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Government of Canada

THE PRIMARY IRON AND STEEL
INDUSTRY - 1948

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DOMINION BUREAU OF STATISTICS
DEPARTMENT OF TRADE AND COMMERCE

**THE PRIMARY IRON AND STEEL
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THE PRIMARY IRON AND STEEL INDUSTRY - 1948

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-two firms were included in this industry in 1948 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 30.5 per cent higher in 1948 than in 1947, the values being \$282,167,150 and \$216,275,618 respectively. Twenty-six works in Ontario accounted for 76 per cent of the total for Canada, or \$214,419,339; 5 plants in Nova Scotia accounted for 9.6 per cent or \$27,036,837; 12 plants in Quebec for 12.1 per cent or \$34,176,303; while the remaining \$6,534,671 or 2.3 per cent was accounted for by 4 plants in Manitoba, 6 in British Columbia and 2 in Alberta.

In 1948 an average of 29,367 people were employed in this industry, this being an increase of 9 per cent over the 1947 average of 26,933. Sixty-six per cent of the employees, or 19,395 worked in plants in Ontario, 4,212 in Quebec, 4,646 in Nova Scotia, 833 in Manitoba and 281 in Alberta and British Columbia. Payments in salaries and wages during 1948 amounted to \$77,357,760, an increase of 28.3 per cent over the previous year's total of \$60,285,368. Salaries advanced to \$9,946,211 from \$8,689,952 and wages increased to \$67,411,549 from \$51,595,416.

Materials used in manufacturing processes cost \$132,779,063 in 1948 compared with \$104,532,334 in 1947, and the cost of fuel and electricity was \$24,111,139 as against \$18,863,396, an increased expenditure of 27.1 per cent for materials, fuel and power.

Pig Iron - Output of 2,125,739 net tons of pig iron in 1948 was 8.3 per cent more than the 1,962,848 tons reported for the previous year. Production of basic iron amounted to 1,741,613 tons or 82 per cent of the total; foundry iron amounted to 216,246 tons, and malleable iron to 167,880 tons.

Producers' sales of pig iron totalled 454,341 tons at \$17,165,056 in 1948 compared with 458,300 tons at \$14,172,493 in 1947.

Charges to iron blast furnaces during the year included 3,716,683 tons of imported iron ore; 193,935 tons of Canadian ore; 2,075,263 tons of coke; 705,483 tons of imported limestone and 181,814 tons of Canadian limestone.

Imports of pig iron during the calendar year decreased to 7,378 tons from 8,893 tons in 1947, and exports decreased to 662 tons from 1,475 tons.

Producers' stocks of pig iron at the end of 1948 totalled 31,391 tons compared with 44,976 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 2,146,040 tons in 1948 or 8.5 per cent more than in 1947 when the apparent domestic supply was 1,977,402 tons.

Producers of pig iron in Canada had 14 blast furnaces at the end of 1948 which could produce 2.75 million net tons if operated at rated capacity. Actual production of 2,125,739 net tons in 1948 showed an operating rate of about 78 per cent. Twelve furnaces were in blast during the year.

Ferro-alloys - Ferro-alloys were made in 1948 by 10 different concerns, 5 of which recovered ferrosilicon as a by-product in the manufacture of abrasives. Output of ferro-alloys in 1948 amounted to 232,734 net tons, an increase of 2.5 per cent over the 227,123 reported for 1947.

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 3.6 per cent to 3,200,480 tons in 1948 from 2,945,952 tons in 1947, the output of steel ingots going to 3,087,063 tons from 2,854,779 tons, and steel castings to 113,417 tons from 91,173 tons. Factory sales of ingots and castings totalled 176,314 tons at \$34,268,313.

Thirty-three steel plants were in operation during the year. At the end of 1948 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 766,000 tons, and 3 converters at 10,000 tons. There were 9 makers of steel ingots with capacity of 3,552,000 net tons per annum. The total annual steel capacity of all plants, including ingots and castings, was 3,852,000 tons at the year end.

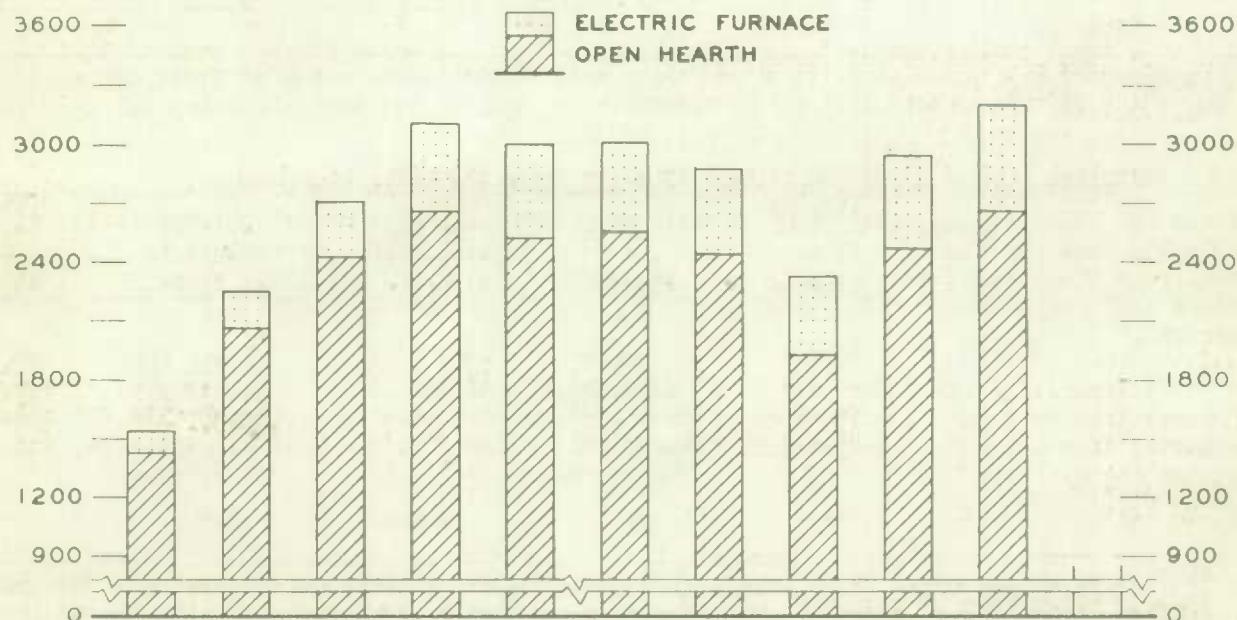
Operating steel furnaces in 1948 used 1,696,128 net tons of pig iron, 1,833,539 tons of scrap iron or steel, 170,790 tons of iron ore, 244,096 tons of limestone, 118,807 tons of dolomite, 74,074 tons of lime, 84,886 tons of silica sand, 15,286 tons of magnesite, and 41,331 tons of ferro-alloys.

Rolled and Drawn Steel - In 1948 there were 11 mills occupied chiefly in hot rolling of steel products and 3 mills making only cold drawn and cold rolled shapes. Nine of these mills were in Ontario, 2 in Nova Scotia, 2 in Quebec and 1 in Manitoba.

Rolling mill sales advanced 31 per cent to \$203,642,830 from \$155,955,401 in 1947. The main items sold during the year under review were 507,364 tons of hot rolled bars at \$47,877,986; 228,492 tons of plates at \$17,300,582; 752,319 tons of sheets, hoops, bands and strips at \$69,899,438; 401,337 tons of rails and rail fastenings at \$27,939,706; 424,654 tons of semi-finished forms, such as blooms, billets, etc. at \$24,522,344; 173,949 tons of structural shapes at \$12,830,518; and 107,686 tons of wire rods at \$6,267,303.

PRODUCTION OF IRON AND STEEL IN CANADA, 1939-1948
 (THOUSAND NET TONS)

STEEL INGOTS AND CASTINGS



PIG IRON

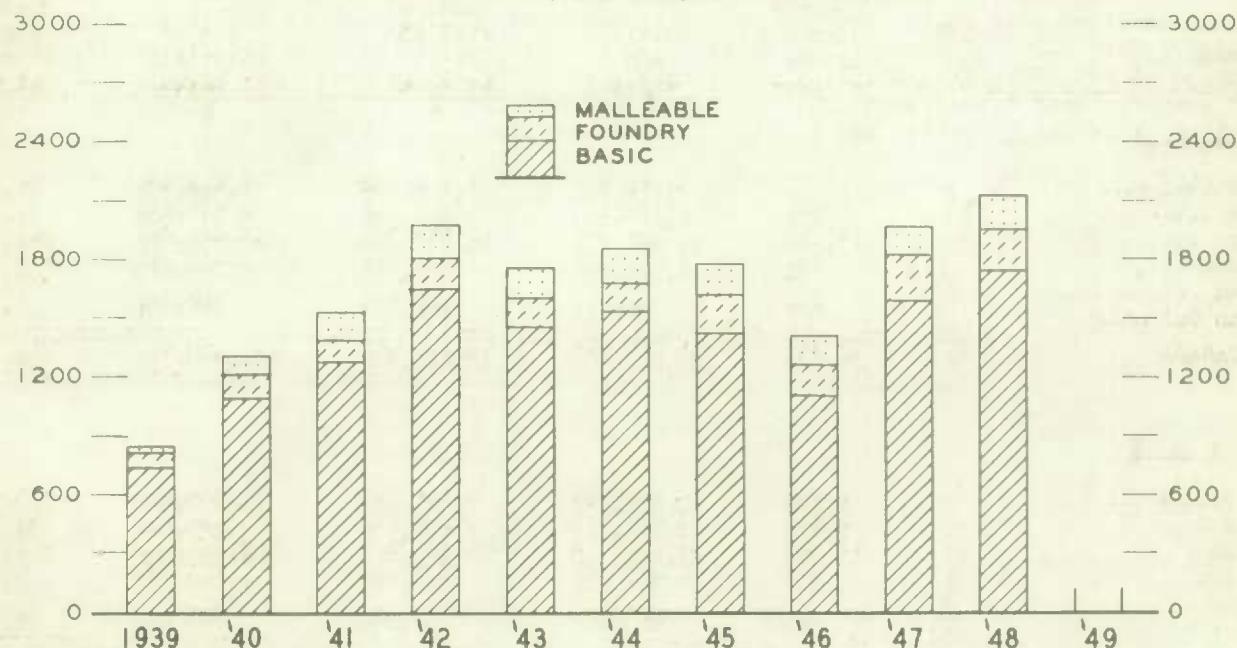


Table 1 - PROVINCIAL DISTRIBUTION OF ACTIVE PLANTS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1948

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	11	...	...	9	19	2	1
Ontario	17	3	10	11	75	9	3
Manitoba	3	...	...	3	5	1	...
Alberta	2	...	...	2	2	...	...
British Columbia	6	...	...	6	10	...	...
CANADA	42(b)	4	14	33	128	14	4

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

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

Table 2 - PRINCIPAL STATISTICS OF THE PRIMARY IRON AND STEEL INDUSTRY, 1944-1948

Year	Number of plants	Average 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
		\$	\$	\$	\$	\$
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	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
Per cent change, 1948 from 1947.	...	+9.0	+28.3	+27.8	+27.0	+30.5

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 - PRINCIPAL STATISTICS OF THE PRIMARY IRON AND STEEL INDUSTRY, BY PROVINCES, 1947 and 1948

Province	Number of plants	Average 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
		\$	\$	\$	\$	\$
<u>1947</u>						
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

1948

Nova Scotia	5	4,646	10,992,193	2,539,615	15,079,626	27,036,837
Quebec	12	4,212	10,223,119	2,499,674	12,481,894	34,176,303
Ontario	26	19,395	53,691,148	18,462,628	103,334,500	214,419,339
Manitoba	4	833	1,811,200	541,323	1,589,175	5,311,124
Alberta	2)	281	640,100	67,899	293,868	1,223,547
British Columbia	6)					
CANADA	55	29,367	77,357,760	24,111,139	132,779,063	282,167,150

(a) Pig Iron

Table 4 - PRODUCTION OF PIG IRON AND SALES BY PRODUCERS, 1947 and 1948

Grade	Delivered in molten condition	Machine cast	Total tonnage made	Sales	
	Net tons	Net tons	Net tons	Quantity Net tons	Income from sales \$
<u>1 9 4 7</u>					
Basic	1,459,811	127,443	1,587,254	88,565	2,676,561
Foundry .....	...	234,612	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(*)	458,300	14,172,493

1 9 4 8

Basil	1,613,321	128,292	1,741,613	78,341	2,789,417
Foundry .....	...	216,246	216,246	206,138	7,441,491
Malleable .....	...	167,880	167,880	169,862	6,934,148
TOTAL	1,613,321	512,418	2,125,739	454,341	17,165,056

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

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

Table 5 - MATERIALS CHARGED TO IRON BLAST FURNACES, 1947 and 1948

Material	1 9 4 7		1 9 4 8	
	Quantity	Cost at furnace	Quantity	Cost at furnace
	Net tons	\$	Net tons	\$
Iron ore:				
Canadian (crude)	3,119,177	97,149	45,026	265,379
Imported (crude)	2,780,818	11,818,785	2,901,528	14,077,085
Canadian (beneficiated)	232,908	1,132,678	148,909	846,053
Imported (beneficiated)	640,072	2,736,397	815,155	3,913,320
Mill cinder, roll scale, flue dust, etc. ..	154,595	465,275	273,846	794,225
Scrap (net charge)	39,474	338,631	44,374	748,373
Limestone:				
From Canadian quarries	190,042	279,917	181,814	313,128
From foreign sources	590,558	775,582	705,483	977,698
Dolomite:				
From Canadian quarries	94,666	128,300	102,097	198,266
From foreign sources	4,841	6,872	13,346	20,834
Coke	1,903,419	21,106,752	2,075,263	25,247,496
Other materials .....	...	296,261	...	179,412
TOTAL .....	...	39,182,599	...	47,581,269

Table 6 - PRODUCTION OF PIG IRON, BY GRADES, 1939-1948

Year	Basic	Foundry	Malleable	TOTAL	
				(Net tons)	
1939	734,227	80,314	31,877		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(*)
1948	1,741,613	216,246	167,880		2,125,739

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

Primary Iron and Steel

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Table 7 - PRODUCTION OF PIG IRON, BY PROVINCES, 1939-1948

Year	Nova Scotia	Ontario	T O T A L
		(Net tons)	
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(*)
1948	438,430	1,687,309	2,125,739

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

Table 8 - PRODUCTION OF PIG IRON, BY MONTHS, 1947 and 1948

Month	1 9 4 7			1 9 4 8		
	For own use	For sale	Total	For own use	For sale	Total
	(Net tons)					
January	131,072	46,241	177,313	125,914	34,128	160,042
February	114,046	36,586	150,632	120,515	30,608	151,123
March	129,808	34,595	164,403	141,035	31,640	172,675
April	120,292	40,457	160,749	134,562	36,223	170,785
May	114,902	45,328	160,230	153,958	39,347	193,305
June	121,040	38,786	159,826	140,177	43,586	183,763
July	126,155	30,998	157,153	141,925	46,015	187,940
August	123,097	43,781	166,878	148,425	42,958	191,383
September	126,029	43,601	169,630	143,180	39,285	182,465
October	130,018	33,317	163,335	157,582	28,842	186,424
November	138,944	35,203	174,147	128,705	38,066	166,771
December	129,145	29,407	158,552	135,420	43,643	179,063
TOTAL	1,504,548	458,300	1,962,848(*)	1,671,398	454,341	2,125,739

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

Table 9 - SALES OF PIG IRON BY THE PRODUCERS, 1939-1948

Year	Tonnage sold	Income from sales	Year	Tonnage sold	Income from sales
	\$				\$
1939	192,614	3,757,573	1944	400,010	8,641,495
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

Table 10 - IRON ORE, FUEL AND FLUX CHARGED TO IRON BLAST FURNACES, 1939-1948

Year	Iron Ore	Mill cinder, scale, etc.	Scrap	Coke	Limestone	Dolomite
					(Net tons)	
1939	1,476,106	119,654	21,204	775,869	357,377	
1940	2,342,717	130,171	28,691	1,223,173	579,451	Not avail-
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
1948	3,910,618	273,846	44,374	2,075,263	887,297	115,443

Table 11 - IMPORTS INTO CANADA AND EXPORTS OF PIG IRON, 1939-1948

Year	Imports		Exports	
	Net tons	\$	Net tons	\$
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
1948	7,378	233,223	662	29,226

Table 12 - STOCKS OF PIG IRON HELD BY PRODUCERS IN CANADA, 1939-1948

Year	Net Tons	Year	Net Tons
1939	69,174	1944	49,615
1940	76,560	1945	25,193
1941	27,049	1946	52,112
1942	87,955	1947	44,976
1943	28,230	1948	31,391

Table 13 - APPARENT SUPPLY OF PIG IRON IN CANADA, 1939-1948

Year	Production	Add imports	Deduct exports	Add or deduct changes in producers' stocks (*)	Apparent supply (x)
(Net tons)					
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	1,852,628	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

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

(*) 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 14 - CONSUMPTION OF PIG IRON IN CANADA, BY INDUSTRIES AND BY PROVINCES, 1945-1948 (as reported by consumers)

	1945	1946	1947	1948
	(Net tons)			
(a) By Industries				
Steel ingots and castings	1,416,844	1,085,005	1,542,040	1,696,128
Iron castings	173,185	173,557	208,927	248,228
Boilers, tanks and platework	36,476	36,002	39,363	44,046
Agricultural implements	26,521	27,288	29,931	27,975
Machinery	22,149	25,784	26,680	24,699
Automobiles	5,197	7,372	8,921	7,581
Automobile parts	10,641	9,740	14,132	8,956
Railway rolling stock	28,234	21,526	24,734	32,094
Brass and copper products	2,170	3,851	3,097	3,433
Shipbuilding	3,488	939	974	870
Hardware and tools	3,223	3,480	3,024	2,600
Miscellaneous iron and steel	775	1,167	1,449	497
Heating and cooking apparatus	26,321	22,393	25,815	26,563
Electrical apparatus and supplies ..	4,426	2,782	3,764	5,148
TOTAL	1,759,650	1,420,886	1,932,851	2,128,818
(b) By Provinces				
Prince Edward Island	97	45	40	20
Nova Scotia	393,291	295,705	366,367	430,258
New Brunswick	4,413	3,786	4,772	4,465
Quebec	101,107	74,961	92,327	105,588
Ontario	1,245,198	1,031,843	1,451,851	1,572,375
Manitoba	7,679	11,347	13,495	11,991
Saskatchewan	58	70	70	33
Alberta	164	221	422	248
British Columbia	7,643	2,908	3,507	3,840
CANADA	1,759,650	1,420,886	1,932,851	2,128,818

Table 15 - BLAST FURNACES IN CANADA, 1946-1948

Name of Company	Location of Plant	Number of stacks	Total annual capacity	Number of days in blast		
				1946	1947	1948
Dominion Steel and Coal Corporation, Ltd.	Sydney, Nova Scotia	1	224,840	365	331	341
		1	235,060	365	365	289
		1	135,050	156	219	366
		1	135,050	...	...	...
		4	730,000	...	...	...
Canadian Furnace Company, Limited	Port Colborne, Ontario	1	170,000	336 ¹ (*)	321(*)	321(*)
		1	53,000	...	...	...
		2	223,000	...	...	...
		3	757,000	...	...	...
The Steel Company of Canada, Limited	Hamilton, Ontario	1	133,000	266	364	364
		1	276,000	328	365	365
		1	358,000	219	365	365
		3	757,000	...	...	...
		5	1,035,000	...	...	...
TOTAL FOR CANADA		14	2,745,000	...	...	...

(*) 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	1944	1945	1946	1947	1948
	(Thousands of Net tons)				
United States	62,866	54,919	46,515	60,117	61,912
Canada	2,012	1,976	1,525	2,152	2,335
United Kingdom	7,545	7,960	8,692	8,457	10,389
Belgium	780	802	2,393	3,108	4,346
Luxembourg	1,481	344	1,505	2,004	2,896
France	3,189	1,304	3,796	5,383	7,248
Netherlands .....	...	...	128	180	487
Hungary	326	1	176	330	336
Germany	14,737	1,550	2,425	2,491	6,394
Saar	1,634	...	271	721	1,252
Austria .....	...	...	64	306	680
Czechoslovakia	1,746	635	1,058	1,569	1,822
Poland	271	252	800	944	1,199
Yugoslavia .....	...	...	...	...	...
Rumania .....	...	...	...	...	...
Russia	16,800	18,800	16,800	18,000	18,500
Italy	341	83	226	425	580
Spain	607	519	540	551	562
Sweden	941	839	771	779	861
Japan (*)	3,434	556	202	391	921
TOTAL	118,709	90,540	87,887	107,908	122,720

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

(b) Ferro-alloys

Table 17 - PRODUCTION OF FERRO-ALLOYS, 1939-1948

Year	Net tons	Year	Net tons
1939	85,540	1944	171,323
1940	149,394	1945	171,642
1941	204,354	1946	139,392
1942	209,017	1947	227,123
1943	197,094	1948	232,734

Table 18 - PRODUCERS OF FERRO-ALLOYS IN CANADA, 1948

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 19 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS AND SALES BY THE PRODUCERS, 1947 and 1948

	1947	Sales	1948	Sales
Total tonnage of steel made (all kinds) including alloys	Quantity	Income from sales	Total tonnage of steel made (all kinds) including alloys	Quantity
	Net tons	\$	Net tons	Net tons
Steel Ingots -				
Basic open hearth ...	2,438,569	63,746	2,296,576	2,620,946
Electric	416,210	2,850	629,200	466,117
Total Steel Ingots .	2,854,779	66,596	2,925,776	3,087,063
Steel Castings -				
Basic open hearth ...	24,100	22,093	5,025,675	34,041
Converter	741	741	249,985	395
Electric	66,332	62,683	17,058,857	78,981
Total Steel Castings	91,173	85,517	22,334,517	113,417
TOTAL STEEL INGOTS AND CASTINGS	2,945,952	152,113	25,260,293	3,200,480
Any other products ....	...	...	712,484	...
TOTAL ALL PRODUCTS ..	...	...	25,972,747	...
Alloy steel included in above -				
Ingots	134,339	348	90,000	155,863
Castings	13,558	13,158	4,668,327	15,737
TOTAL	147,897	13,506	4,758,327	171,600

Table 20 - MATERIALS USED IN STEEL FURNACES, 1947 and 1948

Material	1947	Cost of purchased materials	1948	Cost of purchased materials
	Quantity		Quantity	
	Net tons	\$	Net tons	\$
Pig iron - Own make	1,513,502	...	1,672,556	...
Purchased	28,538	830,336	23,572	807,518
Scrap iron or steel - Own make	882,958	...	934,905	...
Purchased	788,718	19,426,124	898,634	23,130,302
Spiegeleisen	131	6,818	...	...
Silicospiegeleisen	438	36,434	602	54,786
Ferrocolumbium	4	11,366	...	...
Ferromanganese - High carbon	11,014	1,355,643	13,566	1,881,224
Medium carbon	7,817	1,019,556	8,639	1,267,649
Low carbon	283	61,831	489	127,553
Silicomanganese	7,399	981,499	6,885	1,073,706
Sil-x	1,041	113,262	313	41,882
Ferrosilicon - 15%	430	19,678	132	8,362
25%	107	7,174	...	...
50%	5,929	418,583	5,959	551,524
75%	109	9,915	881	96,553
85-90%	210	36,204	118	25,328
Ferrochrome (including chrom-x) - High carbon..	1,259	240,962	1,506	354,838
Low carbon ..	1,026	353,570	915	354,854
Ferromolybdenum	101	110,037	65	80,263
Ferrophosphorus	486	37,566	531	43,544
Ferroseelenium .....	...	88	4	6,463
Ferrotitanium	500	86,228	442	81,129
Ferrotungsten	366	888,904	187	590,584
Ferrovanadium	72	219,031	67	218,734

Table 20 - MATERIALS USED IN STEEL FURNACES, 1947 and 1948 (Concluded)

Material	1947		1948	
	Quantity	Cost of purchased materials	Quantity	Cost of purchased materials
		Net tons	\$	Net tons
Ferrozirconium	3	729	30	4,754
Calcium silicon	264	82,515	37	14,664
Calcium manganese silicon	297	79,289	524	200,328
Other ferro-alloys .....	...	30,715	...	3,848
Aluminum ingot and shot	786	213,653	876	300,123
Copper ingots, cakes, shot, etc.	354	132,616	261	113,306
Nickel	752	483,917	869	603,059
Other metals .....	...	45,508	...	52,752
Ore, iron	155,621	1,333,298	170,790	1,637,660
Ore, manganese	13	647	57	2,480
Ore, chrome	429	21,129	229	19,067
Ore, tungsten	39	55,717	172	206,112
Bentonite	3,095	77,412	4,490	121,474
Coal - Anthracite	586	7,223	505	6,994
Bituminous	239	2,976	312	4,122
Coke	6,008	78,290	8,559	118,904
Charcoal	64	3,040	49	3,336
Dolomite - Crude	88,935	221,953	109,220	316,353
Calcined	6,748	124,107	9,587	198,040
Fluorspar	18,768	612,929	20,651	700,005
Ganister	7,117	24,610	8,617	30,802
Graphite	775	74,123	641	63,095
Lime	53,374	414,464	74,074	666,662
Limestone - Canadian	96,357	165,249	101,924	201,551
Imported	135,633	171,732	142,172	199,047
Magnesite	15,293	607,889	15,286	686,486
Electrodes .....	...	1,024,862	...	1,480,847
Silica sand - For moulds	50,988	346,677	83,785	613,659
For sand blasting	353	13,315	1,101	89,431
Other foundry sands .....	...	67,569	11,155	39,648
Sulphur	86	5,112	74	10,143
Firebrick, fireclay and other refractories .....	...	1,947,651	...	2,958,073
Calcium molybdate	36	36,458	41	39,927
Molybdenum trioxide (molybdic oxide) briquettes	97	85,372	174	144,511
All other materials .....	...	1,855,369	...	2,470,984
TOTAL VALUE OF METALS, ORES AND OTHER MATERIALS USED .....	...	36,718,924	...	45,119,043

Table 21 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY GRADES, 1939-1948

Year	Steel Ingots		Steel Castings			Total steel ingots and castings
	Open hearth	Electric	Open hearth	Con- verter	Electric	
	(Net tons)					
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	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

Table 22 - PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY MONTHS, 1944-1948

Month	1944	1945	1946	1947	1948
	(Net tons)				
January	242,186	268,722	244,623	249,798	256,726
February	229,852	250,464	233,893	229,222	239,646
March	275,539	277,461	249,117	269,732	286,026
April	260,825	274,213	247,519	252,156	264,266
May	263,431	267,643	259,626	244,076	289,567
June	240,750	257,115	214,861	238,297	259,365
July	234,418	229,161	135,914	232,341	244,872
August	246,755	224,928	88,729	233,754	263,054
September	242,725	198,508	76,564	234,188	257,865
October	272,775	205,846	123,841	256,461	281,866
November	266,174	207,981	222,644	255,372	277,978
December	240,732	215,885	229,954	250,555	279,249
TOTAL	3,016,162	2,877,927	2,327,285	2,945,952	3,200,480

Table 23 - ANNUAL PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS, BY PROVINCES, 1939-1948

Year	Nova Scotia	Quebec	Ontario	Manitoba	Alberta	British Columbia	CANADA
	(Net tons)						
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
1948	626,604	73,681	2,436,050	59,084	397	4,664	3,200,480

Table 24 - SALES OF STEEL INGOTS AND STEEL CASTINGS BY THE PRODUCERS, 1939-1948

Year	Tonnage sold		Year	Tonnage sold	
	Net tons	\$		Net tons	\$
1939	63,354	9,169,097	1944	171,072	34,848,365
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

Table 25 - PRODUCTION OF ALLOY STEEL INGOTS AND CASTINGS, 1940-1948

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

Table 26 - METAL, ORE AND FLUX CHARGED TO STEEL FURNACES, 1939-1948

Year	Pig iron	Ferro-manganese and spiegeleisen	Other ferro-alloys	Scrap iron and steel	Iron ore	Limestone	Dolomite	Fluorspar
	(Net tons)							
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
1948	1,696,128	22,694	18,637	1,833,539	170,790	244,096	118,807	20,651

Table 27 - STEEL FURNACES IN CANADA, DECEMBER 31, 1948

	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.	2	175	200,000
	O.H.	3	125	241,500
	Elec.	1	11	28,000
Total .....	...	16	...	789,500
Maritime Steel Foundries Ltd., New Glasgow	Elec.	1	4	3,000
<u>Quebec -</u>				
Canadian Uniteast-Steel, Ltd., Montreal	Elec.	2	2	1,800
Canadian Car & Foundry Co. Ltd., Montreal	O.H.	3	25	51,576
	Elec.	1	3½	7,728
Total .....	...	4	...	59,304
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	1½	4,000
	Elec.	1	2	8,000
Total .....	...	3	...	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	6½	5,000

Table 27 - STEEL FURNACES IN CANADA, DECEMBER 31, 1948 (Continued)

	Type	Number of units	Size (net tons)	Total annual capacity (net tons)
<u>Ontario -</u>				
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	60,000
	Elec.	2	45	86,400
Total .....	...	6	...	165,600
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	2 $\frac{1}{2}$	9,000
Total .....	...	10	...	375,800
Fahralloy Canada Ltd., Orillia	Elec.	1	1 $\frac{1}{2}$	1,524
	Elec.	1	1 $\frac{1}{2}$	2,286
	Elec.	1	2	3,048
Total .....	...	3	...	6,858
Quality Steels (Canada) Ltd., London	Elec.	2	8	16,000
Ford Motor Co. of Canada Ltd., Windsor	Elec.	1	4 $\frac{1}{2}$	625
	Elec.	1	5	10,500
	Elec.	16	4	94,000
	Elec.	1	1 $\frac{1}{2}$	750
Total .....	...	19	...	105,875
William Kennedy & Sons Ltd., Owen Sound	Conv.	1	2	4,800
	Elec.	1	1 $\frac{1}{2}$	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	1 $\frac{1}{2}$)	
	Elec.	1	1 $\frac{1}{2}$)	
	Elec.	1	1 $\frac{1}{2}$)	5,400
Total	3	...	5,400

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Table 27 - STEEL FURNACES IN CANADA, DECEMBER 31, 1948 (Concluded)

	Type	Number of units	Size (net tons)	Total annual capacity (net tons)
<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	1½	384
<u>British Columbia -</u>				
A-1 Steel and Iron Foundry, Vancouver	Elec.	1	4	1,975
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	1½	430
	Elec.	1	1½	2,600
Total .....	...	2	...	3,030
Vancouver Engineering Works Ltd., Vancouver	Elec.	1	2	3,500
	Elec.	1	1	2,000
	Conv.	1	2	4,500
Total .....	...	3	...	10,000
Victoria Machinery Depot Co. Ltd., Victoria	Elec.	1	1½	625

Table 28 - SUMMARY OF STEEL FURNACE CAPACITY, DECEMBER 31, 1948

	Number of furnaces	Total annual capacity (net tons)
Basic open hearth	49	3,076,000
Electric	76	766,000
Converter	3	10,000
TOTAL	128	3,852,000
Steel ingots - Basic open hearth .....	...	3,024,000
Electric .....	...	528,000
TOTAL .....	...	3,552,000
Steel castings .....	...	300,000
TOTAL INGOTS AND CASTINGS .....	...	3,852,000

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	1944	1945	1946	1947	1948
	(Thousands of net tons)				
United States	89,642	79,702	66,603	84,894	88,640
Canada	2,930	2,803	2,293	2,902	3,159
United Kingdom	13,599	13,243	14,220	14,246	16,662
Belgium	701	812	2,518	3,180	4,318
Luxemburg	1,389	291	1,426	1,888	2,704
Hungary	766	142	389	658	818
France	3,408	1,822	4,859	6,338	7,984
Italy	1,138	437	1,270	1,874	2,343
Russia	15,400	19,800	20,000	22,000	22,200
Germany	20,192	322(*)	2,963(*)	3,290(*)	6,127
Saar	1,974	...	321	776	1,346
Austria .....	...	189	207	394	714
Czechoslovakia	2,778	1,045	1,843	2,520	2,916
Poland	755	546	1,344	1,731	2,070
Spain	546	617	656	581	590
Sweden	1,320	1,327	1,335	1,311	1,385
Japan (x)	7,032	1,177	608	1,041	1,889
TOTAL	163,569	124,274	122,853	149,624	165,865

(*) American, British and French zones.

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

(d) Rolled and Drawn Steel

Table 30 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1947 and 1948

Product	Total tonnage made	Factory Sales	
		Tonnage sold in Canada or for export	Income from tonnage sold \$
1 9 4 7			
<u>Semi-finished rolled forms of iron and steel -</u>			
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
<u>Rails and rail fastenings -</u>			
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
<u>Wire rods, No.5 gauge to 47/64 inch in diameter (excluding straight lengths over 5/16 inch in diameter)</u>	284,795	108,512	5,310,661
<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	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 30 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1947 and 1948 (Continued)

Product	Total tonnage made	Factory Sales	
		Tonnage sold in Canada or for export	Income from tonnage sold
	Net tons	Net tons	\$
<u>1 9 4 7</u> (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>	38,091	37,950	5,840,599
<u>Plates, all kinds, including boiler and other sheared plates, nail, washer, spike, tack and hinge plate</u>	192,155	188,580	11,566,700
<u>Sheets, hoops, bands and strips, including plain sheets, hot rolled strips, cold rolled strips, galvanized sheets (*), tinplate, terne plate (*) and bonderized plate (*)</u>	510,535	494,848	42,809,777
Total Plates, Sheets, Hoops, Bands and Strips..	702,690	683,428	54,376,477
<u>Other rolled forms, including mine arches, sheet piling, etc.</u>	55,710	30,011	1,918,260
<u>Miscellaneous products (not rolled) made in rolling mills, including horseshoes, grinding balls, washers, forged axles, railway spikes, pressed spikes, etc.</u> .....	...	...	3,653,250
TOTAL VALUE OF PRODUCTION .....	...	...	155,955,401
<u>1 9 4 8</u>			
<u>Semi-finished rolled forms of iron and steel -</u>			
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
<u>Rails and rail fastenings -</u>			
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
<u>Wire rods, No. 5 gauge to 47/64 inch in diameter (excluding straight lengths over 5/16 inch in diameter)</u>	286,990	107,686	6,267,303

Table 30 - PRODUCTS MADE IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1947 and 1948 (Concluded)

Product	Total tonnage made	Tonnage sold in Canada or for export	Factory Sales Income from tonnage sold
	Net tons	Net tons	\$
1 9 4 8 (Concluded)			
<u>Structural steel shapes</u> (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
<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	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
<u>Cold rolled and cold drawn bars</u>	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
<u>Sheets, hoops, bands and strips</u> , including plain sheets, hot rolled strips, cold rolled strips, galvanized sheets (*), tinplate, terne plate (*) and bonderized plate (*)	524,440	523,827	52,598,856
Total Plates, Sheets, Hoops, Bands and Strips..	753,418	752,319	69,899,438
<u>Other rolled forms</u> , including mine arches, sheet piling, etc.	83,758	49,367	3,761,504
<u>Miscellaneous products</u> (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

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

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Table 31 - MATERIALS USED FOR ALL PURPOSES IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1947 and 1948

Material	Companies' own make	Purchased Quantity Net tons	Cost at works \$
<u>1 9 4 7</u>			
Steel ingots	2,814,458	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

1 9 4 8

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

Table 32 - ALLOY STEEL PRODUCTS MADE AND SOLD BY ROLLING MILLS, 1947 and 1948

	1 9 4 7	1 9 4 8		
	Tonnage Made	Tonnage Sold	Tonnage Made	Tonnage Sold
	(Net tons)			
Rails			223	223
Bars	67,134	66,569	83,266	79,029
Other products, including plates, billets, forgings, sheet piling and wire rods, etc..	79,070	12,827	95,627	19,813
TOTAL ALLOY STEEL	146,204	79,396	179,116	99,065

Table 33 - PRODUCTS ROLLED FROM OLD RAILS, AXLES, ETC., 1947 and 1948

	1 9 4 7	1 9 4 8		
	Tonnage Made	Tonnage Sold	Tonnage Made	Tonnage Sold
	(Net tons)			
Rails	997	997	568	568
Bars	26,428	26,461	18,142	16,449
Other products	24,362	18,978	35,409	26,290
TOTAL	51,787	46,436	54,119	43,307

Primary Iron and Steel

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Table 34 - PIG IRON, STEEL INGOTS AND CASTINGS, AND SEMI-FINISHED ROLLED FORMS SHIPPED FOR EXPORT BY PRODUCERS, 1947 and 1948

	1947	1948
	(Net tons)	
Pig iron	1,432	5,557
Steel ingots	24,547	...
Steel castings	2,682	4,231
Semi-finished rolled forms	<u>51,412</u>	<u>24,228</u>
TOTAL	80,073	34,016

Table 35 - NET PRODUCTION (*) IN CANADA OF HOT ROLLED IRON AND STEEL PRODUCTS, 1946-1948

	1946	1947	1948
	(Net tons)		
Blooms, billets and slabs	81,673	152,254	131,289
Rails	206,374	250,049	337,244
Rail fastenings	50,696	49,299	72,674
Wire rods	210,548	284,795	286,990
Structural shapes	131,894	180,226	175,031
Bars	444,040	559,746	572,075
Plates, sheets, hoops, bands and strips	455,148	634,157	694,145
Other hot rolled forms	44,472	55,710	83,758
TOTAL	1,624,845	2,166,236	2,353,206

(*) Inter-mill shipments have been excluded.

Table 36 - PRODUCTION AND FACTORY SALES OF STEEL RAILS, 1939-1948

Year	Tonnage made	Factory Sales		
		Tonnage sold	Income from sales	\$
	Net tons	Net tons		\$
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	
1948	337,244	328,572	21,887,014	

Table 37 - PRODUCTION AND FACTORY SALES OF FINISHED RAIL FASTENINGS, 1939-1948

Year	Tie Plates			Fish Plates and Splice Bars		
	Quantity made	Factory Sales		Quantity made	Factory Sales	
		Quantity	Income from sales		Net tons	\$
	Net tons	Net tons	\$	Net tons	Net tons	\$
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
1948	49,669	49,575	3,901,039	23,005	23,190	2,151,653

Table 38 - PRODUCTION AND FACTORY SALES OF WIRE RODS OF IRON OR STEEL, 1939-1948

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	\$
1939	240,194	98,070	3,954,970	1944	244,270	105,046	4,300,337
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

Table 39 - PRODUCTION AND FACTORY SALES OF BLOOMS, BILLETS AND SLABS, 1939-1948

Year	Except for Forging (*)				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	\$
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	
1948	2,201,281	321,748	16,983,227		112,338	102,906	7,539,117	

(*) Shipments to other Canadian rolling mills are included.

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

Table 40 - PRODUCTION AND FACTORY SALES OF HOT ROLLED BARS OF ALL KINDS, 1939-1948

Year	Total tonnage made	Factory Sales	
		Tonnage sold	Income from sales
	Net tons	Net tons	\$
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
1948	634,315	507,364	47,877,986

Table 41 - PRODUCTION OF STRUCTURAL STEEL SHAPES (*) OF ALL KINDS, 1939-1948

Year	Total tonnage made	Factory Sales	
		Tonnage sold	Income from sales
	Net tons	Net tons	\$
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
1948	175,031	173,949	12,830,518

(*) Includes light angles since 1939.

Primary Iron and Steel

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Table 42 - PRODUCTION AND FACTORY SALES OF STEEL PLATES, 1939-1948

Year	Total tonnage made	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
1948	228,978	228,492	17,300,582

Table 43 - IMPORTS INTO CANADA OF PRIMARY FORMS OF IRON AND STEEL, 1948

Commodity	Country of Origin	Carbon	Alloy	Stainless
(Tons of 2,000 pounds)				
Pig Iron -				
Basic	United States	4,968	...	...
	Australia	234	...	...
Foundry	United States	1,917	...	...
Special	Norway	13	...	...
	Sweden	56	...	...
Silvery	United States	154	...	...
Charcoal	United States	28	...	...
Ingots	United States	37,669	31	...
Billets, blooms, slabs and sheet bars	United States	66	96	...
Tube rounds and tube billets	United States	14,594	...	...
Bars and Sections -				
Hot rolled, n.o.p.	United States	49,895	2,305	80.4
	United Kingdom	398	...	22.3
	Belgium	2,946	...	...
	Sweden	3	...	...
Hot rolled -				
For agricultural implements	United States	17,726	4,072	...
	United Kingdom	50	...	...
Rounds over 4 $\frac{7}{8}$ ", squares over 4"	United States	998	213	.3
	United Kingdom	107	...	.3
	Sweden	1	...	...
Angles, channels, etc.	United States	10,279	...	28.4
	United Kingdom	2	...	...
	Belgium	1,662	...	...
Structurals (bar sizes) for agricultural implements	United States	9,886	948	...
Sash or casement sections	United States	3,013	...	...
	United Kingdom	130	...	...
	Belgium	11	...	...
Cold rolled, n.o.p.	United States	5,831	269	76.3
	United Kingdom	48	...	4.0
	Germany	...	4	...
Cold rolled, for agricultural implements	United States	7,473	44	...
Tool steel	United States	217	611	...
	United Kingdom	572	215	...
	Sweden	6	...	...
Structurals	United States	159,250	151	7.1
	United Kingdom	733	...	...
	Belgium	2,026	59	...

Table 43 - IMPORTS INTO CANADA OF PRIMARY FORMS OF IRON AND STEEL, 1948 (Continued)

Commodity	Country of Origin	Carbon	Alloy	Stainless
		(Tons of 2,000 pounds)		
Plates -				
78" and under in width	United States	29,548	494	307.8
	United Kingdom	3,014	...	11.7
	Belgium	110	...	...
Over 78" and under 100" in width..	United States	11,303	230	41.7
	United Kingdom	1,046	...	14.6
Over 100" in width	United States	5,480	159	37.6
	United Kingdom	123	...	2
Flanged, dished or curved	United States	1,245	...	12.9
Boiler, pulp-mill digesters	United States	6,619	12	81.6
	United Kingdom	247	...	...
Chequered or surface pattern	United States	7,451	...	...
Painted	United States	92	...	...
Sheets -				
Silicon .075 or more	United States	...	18,932	...
Galvanized	United States	7,053	...	...
	United Kingdom	443	...	...
Hot rolled -				
18 gauge and heavier	United States	39,800	103	218.5
	United Kingdom	85	...	41.9
	Belgium	196	...	...
	Japan	39	...	...
Lighter than 18 gauge	United States	9,043	8	53.5
	Japan	138	...	...
	Belgium	53	...	...
For hollow ware (vitreous enamel)	United States	3,525	...	...
.05¢ per pound and over	United States	13	...	...
Corrugated	United States	3,511	...	...
Coated with paint, tar, asphaltum, etc.	United States	1,138	...	...
For shoe and corset laces, buckles, ball bearings, etc. ..	United States	30	...	...
For saws	United States	185	627	...
	United Kingdom	...	19	...
For cold rolled strip	United States	1,047	...	...
Shaped for agricultural implements	United States	2,643	...	...
For tubes	United States	359	...	...
Cold rolled -				
18 gauge and heavier	United States	9,899	1	876.8
	United Kingdom	171	...	29.2
	Belgium	110	...	...
Lighter than 18 gauge	United States	31,674	18	1,336.2
	United Kingdom	723	...	...
For hollow ware (vitreous enamel)	United States	4,139	...	...
	United Kingdom	677	...	...
Black plate -- Tin mill	United States	18,370	...	...
Waste waste	United States	129	...	...
Rejects	United States	496	...	...
Coated with paint, tar, asphaltum, etc.	United States	1,259	...	...
For shoe and corset laces, buckles, ball bearings, etc. ..	United States	2	...	...
For heating apparatus	United States	218	...	...
For saws	United States	30	23	...
	Sweden	...	7	...
For tubes	United States	7,742	...	...
For tubular products	United States	291	...	...
For butt hinges	United States	59	...	...

Table 43 - IMPORTS INTO CANADA OF PRIMARY FORMS OF IRON AND STEEL, 1948 (Continued)

Commodity	Country of Origin	Carbon	Alloy	Stainless
		(Tons of 2,000 pounds)		
Sheets - (concluded)				
Black plate - For tinning	United States	39,530	...	...
Sheets hot rolled for conversion to tin plate	United States	10,013	...	...
Tin plate - Primes	United States	24,821	...	...
Seconds	United Kingdom	653	...	...
Electrolytic (25#) ...	United Kingdom	7	...	...
(50#) ...	United States	21,370	...	...
Waste waste	United States	875	...	...
Terne plate - Long	United States	30	...	...
Short	United Kingdom	3,759	...	...
	United States	3	...	...
	United States	3,263	...	...
Strip -				
Hot rolled -				
18 gauge and heavier	United States	14,512	109	24.6
	Sweden	2	...	...
	United Kingdom	251	9	...
	Belgium	1,099	...	...
Lighter than 18 gauge	United States	1,600	...	5
	United Kingdom	3	...	...
For cold rolling	United States	4,972	...	...
For barrel hoops	United States	753	...	...
Painted	United States	5,601	...	...
.05¢ per pound and over	United States	1	...	...
For shoe and corset laces, buckles, ball bearings, etc. ..	United States	885	...	...
For saws	United States	309	304	...
	Sweden	7	...	...
For motor vehicles	United States	12,399	43	...
For butt hinges	United States	199	...	...
For hoops	United States	1,320	...	...
For tubes	United States	283	...	...
For tubular products	United States	241	...	...
Silicon .075 or more	United States	19	1,295	...
Cold rolled -				
18 gauge and heavier	United States	3,408	30	185.7
	Sweden	1	...	...
	United Kingdom	2	...	...
Lighter than 18 gauge	United States	5,862	3	949.2
	United Kingdom	10	...	6
	Sweden	226	...	...
	Germany	3	...	...
Painted	United States	604	...	...
For shoe and corset laces, buckles, ball bearings, etc. ..	United States	335	...	...
For saws	United States	29	123	...
	Sweden	1	69	...
For tubes	United States	1,296	...	...
For tubular products	United States	967	...	...
For butt hinges	United States	894	...	...
Silicon .075 or more	United States	131	684	...
Galvanized strip	United States	8,317	...	...
Skelp -				
Over 15 ³ / ₈ " in width	United States	5,454	...	...
15 ³ / ₈ " and under in width	United States	45,153	...	...
	Belgium	9,785	...	...

Table 43 - IMPORTS INTO CANADA OF PRIMARY FORMS OF IRON AND STEEL, 1948 (Continued)

Commodity	Country of Origin	Carbon	Alloy	Stainless
		(Tons of 2,000 pounds)		
Pipes and Tubes -				
Cast	United States	656	...	...
	United Kingdom	4,394	...	...
Bedstead	United States	81	...	...
Boiler and pulp-mill digesters -				
Hot finished	United States	9,822	76	...
Cold drawn	United States	1,742	75	3.9
Welded	United States	644	...	2.3
	United Kingdom	6	...	...
Welded for oil refinery	United States	7	4	...
Seamless, 12" and under in diameter - Cold drawn	United States	7,202	296	158.9
	United Kingdom	155	3	26.9
	Sweden	...	...	.6
Hot finished	United States	2,517	26	...
	United Kingdom	9	...	...
Seamless, over 12" in diameter -				
Cold drawn	United States	105	...	1.9
Hot finished	United States	1,411	...	...
	United Kingdom	5,932	...	...
Welded, 4" and under in diameter	United States	12,796	1	55.6
	United Kingdom	1,762	...	...
	Australia	21	...	...
Welded, over 4" in diameter	United States	3,270	...	15.8
	Belgium	82	...	...
	Australia	5	...	...
Tubing -				
Not over $\frac{1}{2}$ " diameter, welded and coated	United States	182	...	1.0
Casings	United States	19,515	...	...
Fittings and couplings	United States	2,414	...	13.4
	United Kingdom	12	...	...
	Belgium	7	...	...
Wire rope	United States	374	...	4.5
	United Kingdom	119	...	...
Wire -				
For wire rope	United States	22,740	...	.7
	United Kingdom	474	...	...
For corset laces, steels, etc. ...	United States	176	...	...
	United Kingdom	12	...	...
For spring mattress, etc.	United States	2,099	...	...
For fencing, galvanized	United States	276	...	...
Wire cloth and netting	United States	1,371	...	1.9
Wire, coated	United Kingdom	65	...	...
Wire - All other	United States	763	...	...
	United States	9,714	...	34.3
	Sweden	5	...	...
Wire rods, not over $\frac{3}{8}$ " in diameter ..	United States	870	...	...
Welding wire and welding rods	United States	2,057	82	115.6
Castings -				
For agricultural implements	United States	1,624	...	...
For ingot moulds	United States	22,937	...	...
Malleable	United States	459	...	...
Non-malleable	United States	1,584	...	...
Steel	United States	1,115	71	2.4
For railway vehicles	United States	441	...	...
Rolls	United States	2,630	1,575	...
	United Kingdom	32	87	...
Piston rings (rough)	United States	233	...	...

Table 43 - IMPORTS INTO CANADA OF PRIMARY FORMS OF IRON AND STEEL, 1948 (Concluded)

Commodity	Country of Origin	Carbon	Alloy	Stainless
		(Tons of 2,000 pounds)		
Forgings	United States	1,124	230	9.9
	United Kingdom	198	186	...
Axles -				
For railway vehicles	United States	475	...	...
For all other vehicles	United States	51	...	...
Wheels -				
For railway rolling stock	United States	2,123	...	...
	United Kingdom	6,160	...	...
Tires -				
For railway rolling stock	United States	5,531	...	...
	United Kingdom	4,532	260	...
Rails -				
60 pounds and under	United States	298	...	...
Over 60 pounds and including				
100 pounds	United States	640	...	...
Over 100 pounds	United States	63	...	...
Grooved for electric tramways	United States	3,961	...	...
Track material -				
Angle bars, tie plates, rail				
Joints	United States	1,097	...	...
Intersections, switches, frogs ...	United States	118	...	...
Total Imports	United States	896,870	34,374	4,741.2
All other		52,208	918	152.3
TOTAL		949,078	35,292	4,893.5

Table 44 - EXPORTS FROM CANADA OF PRIMARY IRON AND STEEL, 1948

Commodity	Total Tonnage
	(Tons of 2,000 pounds)
Pig iron	662
Ingots, blooms and billets	35,773
Bars	46,821
Rods	2,223
Plates, sheets and strips	14,170
Rails	159,391
Structural shapes	10,506
Pipe and tubing - Wrought iron	1,232
Cast iron	659
Galvanized	2,812
Other	976
Castings, iron and steel	8,531
Forgings	732

Table 45 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1947 and 1948

Province	Average Number of Employees				Total employ-ees	Salaries	Wages	Total Salaries and Wages				
	On Salaries		On Wages									
	Male	Female	Male	Female								
<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				
<u>1948</u>												
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	3	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				

DIRECTORY OF FIRMS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1948

Name of Firm	Location of Plants
<u>(a) Pig Iron</u>	
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
<u>(b) Ferro-alloys (*)</u>	
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
<u>(c) Steel Ingots and Steel Castings</u>	
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

Name of Firm	Location of Plants
(c) Steel Ingots and Steel Castings (Concluded)	
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, 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
(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 and 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

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

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