including angles with a side of 3 inches and over, beams, channels, tees, etc., but excluding plates and bars) -				
Over 35 pounds per yard	76,829	78,553	4,860,286	
Up to, and including, 35 pounds per yard	103,397	96,833	6,134,861	
Total Structural Steel Shapes	180,226	175,386	10,995,147	

Table 34 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1946 and 1947 (concluded)

Product	Total tonnage made	Factory Sales	
		Tonnage sold in Canada or for export	Income from tonnage sold
	Net tons	Net tons	\$
1947 (concluded)			
<u>Bars of iron or steel</u> -			
Bars, hot rolled, of all grades and of all sections, including light angles with sections of less than 3 inches, but omitting all bars reported under the items immediately below	481,606	397,004	33,812,059
Bars for concrete reinforcing, including twisted and other deformed bars	78,140	76,426	5,137,855
Long angle splice bars, tie plate bars and all other long rail joint bars	50,017	...	...
Total Hot Rolled Bars	609,763	473,430	38,949,914
<u>Cold rolled and cold drawn bars</u>			
Plates, all kinds, including boiler and other sheared plates, nail, washer, spike, tack and hinge plate ...	38,091	37,950	5,840,599
Sheets, hoops, bands and strips, including plain sheets, hot rolled strips, cold rolled strips, galvanized sheets (†), tinplate, terne plate (‡) and bonderized plate (§)	192,155	188,580	11,566,700
Total Plates, Sheets, Hoops, Bands and Strips	510,535	494,848	42,809,777
Total Plates, Sheets, Hoops, Bands and Strips	702,690	683,428	54,376,477
Other rolled forms, including mine arches, sheet piling, etc.	55,710	30,011	1,918,260
Miscellaneous products (not rolled) made in rolling mills, including horseshoes, grinding balls, washers, forged axles, railway spikes, pressed spikes, etc. ....	...	...	3,653,250
TOTAL VALUE OF PRODUCTION .....	...	...	155,955,401

(†) Includes the tonnages made in rolling mills only.

Table 35 - ALLOY STEEL PRODUCTS MADE AND SOLD BY ROLLING MILLS, 1946 and 1947.

	1946		1947	
	Tonnage Made	Tonnage Sold	Tonnage Made	Tonnage Sold
	(Net tons)			
Rails .....	...	...	...	...
Bars	62,598	60,253	67,134	66,569
Other products, including plates, billets, forgings, sheet piling and wire rods ...	44,923	9,646	79,070	12,827
TOTAL ALLOY STEEL	107,521	69,899	146,204	79,396

Table 36 - PRODUCTS ROLLED FROM OLD RAILS, AXLES, ETC., 1946 and 1947

	1946		1947	
	Tonnage Made	Tonnage Sold	Tonnage Made	Tonnage Sold
	(net tons)			
Rails	1,128	1,128	997	997
Bars	31,419	30,333	26,428	26,461
Other products	11,948	9,431	24,362	18,978
TOTAL	44,495	40,892	51,787	46,436

Primary Iron and Steel.

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Table 37 - PIG IRON, STEEL INGOTS AND CASTINGS, AND SEMI-FINISHED ROLLED FORMS SHIPPED FOR EXPORT BY PRODUCERS, 1946 and 1947

	1 9 4 6	1 9 4 7
	(Net tons)	
Pig iron	808	1,432
Steel ingots	35,709	24,547
Steel castings	2,179	2,682
Semi-finished rolled forms	36,198	51,412
TOTAL	74,894	80,073

Table 38 - NET PRODUCTION (*) IN CANADA OF HOT ROLLED IRON AND STEEL PRODUCTS, 1945-1947

	1 9 4 5	1 9 4 6	1 9 4 7
	(Net tons)		
Blooms, billets and slabs	251,229	81,673	151,254
Rails	291,651	206,374	250,049
Rail fastenings	50,976	50,696	49,299
Wire rods	257,606	210,548	284,795
Structural shapes	191,907	131,894	180,226
Bars	524,964	444,040	559,746
Plates, sheets, hoops, bands and strips	522,621	455,148	634,157
Other hot rolled forms	12,143	44,472	55,710
TOTAL	2,103,097	1,624,845	2,165,236

(*) Inter-mill shipments have been excluded.

Table 39 - PRODUCTION AND FACTORY SALES OF STEEL RAILS, 1937-1947

Year	Tonnage made Net tons	Factory Sales	
		Tonnage sold Net tons	Income from sales \$
1937	86,932	86,514	3,422,501
1938	126,479	121,612	5,002,610
1939	123,023	127,694	5,182,146
1940	199,998	197,626	7,839,858
1941	137,298	131,128	5,575,492
1942	183,430	184,016	8,216,123
1943	263,920	261,483	12,309,676
1944	325,486	324,052	15,921,873
1945	291,651	288,630	14,229,922
1946	206,374	210,020	10,716,361
1947	250,049	242,729	13,236,588

Table 40 - PRODUCTION AND FACTORY SALES OF FINISHED RAIL FASTENINGS, 1937-1947

Year	Tie Plates			Fish Plates and Splice Bars		
	Quantity made Net tons	Factory Sales		Quantity made Net tons	Factory Sales	
		Quantity made Net tons	Income from sales \$		Quantity made Net tons	Income from sales \$
1937	23,284	24,394	1,123,923	7,125	7,180	430,204
1938	22,190	20,629	1,090,726	5,543	4,978	335,396
1939	24,548	23,183	1,181,086	10,314	10,784	716,985
1940	24,371	26,544	1,388,150	14,040	13,702	907,832
1941	28,747	28,765	1,492,488	12,873	12,566	847,039
1942	25,187	25,685	1,393,375	14,510	14,963	1,018,651
1943	27,214	27,057	1,486,184	14,376	14,554	1,002,902
1944	41,826	38,351	2,123,629	14,583	14,324	997,004
1945	40,129	40,784	2,271,313	10,847	10,836	778,664
1946	38,778	41,097	2,474,231	11,918	11,988	876,209
1947	39,175	39,459	2,572,632	10,124	9,666	747,608

Table 41 - PRODUCTION AND FACTORY SALES OF WIRE RODS OF IRON OR STEEL, 1937-1947

Year	Total tonnage made	Factory Sales		Year	Total tonnage made	Factory Sales	
	Net tons	Tonnage sold	Income from sales		Net tons	Tonnage sold	Income from sales
1937	242,092	96,518	3,568,873	1943	235,583	88,848	3,621,772
1938	191,803	77,554	3,075,006	1944	244,270	105,046	4,300,337
1939	240,194	98,070	3,954,970	1945	257,606	105,548	4,417,200
1940	300,785	131,255	5,305,124	1946	210,548	82,006	3,670,356
1941	293,476	121,422	5,214,493	1947	284,795	108,512	5,310,661
1942	256,457	105,475	4,347,189				

Table 42 - PRODUCTION AND FACTORY SALES OF BLOOMS, BILLETS AND SLABS, 1937-1947

Year	Except for Forging (x)			For Forging (x)		
	Total tonnage made	Factory Sales		Total tonnage made	Factory Sales	
	Net tons	Tonnage sold	Income from sales	Net tons	Tonnage sold	Income from sales
1937	1,401,043	181,711	5,128,779	41,730	27,807	1,171,280
1938	868,083	99,908	3,037,373	26,451	23,732	979,797
1939	1,109,145	147,978	4,702,975	29,203	27,036	1,233,754
1940	1,591,238	175,254	6,821,949	41,232	41,404	1,885,903
1941	1,604,520	174,463	6,882,562	111,712	102,317	5,796,472
1942	1,608,969	162,171	5,650,983	226,541	178,897	10,692,911
1943	1,694,930	134,000	6,320,193	165,999	145,492	7,586,292
1944	1,643,679	125,159	4,849,949	226,114	211,800	12,191,804
1945	1,572,489	88,950	3,425,864	227,577	211,468	14,306,145
1946	1,589,256	188,224	7,979,155	45,599	37,635	2,248,394
1947	1,980,914	264,871	11,278,574	138,034	128,654	7,075,691

(*) Includes sheet and tinplate bars and muck and scrap bars for 1937. Shipments to other Canadian rolling mills are included.

(x) Includes blanks or pierced billets for seamless tubes for 1947.

Table 43 - PRODUCTION AND FACTORY SALES OF HOT ROLLED BARS (*) OF ALL KINDS, 1937-1947

Year	Total tonnage made	Factory Sales	
		Tonnage sold	Income from sales
	Net tons	Net tons	\$
1937	388,662	321,515	18,066,438
1938	277,783	215,830	12,295,300
1939	314,050	251,040	14,216,981
1940	453,788	365,434	23,078,104
1941	542,575	444,634	29,786,195
1942	592,016	474,312	37,442,850
1943	598,113	489,879	43,233,796
1944	534,196	428,982	30,099,216
1945	574,446	438,622	31,680,209
1946	492,853	377,250	28,448,498
1947	609,763	473,430	38,949,914

(*) Includes light angles prior to 1939.

Table 44 - PRODUCTION OF STRUCTURAL STEEL SHAPES (a) OF ALL KINDS, 1937-1947

Year	Total tonnage made Net tons	Factory Sales	
		Tonnage sold Net tons	Income from sales \$
1937	93,279	94,461	4,605,796
1938	65,633	67,730	3,589,905
1939	90,810	91,921	4,554,201
1940	183,728	180,278	8,667,678
1941	189,783	193,251	9,600,490
1942	184,701	191,319	10,540,658
1943	146,965	151,674	8,802,273
1944	155,908	159,241	9,380,379
1945	191,907	190,050	10,399,503
1946	131,894	131,900	7,697,043
1947	180,226	175,386	10,995,147

(a) Includes light angles since 1939.

Table 45 - PRODUCTION AND FACTORY SALES OF STEEL PLATES, 1939-1947

Year	Total tonnage made Net tons	Factory Sales	
		Tonnage sold Net tons	Income from sales \$
1939	75,655	76,189	3,770,927
1940	82,481	83,392	4,338,799
1941	194,647	191,620	13,161,884
1942	391,887	385,314	30,095,754
1943	395,298	391,202	27,919,833
1944	390,343	389,671	26,566,575
1945	282,592	275,674	16,687,112
1946	170,043	165,356	9,480,384
1947	192,155	188,580	11,566,700

DIRECTORY OF FIRMS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1947

Name of Firm	Location of Plants
(a) Pig Iron	
Dominion Steel & Coal Corporation, Limited	Sydney, Nova Scotia
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ontario
Canadian Furnace Limited	Port Colborne, Ontario
Steel Company of Canada, Limited	Hamilton, Ontario
British Columbia Tube Works Ltd., (x)	Vancouver, British Columbia
(b) Ferro-alloys (x)	
Canadian Furnace, Limited	Port Colborne, Ontario
Chromium Mining & Smelting Corporation, Limited	Sault Ste. Marie, Ontario
Electro Metallurgical Company of Canada, Limited	Welland, Ontario
St. Lawrence Alloys and Metals, Limited	Beauharnois, Quebec
(c) Steel Ingots and Steel Castings	
Maritime Steel and Foundries, Limited	379 Glasgow St., New Glasgow, Nova Scotia
Dominion Steel & Coal Corporation, Limited	Sydney, Nova Scotia
Canadian Brake Shoe & Foundry Company, Limited	101 Belvidere St., Sherbrooke, Quebec
Canadian Car & Foundry Company, Limited	Longue Pointe, Montreal, Quebec
Canadian Tube & Steel Products, Limited	5900 St. Patrick St., Montreal, Quebec
Joliette Steel, Limited	Laval St., Joliette, Quebec
La Compagnie F. X. Drolet	206 rue du Pont, Quebec, Quebec
Lynn MacLeod Metallurgy Limited	Notre Dame St., Thetford Mines, Quebec
Manganese Steel Castings, Limited	Abenaquis St., Sherbrooke, Quebec
Shawinigan Chemicals, Limited (Stainless Steel Division)	Shawinigan Falls, Quebec

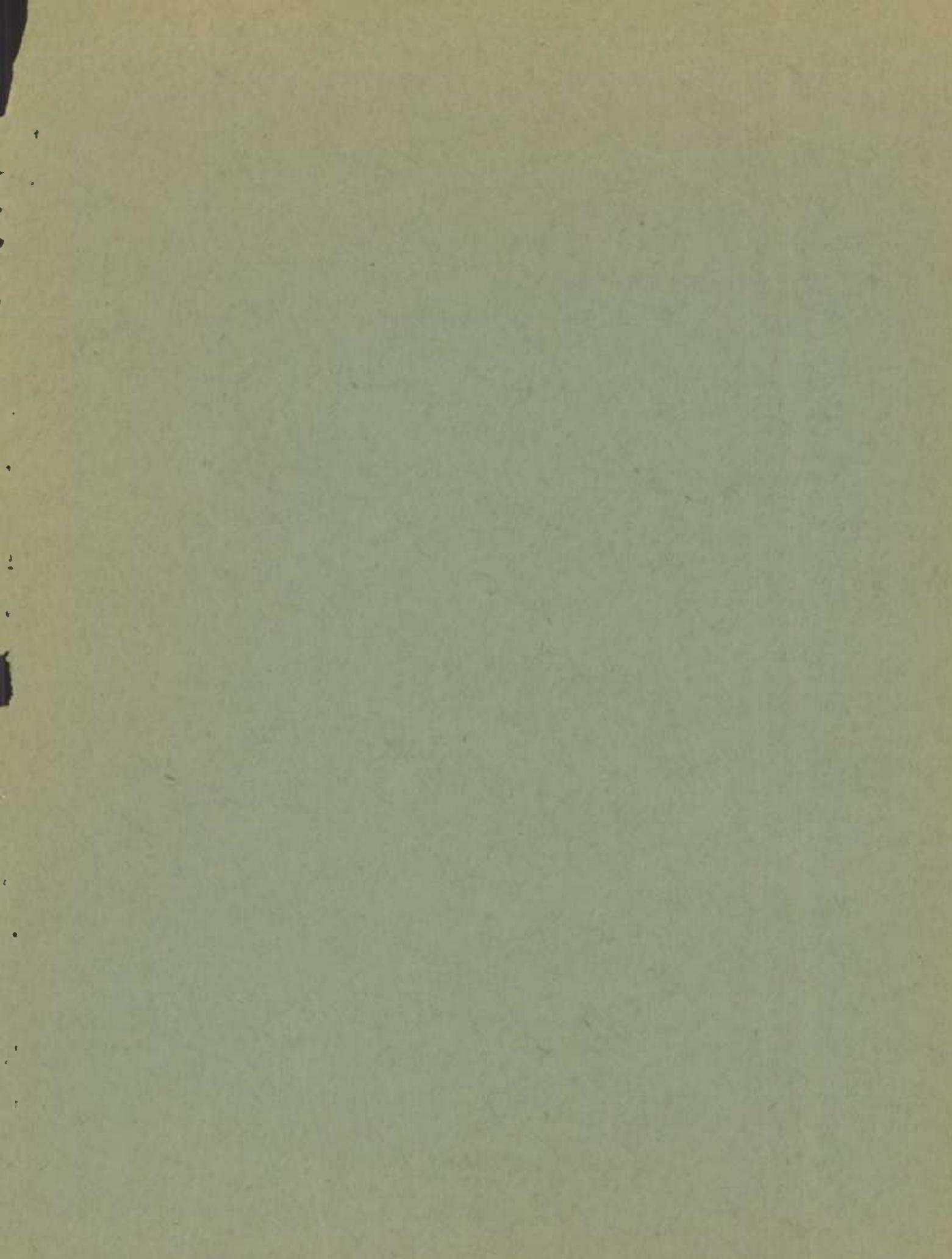
(x) Not including the firms which made ferro-alloys as a secondary product.

(x) Operated an electric furnace for making pig iron.

DIRECTORY OF FIRMS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1947
(Concluded)

Name of Firm	Location of Plants
(c) Steel Ingots and Steel Castings (Concluded)	
Sorel Industries, Limited	Sorel, Quebec
Sorel Steel Foundries, Limited	7 Limoges St., Sorel, Quebec
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ontario
Atlas Steels, Limited	East Main St., Welland, Ontario
Burlington Steel Company, Limited	Sherman Avenue North, Hamilton, Ontario
Canada Electric Castings, Limited	West St., Orillia, Ontario
Dominion Foundries & Steel, Limited	Depew St., Hamilton, Ontario
Fahralloy, Canada, Limited	Barrie Road, Orillia, Ontario
Quality Steels (Canada) Ltd.	London, Ontario
Ford Motor Company of Canada, Limited	Windsor, Ontario
Kennedy & Sons, Limited, The Wm.	Second Avenue West, Owen Sound, Ontario
Steel Company of Canada, Limited	Wilcox St., Hamilton, Ontario
Welland Electric Steel Foundry Limited	123 Victoria St., Welland, Ontario
Manitoba Rolling Mill Company, Limited	Selkirk, Manitoba
Manitoba Steel Foundries, Limited	Selkirk, Manitoba
Vulcan Iron Works, Limited	Pt. Douglas Ave., Winnipeg, Manitoba
Foothills Steel Foundry & Iron Works	1439 - 17th Ave. East, Calgary, Alberta
Riverside Iron Works, Limited	803 - 24th Ave., S.E., Calgary, Alta.
Britannia Mining and Smelting Company, Limited	Britannia Beach, British Columbia
Consolidated Mining & Smelting Company of Canada, Limited	Tadanac, British Columbia
Reliance Foundry Company, Limited	149 Fourth Avenue West, Vancouver, British Columbia
Vancouver Engineering Works, Limited	519 Sixth Avenue West, Vancouver, British Columbia
Westland Iron and Steel Foundries, Limited	1395 Franklin St., Vancouver, British Columbia
A-1 Steel & Iron Foundry Ltd.	29 West 3rd Ave., Vancouver, British Columbia
Victoria Machinery Depot Co. Ltd.	33 Dallas Road, Victoria, British Columbia
(d) Hot Rolled Iron and Steel	
Canadian Car & Foundry Company, Limited	Amherst, Nova Scotia
Dominion Steel & Coal Corporation, Limited	Sydney, Nova Scotia
Canadian Tube & Steel Products, Limited	5900 St. Patrick St., Montreal, Quebec
Steel Company of Canada, Limited	Notre Dame St. West, Montreal, Quebec
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ontario
Atlas Steels, Limited	Welland, Ontario
Burlington Steel Company, Limited	Sherman Avenue North, Hamilton, Ontario
Dominion Foundries & Steel, Limited	Depew Street, Hamilton, Ontario
Quality Steels (Canada) Ltd.	529 Philip St., London, Ontario
Steel Company of Canada, Limited	Queen St. North, Hamilton, Ontario
Steel Company of Canada, Limited	Wilcox St., Hamilton, Ontario
Manitoba Rolling Mill Company, Limited	Selkirk, Manitoba
(e) Cold Rolled Steel	
Stanley Steel Company, Limited	57 Gerrard St., Hamilton, Ontario
(f) Cold Drawn Steel	
Canadian Drawn Steel Company, Limited	Gerrard St., Hamilton, Ontario
Union Drawn Steel Company, Limited	Victoria Avenue South, Hamilton, Ontario

Note: Detailed statistics of imports and exports of iron and steel products are available on application to the Dominion Bureau of Statistics, Ottawa, Canada.



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