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GOVERNMENT OF CANADA

THE PRIMARY IRON AND STEEL
INDUSTRY, 1949





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THE PRIMARY IRON AND STEEL
INDUSTRY, 1949

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NOTICE

The Industry and Merchandising Division of the Bureau of Statistics collects and compiles figures on (a) the primary industries in Canada—mining, forestry and fishing; (b) manufacturing; (c) construction, and (d) merchandising and services.

For the purpose of annual compilation and publication, the manufacturing industries have been classified into major groups, prefaced by two reports of a general nature, as follows:

- I Summary Report on Manufacturing Industries
- II Manufacturing Industries by Geographical Distribution
- III Foods and Beverages
- IV Tobacco and Tobacco Products
- V Rubber Products
- VI Leather Products
- VII Miscellaneous Manufactures
- VIII Textiles
- IX Wood and Paper Products
- X Printing Trades
- XI Operations in the Woods
- XII Iron and Steel Products
- XIII Transportation Equipment
- XIV Non-ferrous Metal Products
- XV Electrical Apparatus and Supplies
- XVI Non-metallic Mineral Products
- XVII Products of Petroleum and Coal
- XVIII Chemicals and Allied Products

The present report belongs in Group XII. It is punched to permit of filing in a ring binder along with others of the group. The reports in this group are:

- A General Review
- B The Agricultural Implements Industry
- C The Boilers and Plate Work Industry
- D The Bridge Building and Structural Steel Industry
- E The Hardware, Tools and Cutlery Industry
- F The Heating and Cooking Apparatus Industry
- G The Machinery Industry
- H The Machine Shops Industry
- I The Iron Castings Industry
- J The Primary Iron and Steel Industry
- K The Sheet Metal Products Industry
- L The Wire and Wire Goods Industry
- M The Miscellaneous Iron and Steel Products Industry

THE PRIMARY IRON AND STEEL INDUSTRY, 1949

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 drawn steel bars, strips and shapes. Forty-three firms were included in this industry in 1949 and reports were received for 55 different plants or departments, including 4 blast furnace departments, 4 ferro-alloy plants, 33 steel furnace divisions, and 14 rolling or drawing mills. Separate reports were received for blast furnace departments, for steel furnace divisions and 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 8.4 per cent higher in value in 1949 than in 1948, the totals being \$305,734,984 and \$282,167,150 respectively. Twenty-four works in Ontario accounted for 74 per cent of the total for Canada, or \$226,993,285; 12 plants in Quebec accounted for 12 per cent or \$36,556,230; 5 plants in Nova Scotia for 11 per cent or \$33,501,905; while the remaining \$8,683,564 or 3 per cent was accounted for by 4 plants in Manitoba, 2 in Alberta and 8 in British Columbia.

In 1949 an average of 29,097 people was employed in this industry, this being a decline of approximately 1 per cent from the 1948 average of 29,367. Sixty-five per cent of the employees, or 18,981, worked in plants in Ontario; 4,832 in Nova Scotia, 4,017 in Quebec, 868 in Manitoba and 399 in Alberta and British Columbia. Payments in salaries and wages during 1949 amounted to \$82,958,229, an increase of 7.2 per cent over the previous year's total of \$77,357,760. Salaries advanced to \$11,472,895 from \$9,946,211 and wages increased to \$71,485,334 from \$67,411,549.

Materials used in manufacturing processes cost \$147,229,391 in 1949 compared with \$132,779,063 in 1948, and the cost of fuel and electricity was \$22,352,965 as against \$24,111,139, an increased expenditure of 8.1 per cent for materials, fuel and power.

Pig Iron — Output of 2,154,485 net tons of pig iron in 1949 was 1.3 per cent more than the 2,125,739 tons reported for the previous year. Production of basic iron amounted to 1,790,328 tons or 83 per cent of the total; foundry iron amounted to 215,768 tons, and malleable iron to 148,389 tons.

Producers' sales of pig iron totalled 391,423 tons at \$16,400,258 compared with 454,341 tons at \$17,165,056 in 1948.

Charges to iron blast furnaces during the year included 2,738,816 tons of imported iron ore, 1,107,250 tons of Canadian ore, 2,011,749 tons of coke, 442,032 tons of imported limestone and 385,423 tons of Canadian limestone.

Imports of pig iron during the calendar year increased to 20,531 tons from 7,378 tons in 1948, and exports increased to 12,506 tons from 662 tons.

Producers' stocks of pig iron at the end of 1949 totalled 71,231 tons compared with 31,391 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 2,122,670 tons in 1949 or 1.1 per cent less than in 1948 when the apparent domestic supply was 2,146,040 tons.

Producers of pig iron in Canada had 14 blast furnaces at the end of 1949 which could produce 2.75 million net tons if operated at rated capacity. Actual production of 2,154,485 net tons in 1949 showed an operating rate of about 78 per cent. Twelve furnaces were in blast during the year.

Ferro-alloys — Ferro-alloys were made in 1949 by 10 different concerns, 5 of which recovered ferrosilicon as a by-product in the manufacture of abrasives. Output of ferro-alloys in 1949 amounted to 202,092 net tons, a drop of 13 per cent from the 232,734 reported for 1948.

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

Steel Ingots and Castings — Steel production declined slightly to 3,190,377 tons in 1949 from 3,200,480 tons in 1948. Actually, the output of steel ingots increased to 3,095,626 tons from 3,087,063 tons; however, steel castings dropped to 94,751 tons from 113,417 tons. Factory sales of ingots and castings totalled 234,218 tons at \$36,372,735.

Thirty-three steel plants were in operation during the year. At the end of 1949 these plants had 128 furnaces, including 49 basic open hearth with an annual rated capacity of 3,076,000 tons, 76 electric furnaces rated at 917,000 tons, and 3 converters at 10,000 tons. There were 9 makers of steel ingots with capacity of 3,691,000 net tons per annum. The total annual steel capacity of all plants, including ingots and castings, was 4,003,000 tons at the year end.

Operating steel furnaces in 1949 used 1,736,824 net tons of pig iron, 1,770,758 tons of scrap iron or steel, 183,572 tons of iron ore, 254,072 tons of limestone, 120,494 tons of dolomite, 67,483 tons of lime, 95,068 tons of silica sand, 15,333 tons of magnesite, and 42,356 tons of ferro-alloys.

Rolled and Drawn Steel — In 1949 there were 11 mills occupied chiefly in hot rolling of steel products and 3 mills making only cold drawn and cold rolled shapes. Eight of these mills were in Ontario, 2 in Nova Scotia, 2 in Quebec, 1 in Manitoba and 1 in British Columbia.

Rolling mill sales advanced 7 per cent to \$218,464,584 from \$203,642,830 in 1948. The main items sold during the year under review were 532,092 tons of hot rolled bars at \$49,414,874; 171,653 tons of plates at \$14,596,604; 538,134 tons of sheets, hoops, bands and strips at \$64,352,155; 402,000 tons of rails and rail fastenings at \$30,211,139; 396,924 tons of semi-finished forms, such as blooms, billets, etc. at \$23,603,686; 177,314 tons of structural shapes at \$13,940,920; and 114,114 tons of wire rods at \$7,137,187.

TABLE 1. Provincial Distribution of Active Plants in the Primary Iron and Steel Industry, 1949

Province	Number of firms	Pig Iron		Steel Ingots and Castings		Rolling and drawing mills	Ferro- alloys ¹
		Number of plants	Number of blast furnaces	Number of plants	Number of steel furnaces		
Nova Scotia	3	1	4	2	17	2	—
Quebec	11	—	—	9	21	2	1
Ontario	16	3	10	10	72	8	3
Manitoba	3	—	—	3	5	1	—
Alberta	2	—	—	2	2	—	—
British Columbia	8	—	—	7	11	1	—
Canada	43²	4	14	38	128	14	4

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

2. Some firms operate in more than one province.

TABLE 2. Principal Statistics of the Primary Iron and Steel Industry, 1945-1949

Province	Number of plants	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
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.....	58	26,933	60,285,368	18,863,396	104,532,334	216,275,618
1948.....	55	29,367	77,357,760	24,111,139	132,779,063	282,167,150
1949.....	55	29,097	82,958,229	22,352,965	147,229,391	305,734,984
Per cent change, 1949 from 1948	—	- 0.9	+7.2	- 7.3	+10.9	+8.4

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 5. Materials Charged to Iron Blast Furnaces, 1948 and 1949

Material	1948		1949	
	Quantity	Cost at furnace	Quantity	Cost at furnace
		Net tons		\$
Iron ore:				
Canadian (crude).....	45,026	265,379	783,551	4,249,570
Imported (crude).....	3,606,061	17,432,162	2,738,816	15,508,725
Canadian (beneficiated).....	148,909	846,053	323,699	1,980,301
Imported (beneficiated).....	110,622	558,243	—	—
Mill cinder, roll scale, flue dust, etc.....	273,846	794,225	298,598	1,225,641
Scrap (net charge).....	44,374	748,373	58,240	978,070
Limestone:				
From Canadian quarries.....	181,814	313,128	385,423	818,126
From foreign sources	705,483	977,698	442,032	501,898
Dolomite:				
From Canadian quarries.....	102,097	198,266	113,032	171,151
From foreign sources	13,346	20,834	8,815	14,860
Coke	2,075,263	25,247,496	2,011,749	25,926,735
Other materials.....	—	179,412	—	195,409
Total.....	—	47,581,269	—	51,570,486

TABLE 6. Production of Pig Iron, by Grades, 1940-1949

Year	Basic	Foundry	Malleable	Total
				(Net tons)
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 ¹
1948.....	1,741,613	216,246	167,880	2,125,739
1949.....	1,790,328	215,768	148,389	2,154,485

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

TABLE 7. Production of Pig Iron, by Provinces, 1940-1949

Year	Nova Scotia	Ontario	Total
			(Net tons)
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 ¹
1948.....	438,430	1,687,309	2,125,739
1949.....	472,885	1,681,600	2,154,485

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

IRON AND STEEL PRODUCTS

TABLE 8. Production of Pig Iron, by Months, 1948 and 1949

Month	1948			1949		
	For own use	For sale	Total	For own use	For sale	Total
(Net tons)						
January.....	125,914	34,128	160,042	143,714	39,360	183,074
February.....	120,515	30,608	151,123	141,044	31,680	172,724
March.....	141,035	31,640	172,675	153,537	48,593	202,130
April.....	134,562	36,223	170,785	138,697	42,043	180,740
May.....	153,958	39,347	193,305	174,968	27,180	202,148
June.....	140,177	43,586	183,763	163,740	30,515	194,255
July.....	141,925	46,015	187,940	154,470	20,911	175,381
August.....	148,425	42,958	191,383	157,900	22,215	180,115
September.....	143,180	39,285	182,465	139,002	29,434	168,436
October.....	157,582	28,842	186,424	136,259	29,761	166,020
November.....	128,705	38,066	166,771	122,009	35,318	157,327
December.....	135,420	43,643	179,063	137,722	34,413	172,135
Total.....	1,671,398	454,341	2,125,739	1,762,862	391,423	2,154,285

TABLE 9. Sales of Pig Iron by the Producers, 1940-1949

Year	Tonnage sold	Income from sales	Year	Tonnage sold	Income from sales
		\$			\$
1940.....	277,311	5,868,769	1945.....	428,902	9,527,026
1941.....	338,066	7,080,242	1946.....	320,525	8,087,403
1942.....	387,997	8,366,936	1947.....	458,300	14,172,493
1943.....	387,109	8,328,322	1948.....	454,341	17,165,056
1944.....	400,010	8,641,495	1949.....	391,423	16,400,258

TABLE 10. Iron Ore, Fuel and Flux Charged to Iron Blast Furnaces, 1940-1949

Year	Iron Ore	Mill cinder, scale, etc.	Scrap	Coke	Limestone	Dolomite
(Net tons)						
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	Not available
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
1948.....	3,910,618	273,846	44,374	2,075,263	887,297	115,443
1949.....	3,846,066	298,598	58,240	2,011,749	827,455	121,847

TABLE 11. Imports into Canada and Exports of Pig Iron, 1940-1949

Year	Imports		Exports	
	Net tons	\$	Net tons	\$
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
1948.....	7,378	233,223	662	29,226
1949.....	20,531	936,311	12,506	547,963

TABLE 12. Stocks of Pig Iron Held by Producers in Canada, 1940-1949

Year	Net tons	Year	Net tons
1940.....	76,560	1945.....	25,193
1941.....	27,049	1946.....	52,112
1942.....	87,955	1947.....	44,976
1943.....	28,230	1948.....	31,391
1944.....	49,615	1949.....	71,231

TABLE 13. Apparent Supply of Pig Iron in Canada, 1940-1949

Year	Production	Add imports	Deduct exports	Add or deduct changes in producers' stocks ¹	Apparent supply ²
(Net tons)					
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.....	1,852,628	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
1948.....	2,125,739	7,378	662	+13,585	2,146,040
1949.....	2,154,485	20,531	12,506	-39,840	2,122,670

1. 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.

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

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**TABLE 14. Consumption of Pig Iron in Canada, by Industries and by Provinces, 1946-1949
(as reported by consumers)**

	1946	1947	1948	1949
(Net tons)				
(a) By Industries				
Steel ingots and castings.....	1,085,005	1,542,040	1,696,128	1,736,824
Iron castings.....	173,557	208,927	248,228	208,904
Boilers, tanks and platework.....	36,002	39,363	44,046	33,126
Agricultural implements.....	27,288	29,931	27,975	29,004
Machinery	25,784	26,680	24,699	21,926
Automobiles.....	7,372	8,921	7,581	10,439
Automobile parts.....	9,740	14,132	8,956	16,130
Railway rolling stock.....	21,526	24,734	32,094	18,561
Brass and copper products	3,851	3,097	3,433	3,408
Shipbuilding.....	939	974	870	595
Hardware and tools.....	3,480	3,024	2,600	3,198
Miscellaneous iron and steel	1,167	1,449	497	297
Heating and cooking apparatus.....	22,393	25,815	26,563	23,942
Electrical apparatus and supplies.....	2,782	3,764	5,148	7,443
Total.....	1,420,886	1,932,851	2,128,818	2,113,797
(b) By Provinces				
Prince Edward Island.....	45	40	20	20
Nova Scotia.....	295,705	366,367	430,258	467,515
New Brunswick.....	3,786	4,772	4,465	2,919
Quebec.....	74,961	92,327	105,588	78,279
Ontario.....	1,031,843	1,451,851	1,572,375	1,554,484
Manitoba.....	11,347	13,495	11,991	8,392
Saskatchewan.....	70	70	33	20
Alberta.....	221	422	248	203
British Columbia.....	2,908	3,507	3,840	1,965
Canada.....	1,420,886	1,932,851	2,128,818	2,113,797

TABLE 15. Blast Furnaces in Canada, 1947-1949

Name of Company	Location of Plant	Number of stacks	Total annual capacity	Number of days in blast		
				1947	1948	1949
Dominion Steel and Coal Corporation, Ltd.	Sydney, Nova Scotia	1	225,000	331	341	365
		1	235,000	365	289	365
		1	135,000	219	366	225
		1	135,000	—	—	—
		Total	730,000	—	—	—
Canadian Furnace Company, Limited	Port Colborne, Ont.	1	170,000	321 ¹	321 ¹	329 ¹
		1	53,000	—	—	—
		Total	223,000	—	—	—
The Steel Company of Canada, Limited	Hamilton, Ontario	1	133,000	364	364	365
		1	276,000	365	365	363
		1	358,000	365	365	365
		Total	757,000	—	—	—
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ont.	1	120,000	134	363	236
		1	120,000	353	356	302
		1	246,000	351	324	364
		1	189,000	364	359	346
		1	360,000	338	360	310
Total		5	1,035,000	—	—	—
Total for Canada.....		14	2,745,000	—	—	—

1. For making pig iron; ferro-alloys also made in this furnace.

TABLE 16. 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	1945	1946	1947	1948	1949
(Thousands of Net tons)					
United States.....	54,919	46,515	60,117	61,912	54,917 ¹
Canada.....	1,976	1,525	2,152	2,335	2,334 ¹
Mexico	241	311	372	312	396
Brazil	286	402	530	575	550
United Kingdom.....	7,960	8,692	8,457	10,389	10,638 ²
Belgium.....	802	2,393	3,108	4,346	4,128
Luxembourg.....	344	1,505	2,004	2,896	2,615 ³
France	1,304	3,796	5,383	7,248	9,211 ⁴
Netherlands.....	—	128	180	487	479
Hungary.....	1	176	330	336	441
Germany	1,550	2,425	2,491	6,394	7,870 ⁵
Saar.....	—	271	721	1,252	1,744
Austria.....	—	64	306	680	923
Czechoslovakia.....	635	1,058	1,569	1,822	1,874
Poland	252	800	944	1,199	1,488
Yugoslavia.....	—	—	—	—	276
Rumania.....	—	—	—	—	—
Russia.....	18,800	16,800	18,000	18,500	18,700 ⁶
Italy	83	226	425	580	492
Spain.....	519	540	551	562	672
Sweden.....	839	771	779	861	917
Japan.....	556	202	391	921	1,772
Turkey	77	87	109	110	124
India.....	1,562	1,485	1,724	1,639	1,733
Union of South Africa	613	617	701	718	780
Australia	1,257	979	1,329	1,273	1,152
Total	94,576	91,454	112,673	126,091	126,225

(b) FERRO-ALLOYS

TABLE 17. Production of Ferro-Alloys, 1940-1949

Year	Net tons	Year	Net tons
1940.....	149,394	1945.....	171,642
1941.....	204,354	1946.....	139,392
1942.....	209,017	1947.....	227,123
1943.....	197,094	1948.....	232,734
1944.....	171,323	1949.....	202,092

TABLE 18. Producers of Ferro-Alloys, 1949

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	Welland, Ontario.....	Ferrosilicon, ferrochrome, ferromanganese, silico-manganese, 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 siliconmanganese

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS

TABLE 19. Production of Steel Ingots and Steel Castings and Sales by the Producers, 1948 and 1949

	1948			1949		
	Total tonnage of steel made (all kinds) including alloys	Sales		Total tonnage of steel made (all kinds) including alloys	Sales	
		Quantity	Income from sales		Quantity	Income from sales
	Net tons	Net tons	\$	Net tons	Net tons	\$
Steel Ingots:						
Basic open hearth	2, 620, 946	68, 354	3, 336, 482	2, 688, 036	118, 025	6, 113, 726
Electric	466, 117	—	—	407, 590	23, 949	1, 341, 326
Total Steel Ingots.....	3, 087, 063	68, 354	3, 336, 482	3, 095, 626	141, 974	7, 455, 052
Steel Castings:						
Basic open hearth.....	34, 041	32, 026	8, 125, 577	28, 671	29, 613	8, 145, 919
Converter	395	386	125, 973	80	80	29, 912
Electric	78, 981	75, 548	22, 680, 281	66, 000	62, 551	20, 741, 852
Total Steel Castings	113, 417	107, 960	30, 931, 831	94, 751	92, 244	28, 917, 683
Total Steel Ingots and Castings....	3, 200, 480	176, 314	34, 268, 313	3, 190, 377	234, 218	36, 372, 735
Any other products	—	—	885, 454	—	—	777, 641
Total all Products	—	—	35, 153, 767	—	—	37, 150, 376
Alloy steel included in above:						
Ingots.....	155, 863	—	—	143, 977	—	—
Castings.....	15, 737	15, 333	6, 006, 168	12, 975	11, 848	4, 976, 264
Total	171, 600	15, 333	6, 006, 168	156, 952	11, 848	4, 976, 264

TABLE 20. Materials Used in Steel Furnaces, 1948 and 1949

Material	1948		1949	
	Quantity	Cost of purchased materials	Quantity	Cost of purchased materials
	Net tons	\$	Net tons	\$
Pig iron:				
Own make.....	1,672,556	—	1,715,283	—
Purchased.....	23,572	807,518	21,541	902,964
Scrap iron or steel:				
Own make.....	934,905	—	950,904	—
Purchased.....	898,634	23,130,302	819,854	20,960,172
Spiegeleisen.....	—	—	172	16,127
Silicospiegeleisen.....	602	54,786	494	47,966
Ferromanganese:				
High carbon.....	21,752	3,046,149 ¹	24,065	3,674,348
Medium carbon.....	453	102,724 ¹	310	79,248
Low carbon.....	489	127,553	204	63,202
Silicomanganese.....	6,885	1,073,706	5,476	924,049
Sil-x.....	313	41,882	385	57,788
Ferrosilicon:				
15%.....	132	8,362	171	9,089
25%.....	—	—	—	—
50%.....	6,707	625,702 ¹	6,891	704,503
75%.....	163	22,375 ¹	30	7,041
85-90%.....	118	25,328	241	55,945
Ferrochrome (including chrom-x):				
High carbon.....	1,506	354,838	1,865	373,547
Low carbon.....	915	354,854	722	286,324
Ferromolybdenum.....	65	80,263	38	55,333
Ferrophosphorus.....	531	43,544	535	45,233
Ferro selenium.....	4	6,463	8	16,656
Ferrotitanium.....	442	81,129	142	29,067
Ferrotungsten.....	187	590,584	190	428,535
Ferrovanadium.....	67	218,734	39	137,405
Ferozirconium.....	30	4,754	24	4,784
Calcium silicon.....	37	14,664	16	6,862
Calcium manganese silicon.....	524	200,328	338	138,283
Other ferro-alloys.....	—	3,848	—	—
Aluminum ingot and shot.....	876	300,123	896	361,708
Copper ingots, cakes, shot, etc.....	261	113,306	157	63,831
Nickel.....	869	603,059	725	576,840
Other metals.....	—	52,752	—	46,419
Ore, iron.....	170,790	1,637,660	183,572	2,100,456
Ore, manganese.....	57	2,480	16	992
Ore, chrome.....	229	19,067	312	15,987
Ore, tungsten.....	172	206,112	135	206,027
Bentonite.....	4,490	121,474	3,092	88,033
Coal:				
Anthracite.....	505	6,994	65	922
Bituminous.....	312	4,122	285	4,090
Coke.....	8,559	118,904	6,100	82,930
Charcoal.....	49	3,336	34	2,192
Dolomite:				
Crude.....	109,220	316,353	94,725	349,589
Calcined.....	9,587	198,040	25,769	533,879
Fluorspar.....	20,651	700,005	21,136	726,075
Ganister.....	8,617	30,802	9,511	32,069
Graphite.....	641	63,095	920	93,131
Lime.....	74,074	666,662	67,483	586,484
Limestone:				
Canadian.....	101,924	201,551	175,498	381,501
Imported.....	142,172	199,047	78,574	79,564
Magnesite.....	15,286	686,486	15,333	726,965
Electrodes.....	—	1,480,847	—	1,079,004
Silica sand:				
For moulds.....	83,785	613,659	94,682	697,390
For sand blasting.....	1,101	89,431	386	18,240
Other foundry sands.....	11,155	39,648	13,400	39,463
Sulphur.....	74	10,143	55	3,851
Firebrick, fireclay and other refractories.....	—	2,958,073	—	2,754,889
Calcium molybdate.....	41	39,927	30	30,614
Molybdenum trioxide(molybdic oxide) briquettes	174	144,511	226	212,795
All other materials.....	—	2,470,984	—	2,787,795
Total value of metals, ores and other materials used.....	—	45,119,043	—	43,707,576

1. Revised.

IRON AND STEEL PRODUCTS

TABLE 21. Production of Steel Ingots and Steel Castings, by Grades, 1940-1949

Year	Steel Ingots		Steel Castings			Total steel ingots and castings
	Open hearth	Electric	Open hearth	Converter	Electric	
(Net tons)						
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	355,974	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
1948.....	2,620,946	466,117	34,041	395	78,981	3,200,480
1949.....	2,688,036	407,590	28,671	80	66,000	3,190,377

TABLE 22. Production of Steel Ingots and Steel Castings, by Months, 1945-1949

Month	1945	1946	1947	1948	1949
(Net tons)					
January.....	268,722	244,623	249,798	256,726	284,707
February.....	250,464	233,893	229,222	239,646	259,271
March.....	277,461	249,117	269,732	286,026	298,461
April.....	274,213	247,519	252,156	264,266	269,968
May.....	267,643	259,626	244,076	289,567	293,179
June.....	257,115	214,861	238,297	259,365	270,455
July.....	229,161	135,914	232,341	244,872	238,830
August.....	224,928	88,729	233,754	263,054	248,749
September.....	198,508	76,564	234,188	257,865	240,748
October.....	205,846	123,841	256,461	281,866	258,891
November.....	207,981	222,644	255,372	277,978	259,722
December.....	215,885	229,954	250,555	279,249	267,396
Total.....	2,877,927	2,327,285	2,945,952	3,200,480	3,190,377

TABLE 23. Annual Production of Steel Ingots and Steel Castings, by Provinces, 1940-1949

Year	Nova Scotia	Quebec	Ontario	Manitoba	Alberta	British Columbia	Canada
(Net tons)							
1940.....	623,021	73,631	1,512,495	39,789	381	4,452	2,253,769
1941.....	632,203	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
1948.....	626,604	73,681	2,436,050	59,084	397	4,664	3,200,480
1949.....	672,807	73,092	2,365,201	60,079	373	18,825	3,190,377

TABLE 24. Sales of Steel Ingots and Steel Castings by the Producers, 1940-1949

Year	Tonnage sold	Income from sales	Year	Tonnage sold	Income from sales
	Net tons	\$		Net tons	\$
1940	143,927	12,616,483	1945	148,247	28,121,723
1941	333,855	22,508,948	1946	117,863	20,969,581
1942	286,007	38,014,454	1947	152,113	25,260,293
1943	151,924	30,057,984	1948	176,314	34,268,313
1944	171,072	34,848,365	1949	234,218	36,372,735

TABLE 25. Production of Alloy Steel Ingots and Castings, 1940-1949

Year	Ingots	Castings	Total
			(Net tons)
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
1948	155,863	15,737	171,600
1949	143,977	12,975	156,952

TABLE 26. Metal, Ore and Flux Charged to Steel Furnaces, 1940-1949

Year	Pig iron	Ferro-manganese alloys ¹	Other ferro-alloys	Scrap iron and steel	Iron ore	Limestone	Dolomite	Fluorspar
	(Net tons)							
1940	1,083,190	20,899	15,172	1,327,510	145,658	165,975	81,233	15,307
1941	1,340,441	31,093	20,536	1,599,124	155,273	202,609	92,695	17,054
1942	1,615,396	30,605	20,128	1,826,911	198,890	243,608	101,641	20,133
1943	1,518,548	29,121	10,142	1,751,779	171,040	242,032	89,056	20,790
1944	1,513,586	31,304	7,519	1,642,250	154,415	237,167	85,601	20,024
1945	1,416,844	31,143	15,101	1,741,895	106,614	217,499	77,206	19,462
1946	1,085,005	22,403	10,598	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
1948	1,696,128	30,181	11,150	1,833,539	170,790	244,096	118,807	20,651
1949	1,736,824	30,721	11,635	1,770,758	183,572	254,072	120,494	21,136

1. Including spiegeleisen, silicospiegeleisen, ferromanganese (all grades) and silicomanganese.

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TABLE 27. Steel Furnaces in Canada, December 31, 1949

	Type	Number of units	Size	Total annual capacity
		(net tons)		(net tons)
Nova Scotia:				
Dominion Steel & Coal Corp. Ltd., Sydney.....	O.H.	10	56	320,000
	O.H.	2	175	200,000
	O.H.	3	125	241,500
	Elec.	1	11	26,000
Total	—	16	—	789,500
Maritime Steel Foundries Ltd., New Glasgow.....	Elec.	1	4	3,000
Quebec:				
Canadian Unitcast-Steel, Ltd., Montreal.....	Elec.	1	5	12,000
Canadian Car & Foundry Co. Ltd., Montreal.....	O.H.	3	25	51,600
	Elec.	1	4	7,800
	Elec.	1	2½	4,900
	Elec.	1	½	1,000
Total	—	6	—	65,300
Canadian Tube & Steel Products Ltd., Montreal.....	Elec.	2	25	120,000
	Elec.	2	5	31,200
	Elec.	1	5	13,400
Total	—	5	—	164,600
Joliette Steel Limited, Joliette	Elec.	1	1½	4,000
	Elec.	1	2	8,000
Total	—	2	—	12,000
La Compagnie F.X. Drolet Ltd., Quebec	Conv.	1	1	300
Lynn MacLeod Metallurgy Ltd., Thetford Mines	Elec.	1	1½	2,500
Manganese Steel Castings Ltd., Sherbrooke.....	Elec.	1	2	1,800
Shawinigan Chemicals Ltd., Shawinigan Falls.....	Elec.	1	½	900
	Elec.	1	2	3,600
	Elec.	1	1	1,800
Total	—	3	—	6,300
Sorel Steel Foundries Ltd., Sorel.....	Elec.	1	3	5,900
Ontario:				
Algoma Steel Corp. Ltd., Sault Ste. Marie.....	O.H.	8	84	500,000
	O.H.	4	131	500,000
Total	—	12	—	1,000,000
Atlas Steels Limited, Welland.....	Elec.	1	6	7,200
	Elec.	1	10	12,000
	Elec.	2	25	64,000
	Elec.	2	45	86,400
Total	—	6	—	169,600
Burlington Steel Company Ltd., Hamilton	Elec.	1	6	24,000
Canada Electric Castings Ltd., Orillia.....	Elec.	2	2	6,000
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	27,500
	Elec.	2	50	110,000
	Elec.	1	2½	9,000
Total	—	10	—	375,800
Fahr alloy Canada Ltd., Orillia.....	Elec.	1	½	1,500
	Elec.	1	1½	2,300
	Elec.	1	2	3,100
Total	—	3	—	6,900

TABLE 27. Steel Furnaces in Canada, December 31, 1949 — Concluded

	Type	Number of units	Size	Total annual capacity
			(net tons)	(net tons)
Ontario — Concluded				
Ford Motor Co. of Canada Ltd., Windsor.....	Elec.	1	5	10,500
	Elec.	15	4	88,100
	Elec.	1	1½	750
	Elec.	1	¾	625
Total.....	—	18	—	99,975
William Kennedy & Sons Ltd., Owen Sound	Conv.	1	2	4,800
	Elec.	1	1¼	2,400
	Elec.	1	4	9,000
Total.....	—	3	—	16,200
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	1½	5,400
	Elec.	1	½	
	Elec.	1	¼	
Total.....	—	3	—	5,400
Manitoba:				
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	2,700
Alberta:				
Riverside Iron Works Ltd., Calgary	Elec.	1	1	900
Foothills Steel Foundry & Iron Works, Calgary	Elec.	1	½	1,200
British Columbia:				
A-1 Steel and Iron Foundry, Vancouver	Elec.	1	¼	1,900
Britannia Mining & Smelting Co. Ltd., Britannia Beach.....	Elec.	1	5	4,200
Consolidated Mining & Smelting Co. of Canada, Trail.....	Elec.	1	1	2,500
	Elec.	1	6	6,000
Total.....	—	2	—	8,500
Reliance Foundry Co. Ltd., Vancouver	Elec.	1	½	1,000
	Elec.	1	½	2,600
Total.....	—	2	—	3,600
Vancouver Engineering Works Ltd., Vancouver	Elec.	1	2	3,500
	Elec.	1	1	2,000
	Conv.	1	2	4,500
Total.....	—	3	—	10,000
Vancouver Steel Co. Ltd., Vancouver.....	Elec.	1	10	32,200
Victoria Machinery Depot Co. Ltd., Victoria	Elec.	1	1¼	625

TABLE 28. Summary of Steel Furnace Capacity, December 31, 1949

		Number of furnaces	Total annual capacity
			(net tons)
Basic open hearth.....	49	3,076,000	
Electric.....	76	917,000	
Converter.....	3	10,000	
Total.....	128	4,003,000	
Steel ingots:			
Basic open hearth.....	—	3,024,000	
Electric	—	667,000	
Total	—	3,691,000	
Steel castings.....	—	312,000	
Total Ingots and Castings	—	4,003,000	

TABLE 29. 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	1945	1946	1947	1948	1949
(Thousands of net tons)					
United States.....	79,702	66,603	84,894	88,640	77,978
Canada	2,803	2,293	2,902	3,159	3,154
Mexico	213	280	354	297	394
Brazil.....	224	381	427	509	667
United Kingdom.....	13,243	14,220	14,246	16,662	17,419
Belgium.....	812	2,518	3,180	4,318	4,239
Luxemburg	291	1,426	1,888	2,704	2,506
Hungary	142	389	658	818	882
France	1,822	4,859	6,338	7,984	10,057
Italy	437	1,270	1,874	2,343	2,252
Russia.....	19,800	20,000	22,000	22,200	22,700
Germany.....	322 ¹	2,963 ¹	3,290 ¹	6,127 ¹	10,039 ¹
Saar	—	321	776	1,346	1,938
Austria.....	189	207	394	714	920
Czechoslovakia.....	1,045	1,843	2,520	2,916	3,031
Poland	546	1,344	1,731	2,070	2,315
Spain.....	617	656	581	590	751
Sweden.....	1,327	1,335	1,311	1,385	1,506
Japan	1,177	608	1,041	1,889	3,430
Turkey	67	90	101	109	111
India	1,519	1,456	1,353	1,347	1,488
Union of South Africa	594	560	667	660	699
Australia.....	1,579	1,112	1,378	1,365	1,268
Total.....	128,470	126,732	153,903	170,151	169,744

1. American, British and French zones.

(d) ROLLED AND DRAWN STEEL

TABLE 30. Products Made in Iron and Steel Rolling and Drawing Mills, 1948 and 1949

Product	Total tonnage made	Factory Sales	
		Tonnage sold in Canada or for export	Income from tonnage sold
	Net tons	Net tons	\$
1948			
Semi-finished rolled forms of iron and steel:			
Blooms, billets, slabs and sheet bars, except those for forging and omitting hot strip mill sheet	2,201,281	321,748	16,983,227
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.....	112,338	102,906	7,539,117
Total Semi-finished Rolled Forms.....	2,313,619	424,654	24,522,344
Rails and rail fastenings:			
Rails.....	337,244	328,572	21,887,014
Splice bars or fish plates.....	23,005	23,190	2,151,653
Tie plates, rail joints, frogs, etc.....	49,669	49,575	3,901,039
Total Rails and Rail Fastenings.....	409,918	401,337	27,939,706
Wire rods, No. 5 gauge to 47/64 inch in diameter (excluding straight lengths over 5/16 inch in diameter).....	286,990	107,686	6,267,303
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.....	73,755	72,658	5,280,096
Up to, and including, 35 pounds per yard	101,276	101,291	7,550,422
Total Structural Steel Shapes.....	175,031	173,949	12,830,518
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	485,528	421,532	41,339,989
Bars for concrete reinforcing, including twisted and other deformed bars	86,547	85,832	6,537,997
Long angle splice bars, tie plate bars and all other long rail joint bars	62,240	—	—
Total Hot Rolled Bars.....	634,315	507,364	47,877,986
Cold rolled and cold drawn bars	34,791	35,142	6,182,547
Plates, all kinds, including boiler and other sheared plates, nail, washer, spike, tack and hinge plate	228,978	228,492	17,300,582
Sheets, hoops, bands and strips, including plain sheets, hot rolled strips, cold rolled strips, galvanized sheets ¹ , tinplate, terne plate ¹ and bonderized plate ¹	524,440	523,827	52,598,856
Total Plates, Sheets, Hoops, Bands and Strips.....	753,418	752,319	69,899,438
Other rolled forms, including mine arches, sheet piling, etc.....	83,758	49,367	3,761,504
Miscellaneous products (not rolled) made in rolling mills, including horseshoes, grinding balls, washers, forged axles, railway spikes, pressed spikes, etc.	—	—	4,361,484
Total Value of Production.....	—	—	203,642,830

1. Includes the tonnages made in rolling mills only.

(d) ROLLED AND DRAWN STEEL

TABLE 30. Products Made in Iron and Steel Rolling and Drawing Mills, 1948 and 1949—Conc.

Product	Total tonnage made	Factory Sales	
		Tonnage sold in Canada or for export	Income from tonnage sold
	Net tons	Net tons	\$
1949			
Semi-finished rolled forms of iron and steel:			
Blooms, billets, slabs and sheet bars, except those for forging and omitting hot strip mill sheet.....	2,272,987	321,094	18,037,477
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	82,853	75,830	5,566,209
Total Semi-finished Rolled Forms	2,355,840	396,924	23,603,686
Rails and rail fastenings:			
Rails	329,749	339,390	24,580,963
Splice bars or fish plates	14,481	14,267	1,398,332
Tie plates, rail joints, frogs, etc.	48,493	48,343	4,231,844
Total Rails and Rail Fastenings	392,723	402,000	30,211,139
Wire rods. No. 5 gauge to 47/64 inch in diameter (excluding straight lengths over 5/16 inch in diameter)			
.....	290,863	114,114	7,137,187
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.....	68,487	69,426	5,373,069
Up to, and including, 35 pounds per yard.....	99,612	107,888	8,567,851
Total Structural Steel Shapes	168,099	177,314	13,940,920
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.....	486,368	425,981	41,099,417
Bars for concrete reinforcing, including twisted and other deformed bars	108,335	106,111	8,315,457
Long angle splice bars, tie plate bars and all other long rail joint bars.....	67,785	—	—
Total Hot Rolled Bars	662,488	532,092	49,414,874
Cold rolled and cold drawn bars	35,537	35,701	6,377,739
Plates, all kinds, including boiler and other sheared plates, nail washer, spike, tack and hinge plate	178,440	171,653	14,596,604
Sheets, hoops, bands and strips, including plain sheets, hot rolled strips, cold rolled strips, galvanized sheets¹, tinplate, and blued plate	1,027,743	538,134	64,352,155
Total Plates, Sheets, Hoops, Bands and Strips	1,206,183	709,787	78,948,759
Other rolled forms, including mine arches, sheet piling, etc.	146,249	107,079	4,807,156
Miscellaneous products (not rolled) made in rolling mills, including horseshoes, grinding balls, washers, forged axles, railway spikes, pressed spikes, etc.	—	—	4,023,124
Total Value of Production	—	—	218,464,584

1. Includes the tonnages made in rolling mills only.

TABLE 31. Materials Used for All Purposes in Iron and Steel Rolling and Drawing Mills, 1948 and 1949

Material	Companies own make	Purchased	
		Quantity	Cost at works
		Net tons	\$
1948			
Steel ingots.....	3,047,979	70,492	3,416,747
Steel blooms.....	10,537	—	—
Steel slabs.....	—	215,473	10,877,103
Steel billets.....	74,746	92,198	3,971,332
Steel bars.....	—	40,609	3,486,163
Rails, old.....	605	48,490	1,275,519
Axles, old.....	—	3,198	90,836
Scrap iron and steel, other.....	11,944	536	10,725
Tin.....	—	2,236	3,800,829
Zinc spelter.....	—	6,235	1,667,830
Ammonium chloride.....	—	413	63,531
Sulphuric acid, 100%.....	—	10,042	197,265
Silica sand.....	—	390	2,823
All other materials and supplies.....	—	—	1,324,254
Total	—	—	30,184,957
1949			
Steel ingots.....	2,990,903	106,351	5,539,824
Steel blooms.....	8,783	—	—
Steel slabs.....	—	201,217	12,096,963
Steel billets.....	82,768	114,739	5,458,306
Steel bars.....	—	32,845	3,140,728
Rails, old.....	663	50,351	1,479,593
Axles, old.....	—	3,032	90,239
Scrap iron and steel, other.....	10,393	606	11,549
Tin.....	—	2,462	5,134,381
Zinc spelter.....	—	5,612	1,391,796
Ammonium chloride.....	—	394	61,733
Sulphuric acid, 100%.....	—	12,800	242,015
Silica sand.....	—	—	—
All other materials and supplies.....	—	—	4,311,457
Total	—	—	38,958,584

TABLE 32. Alloy Steel Products Made and Sold by Rolling Mills, 1948 and 1949

	1948		1949	
	Tonnage made	Tonnage sold	Tonnage made	Tonnage sold
(Net tons)				
Rails.....	223	223	—	—
Bars.....	83,266	79,029	78,516	73,353
Other products, including plates, billets, forgings, sheet piling and wire rods, etc.....	95,627	19,813	93,440	23,501
Total Alloy Steel	179,116	99,065	171,956	96,854

TABLE 33. Products Rolled from Old Rails, Axles, Etc., 1948 and 1949

	1948		1949	
	Tonnage made	Tonnage sold	Tonnage made	Tonnage sold
(Net tons)				
Rails.....	568	568	610	610
Bars.....	18,142	16,449	12,888	12,291
Other products.....	35,409	26,290	44,891	35,655
Total.....	54,119	43,307	58,389	48,556

TABLE 34. Pig Iron, Steel Ingots and Castings, and Semi-Finished Rolled Forms Shipped for Export by Producers, 1948 and 1949

	1948	1949	
			(Net tons)
Pig iron.....	5,557	11,793	
Steel ingots.....	—	—	
Steel castings.....	4,231	5,169	
Semi-finished rolled forms.....	24,228	58,684	
Total.....	34,016	75,646	

TABLE 35. Production and Factory Sales of Steel Rails, 1940-1949

Year	Tonnage made	Factory sales	
		Tonnage sold	Income from sales
		Net tons	\$
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
1948.....	337,244	328,572	21,887,014
1949.....	329,749	339,390	24,580,963

TABLE 36. Production and Factory Sales of Finished Rail Fastenings, 1940-1949

Year	Tie Plates			Fish Plates and Splice Bars		
	Quantity made	Factory Sales		Quantity made	Factory Sales	
		Quantity	Income from sales		Quantity	Income from sales
	Net tons	Net tons	\$	Net tons	Net tons	\$
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
1948.....	49,669	49,575	3,901,039	23,005	23,190	2,151,653
1949.....	48,493	48,343	4,231,844	14,481	14,267	1,398,332

TABLE 37. Production and Factory Sales of Wire Rods of Iron or Steel, 1940-1949

Year	Total tonnage made	Factory Sales		Year	Total tonnage made	Factory Sales			
		Tonnage sold	Income from sales			Tonnage sold	Income from sales		
						Net tons	\$		
	Net tons	Net tons	\$			Net tons	Net tons		
1940.....	300,785	131,255	5,305,124	1945.....	257,606	105,648	4,417,200		
1941.....	293,476	121,422	5,214,493	1946.....	210,548	82,006	3,670,356		
1942.....	256,457	105,475	4,347,189	1947.....	284,795	108,512	5,310,661		
1943.....	235,583	88,848	3,621,772	1948.....	286,990	107,686	6,267,303		
1944.....	244,270	105,046	4,300,337	1949.....	290,863	114,114	7,137,187		

TABLE 38. Production and Factory Sales of Blooms, Billets and Slabs, 1940-1949

Year	Total tonnage made	Except for Forging ¹			For Forging ²		
		Tonnage sold	Factory Sales		Total tonnage made	Factory Sales	
			Net tons	Net tons		Tonnage sold	Income from sales
	Net tons	Net tons	\$	Net tons	Net tons	Net tons	\$
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	
1948.....	2,201,281	321,748	16,983,227	112,338	102,906	7,539,117	
1949.....	2,272,987	321,094	18,037,477	82,853	75,830	5,566,209	

1. Shipments to other Canadian rolling mills are included.

2. Includes blanks or pierced billets for seamless tubes since 1947.

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TABLE 39. Production and Factory Sales of Hot Rolled Bars of All Kinds, 1940-1949

Year	Total tonnage made	Factory sales	
		Tonnage sold	Income from sales
	Net tons	Net tons	\$
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
1948	634,315	507,364	47,877,986
1949	662,488	532,092	49,414,874

TABLE 40. Production of Structural Steel Shapes of All Kinds, 1940-1949

Year	Total tonnage made	Factory sales	
		Tonnage sold	Income from sales
	Net tons	Net tons	\$
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
1948	175,031	173,949	12,830,518
1949	168,099	177,314	13,940,920

TABLE 41. Production and Factory Sales of Steel Plates, 1940-1949

Year	Total tonnage made	Factory sales	
		Tonnage sold	Income from sales
	Net tons	Net tons	\$
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
1948	228,978	228,492	17,300,582
1949	178,440	171,653	14,596,604

TABLE 42. Imports of Primary Forms of Iron and Steel, 1949

Commodity	Country of origin	Carbon	Alloy	Stainless
(Tons of 2,000 pounds)				
Pig Iron:				
Basic	United States ...	8,026	-	-
	Belgium	568	-	-
Foundry	United States ...	4,068	-	-
	United Kingdom	112	-	-
Malleable	United States ...	4,702	-	-
Silvery.....	United States ...	1,579	-	-
Charcoal.....	United States ...	117	-	-
Special	Germany.....	56	-	-
Ingots.....	United States ...	31,346	124	-
Billets, blooms, slabs and sheet bars.....	United States ...	2,029	39	-
	United Kingdom	-	26	-
Tube rounds and tube billets	United States ...	4,054	-	-
Bars and Sections:				
Hot rolled, n.o.p.	United States ...	49,286	3,480	58.2
	United Kingdom	897	1	65.8
	Belgium	6,843	-	-
	Sweden	9	-	-
Hot rolled:				
For agricultural implements	United States ...	15,869	2,923	-
Rounds over 4 7/8", squares over 4"	United States ...	1,344	187	8
	United Kingdom	98	-	1.5
	Belgium	4	-	-
Angles, channels, etc.....	United States ...	7,698	4	26.8
	Germany.....	1	-	1.1
	Belgium	2,429	-	-
	United Kingdom	621	-	-
Structurals (bar sizes) for agricultural implements	United States ...	8,782	1,169	-
Sash or casement sections.....	United States ...	1,866	-	-
	United Kingdom	133	-	-
Cold rolled, n.o.p.	United States ...	7,051	245	68.8
	United Kingdom	61	19	8.0
	Germany.....	-	4	-
Cold rolled, for agricultural implements	United States ...	7,708	61	-
Tool steel.....	United States ...	103	453	-
	United Kingdom	655	386	-
	Belgium	2	-	-
Structurals.....	United States ...	166,681	42	10.3
	United Kingdom	803	-	-
	Belgium	11,089	-	-
	France.....	83	-	-
Plates:				
78" and under in width.....	United States ...	37,559	307	252.6
	United Kingdom	20,615	-	31.4
	Belgium	112	-	-
	Holland.....	107	-	-
Over 78" and under 100" in width.....	United States ...	15,725	36	90.1
	United Kingdom	12,708	1	1.8

TOTAL

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TABLE 42. Imports of Primary Forms of Iron and Steel, 1949 — Con.

Commodity	Country of origin	Carbon	Alloy	Stainless
(Tons of 2,000 pounds)				
Plates — Concluded:				
100" in width and over.....	United States...	6,272	1	17.4
Flanged, dished or curved.....	United Kingdom	313	—	19.3
Boiler, pulp-mill digesters	United States...	1,148	—	4.4
Chequered or surface pattern.....	United States...	6,727	—	29.7
Painted.....	United Kingdom	288	—	—
For saws.....	United States...	7,049	—	—
For tubes.....	United States...	25	—	—
	United States...	—	1	—
	United States...	1,058	—	—
Sheets:				
Silicon .075 or more.....	United States...	—	18,677	—
Galvanized.....	United Kingdom	—	472	—
	United States...	13,783	—	—
	United Kingdom	1,485	—	—
Hot rolled:				
18 gauge and heavier.....	United States...	84,683	69	225.4
	Germany	1	—	—
	Belgium.....	876	—	—
	United Kingdom	167	—	201.0
Lighter than 18 gauge.....	United States...	10,969	5	70.4
	Belgium.....	284	—	—
	United Kingdom	157	—	12.5
Hot rolled:				
For hollow ware (vitreous enamel).....	United States...	2,044	—	—
Corrugated.....	United Kingdom	45	—	—
	United States...	3,965	—	2.2
Coated with paint, tar, asphaltum, etc.	United Kingdom	10	—	—
For saws	United States...	1,321	—	—
	United States...	134	546	—
For cold rolled strip.....	United Kingdom	—	12	—
Shaped for agricultural implements	United States...	1,472	—	—
For tubes.....	United States...	3,035	57	—
For galvanizing.....	United States...	1,794	—	—
	United States...	610	—	—
Cold rolled:				
18 gauge and heavier.....	United States...	13,685	—	832.7
Lighter than 18 gauge.....	United Kingdom	562	—	3.8
	United States...	37,990	18	1,135.3
For hollow ware (vitreous enamel).....	United Kingdom	1,669	—	.1
Black plate — Tin mill.....	United States...	14,691	—	—
Coated with paint, tar, asphaltum, etc.	United Kingdom	1,663	—	—
For heating apparatus.....	United States...	6,677	—	—
For saws.....	United States...	618	—	—
	Sweden.....	287	—	—
	United States...	—	11	—
	United States...	—	5	—

TABLE 42. Imports of Primary Forms of Iron and Steel, 1949 — Con.

Commodity	Country of origin	Carbon	Alloy	Stainless
(Tons of 2,000 pounds)				
Sheets — Concluded:				
For shoe and corset laces	United States...	1	—	—
For tubes.....	United States...	9,242	—	—
For tubular products.....	United States...	25	—	—
For butt hinges	United States...	86	—	—
Black plate — For tinning.....	United States...	13,639	—	—
Sheets, hot rolled for conversion to tin plate	United States...	4,308	—	—
Slabs for conversion to tin plate	United States...	20,093	—	—
Tin plate:				
Primes.....	United States...	11,417	—	—
Electrolytic (25#)	United Kingdom	232	—	—
(50#)	United States...	12,958	—	—
Waste waste.....	United States...	297	—	—
United States...	9	—	—	—
Terne plate:				
Long.....	United States...	5,138	—	—
Short.....	United States...	3,722	—	—
Strip:				
Hot rolled:				
18 gauge and heavier	United States...	13,751	212	27.4
Belgium.....	1,072	—	—	—
United Kingdom	411	—	—	—
Lighter than 18 gauge	United States...	1,578	—	(21.6)
For cold rolling	United States...	5,340	—	—
Painted.....	United States...	3,126	—	—
For shoe and corset laces, buckles, ball bearings, etc.....	United States...	802	—	—
For saws.....	United States...	237	257	—
For motor vehicles	United States...	14,158	80	—
For hoops.....	United States...	1,896	—	—
United Kingdom	114	—	—	—
For tubes	United States...	403	—	—
For tubular products	United States...	132	—	—
Silicon .075 or more.....	United States...	—	3,721	—
Cold rolled:				
18 gauge and heavier	United States...	4,873	56	250.5
United Kingdom	63	4	—	—
Lighter than 18 gauge	United States...	6,343	28	1,010.0
Sweden.....	174	—	—	1
United Kingdom	84	—	—	—
Painted.....	United States...	1,053	—	—
For shoe and corset laces, buckles, ball bearings, etc.....	United States...	504	—	—
For saws.....	United States...	8	81	—
Sweden.....	—	63	—	—
For tubes	United States...	1,872	—	—
For tubular products	United States...	1,434	—	1.0
For butt hinges	United States...	1,278	17	—
Sweden.....	1	—	—	—

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TABLE 42. Imports of Primary Forms of Iron and Steel, 1949 — Con.

Commodity	Country of origin	Carbon	Alloy	Stainless
(Tons of 2,000 pounds)				
Strip — Concluded:				
Silicon .075 or more.....	United States...	—	1,018	—
Galvanized strip	United States...	6,844	—	—
Skelp:				
15 ³ / ₈ " and under in width	United States...	106,667	—	—
Belgium	Belgium	27,759	—	—
Over 15 ³ / ₈ " in width.....	United States...	6,471	—	—
Pipes and Tubes:				
Cast.	United States...	143	—	—
Bedstead.....	United Kingdom	4,245	—	—
Repair of pressure parts of boilers:	United States...	73	—	—
Hot finished.....	United States...	12,427	356	—
Cold drawn.....	United Kingdom	806	8	—
Welded.....	United States...	1,427	61	6.3
Repair of pulp mill digesters:	United Kingdom	366	—	—
Hot finished.....	United States...	2,651	—	5.3
Cold drawn.....	United States...	—	—	3.7
Seamless, 12" and under in diameter:				
Cold drawn.....	United States...	7,233	336	216.1
United Kingdom	465	4	21.8	
Sweden.....	Sweden.....	2	—	1.4
Hot finished.....	United States...	5,308	441	—
Seamless, over 12" in diameter:				
Hot finished.....	United States...	1,657	10	—
United Kingdom	6,504	—	—	
Welded, 4" and under in diameter	United States...	21,442	1	22.9
United Kingdom	4,593	—	2.4	
Occupied Japan	43	—	—	
Belgium.....	187	—	—	
Welded, over 4" in diameter.....	United States...	4,431	—	.2
United Kingdom	9	—	—	
Tubing:				
Not over 1 ¹ / ₂ " diameter, welded and coated.....	United States...	284	—	—
Casings.....	United States...	49,533	—	—
Fittings and couplings.....	France	472	—	—
United Kingdom	63	—	—	
Wire rope	United States...	2,353	—	13.3
United Kingdom	3	—	—	
Wire:				
For wire rope	United States...	449	—	1.2
United Kingdom	278	—	10.2	
Belgium.....	—	—	.9	
For corset laces, steels, etc.....	United States...	118	—	—
United Kingdom	10	—	—	

TABLE 42. Imports of Primary Forms of Iron and Steel, 1949 — Concluded

Commodity	Country of origin	Carbon	Alloy	Stainless
(Tons of 2,000 pounds)				
Wire — Concluded:				
For spring mattress, etc.	United States...	2,736	—	—
For fencing, galvanized.....	United States...	1,255	—	—
Wire cloth and netting.....	United States...	2,149	—	3.0
Wire, coated	United Kingdom	82	—	—
Wire, coated	United States...	1,259	—	—
Wire, coated	United Kingdom	8	—	—
Wire — All other	United States...	8,760	7	64.8
	United Kingdom	2	—	—
	Germany	5	—	—
	France	1	—	—
Wire rods, not over $\frac{3}{8}$ " in diameter.....	United States...	7,652	—	—
Welding wire and welding rods.....	United States...	2,197	200	113.2
Castings:				
For agricultural implements	United States...	2,071	—	—
For ingot moulds.....	United States...	24,430	—	—
Malleable.....	United States...	471	—	—
	United Kingdom	2	—	—
Non-malleable.....	United States...	1,661	—	—
Steel.....	United States...	2,258	69	6
	Norway.....	35	—	—
For railway vehicles	United States...	1,240	—	—
Rolls	United States...	1,911	848	—
	United Kingdom	12	49	—
Piston rings (rough).....	United States...	295	—	—
Forgings.....	United States...	1,266	695	.4
	United Kingdom	603	566	—
Axes:				
For railway vehicles	United States...	288	—	—
Wheels:				
For railway rolling stock.....	United States...	1,361	—	—
	United Kingdom	7,582	—	—
Tires:				
For railway rolling stock.....	United States...	5,508	—	—
	United Kingdom	5,184	—	—
Rails:				
60 lb. and under	United States...	253	—	—
	United Kingdom	11	—	—
Over 60 lb. and including 100 lb.	United States...	1,210	—	—
Over 100 lb.	United States...	307	—	—
Grooved for electric tramways.....	United States...	266	—	—
Track material:				
Angles, bars, tie plates, rail joints	United States...	909	—	—
Intersections, switches, frogs	United Kingdom	48	—	—
Total Imports.....	United States...	1,052,539	36,943	4,587.1
	All other.....	127,607	1,626	383.1
Total		1,180,146	38,569	4,970.2

1,3539.2
1,80146
1,223685.2

IRON AND STEEL PRODUCTS

TABLE 43. Exports of Primary Iron and Steel, 1949

Commodity	Total tonnage
	(Tons of 2,000 pounds)
Pig iron.....	12,506
Ingots, blooms and billets	68,155
Bars	22,659
Rods.....	319
Plates, sheets and strips	31,793
Rails	77,406
Structural shapes.....	10,264
Pipe and tubing:	
Wrought iron	388
Cast iron	998
Galvanized.....	16,807
Other	535
Castings, iron and steel.....	8,007
Forgings.....	654

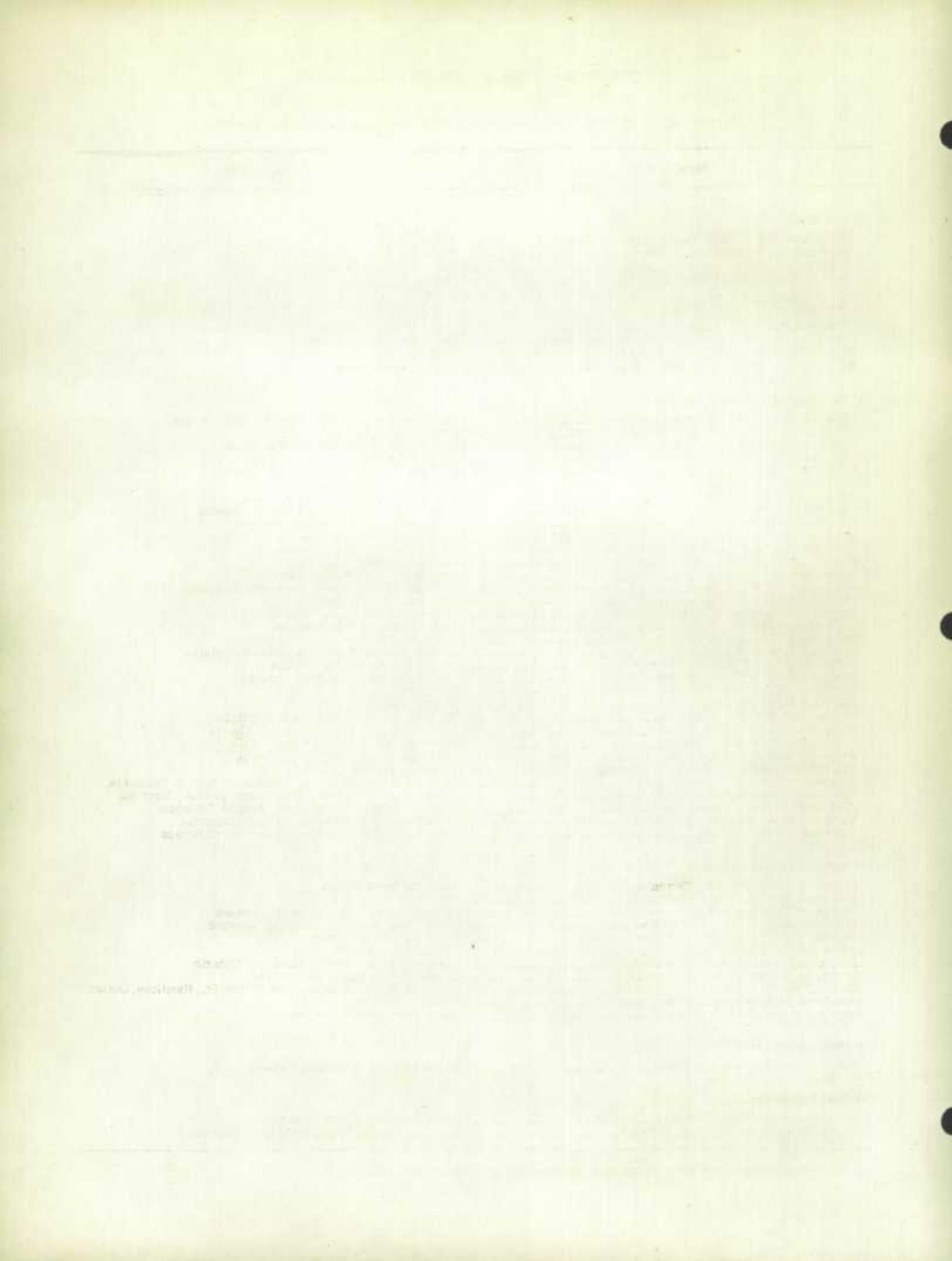
TABLE 44. Employees, Salaries and Wages, by Provinces, 1948 and 1949

Province	Average Number of Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
1948								
Nova Scotia.....	350	63	4,230	3	4,646	1,213,035	9,779,158	10,992,193
Quebec	395	98	3,710	9	4,212	1,406,367	8,816,752	10,223,119
Ontario.....	1,416	631	17,101	247	19,395	7,057,016	46,634,132	53,691,148
Manitoba.....	53	14	766	—	833	196,303	1,614,897	1,811,200
Alberta.....	}	24	5	249	281	73,490	566,610	640,100
British Columbia								
Canada.....	2,238	811	26,056	262	29,367	9,946,211	67,411,549	77,357,760
1949								
Nova Scotia.....	373	69	4,388	2	4,832	1,389,767	11,154,924	12,544,691
Quebec.....	410	106	3,493	8	4,017	1,583,411	8,851,467	10,434,878
Ontario.....	1,474	616	16,556	335	18,981	8,062,745	48,884,519	56,947,264
Manitoba.....	77	12	774	5	868	315,838	1,699,568	2,015,406
Alberta.....	}	31	9	359	399	121,134	894,856	1,015,990
British Columbia								
Canada.....	2,365	812	25,570	350	29,097	11,472,895	71,485,334	82,958,229

Directory of Firms in the Primary Iron and Steel Industry, 1949

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
(b) Ferro-alloys¹	
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 Unitcast Steel, Ltd.	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
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
Fahr alloy, Canada, Limited	Barrie Road, Orillia, 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, Alberta
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
A-1 Steel & Iron Foundry Ltd.	29 West 3rd Ave., Vancouver, British Columbia
Victoria Machinery Depot Co. Ltd.	33 Dallas Road, Victoria, British Columbia
Vancouver Steel Co. Ltd.	Granville Island, Vancouver, 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
Steel Company of Canada, Limited	Queen St. North, Hamilton and Wilcox St., Hamilton, Ontario
Manitoba Rolling Mill Company, Limited.....	Selkirk, Manitoba
Vancouver Rolling Mill	Vancouver, British Columbia
(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

1. Not including the firms which made ferro-alloys as a secondary product.





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