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THE PRIMARY IRON AND STEEL INDUSTRY IN CANADA, 1931.

The primary iron and steel industry covers the operations of plants engaged chiefly in the manufacture of (a) pig iron, (b) ferro-alloys, (c) steel ingots and direct steel castings, (d) rolled and drawn iron and steel products, such as bars, strips, plates, sheets, rails, wire rods, structural shapes, etc. Figures for 1931 include data for one plant which produced cold rolled steel bars and strips, and two which made cold drawn steel shapes; formerly these concerns were classified in the castings and forgings group.

Factory sales from this industry in 1931 were valued at $36,911,245 which was 50 per cent under the sales figure for 1930 and the lowest total reported for any year since 1925.

Thirty-seven firms in this group in 1931 operated 53 different plants or departments including 4 pig iron, 2 ferro-alloy, and 28 steel plants and 19 rolling and drawing mills. The 22 works in Ontario accounted for 59 per cent of the total sales for Canada, 6 in Nova Scotia took care of 22 per cent, 14 in Quebec, 15 per cent, while the remaining 4 per cent was accounted for by 4 plants in Manitoba, 4 in British Columbia, and 3 in Alberta.

Capital employed in 1931 was given at $104,512,104, a decline of 7.5 millions from 1930. Over 70 per cent of this total or $73,945,195 represented the value of lands, buildings and equipment.

The average number of employees was 8,026 as compared with 9,723 in 1930 and 11,218 in 1929. About 632 workers were employed in iron blast furnace departments, 195 in ferro-alloys, 2,945 on steel furnaces, and 4,254 in rolling mills. Salaries and wages for the year totalled $11,072,054 as compared with $14,934,325 in 1930.

(a) PIG IRON - Production of pig iron in Canada during 1931 totalled 420,038 long tons as compared with 747,178 tons in 1930, 1,080,160 tons in 1929, and 1,037,727 tons in 1928.

Imports of pig iron during 1931 amounted to 7,912 long tons, a decline of 42 per cent from the total of 13,643 tons brought in during 1930. Exports were recorded at 2,787 long tons as compared with 595 tons in the previous year.

Furnace charges in 1931 included 745,951 long tons of imported ore, 56,525 long tons of mill cinder, etc., 16,272 long tons of scrap, 224,786 short tons of limestone, and 448,845 short tons of coke.

The stocks of pig iron held by the producers at the end of 1931 totalled 128,222 long tons.

The 4 producing companies had 11 blast furnaces available for use which, if operated at capacity, could produce 1.5 million tons of pig iron per year. Actua production totalled 420,038 tons so the furnaces were worked only at about 28 per cent of the rated capacity over the yearly period. For the first seven months the average rate was at about 39 per cent of capacity but for the last five months operations were at the rate of only 15 per cent of capacity.

(b) FERRO-ALLOYS - Production of ferro-alloys in Canada during 1931 amount to 46,764 long tons as compared with 65,223 long tons in 1930 and 89,116 tons in 1929. This year's output included ferromanganese, ferrosilicon and speigeleisen.

Eight firms made ferro-alloys in 1931, including 4 abrasive manufacturers who made ferrosilicon as a by-product, 1 pig iron producer which also made speigelei 1 steel producer which made some ferrosilicon and 2 concerns which were solely engag in making ferro-alloys.

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS - Production of steel ingots and direct steel castings totalled 672,109 long tons, a decline of 33 per cent from the 1930 output of 1,009,578 tons. This year's output included 637,454 tons of ingots a 34,655 tons of direct castings. All of the ingots were transferred to the producing companies' own plants while only 3,461 tons of castings were for the producers' own use. Sales of direct castings were reported at 30,931 tons, the difference between the tonnage distributed and the tonnage made representing a slight increase in stocks

Of the 28 steel plants, 10 were in Quebec, 7 in Ontario, 4 in British Colu 3 in Manitoba, 2 in Nova Scotia and 2 in Alberta. Five of these works operated basi open hearth furnaces only, 18 had electric furnaces only, 2 used both basic open hea and electric furnaces, and 3 used converters. Five concerns made basic steel ingots 3 made electric ingots, 18 made electric steel castings, 4 made basic open hearth castings, and 3 made converter castings.

(d) ROLLED AND DRAWN STEEL - Sixteen plants made hot rolled products, 1 ma cold rolled shapes and 2 produced cold drawn shapes in 1931. Sales from these facto were valued at $27,270,016 as compared with $36,995,287 in 1930 and $50,758,322 in 1929. During the year a total of 801,787 tons of iron and steel passed through the mills and 693,152 tons of this came from the producers' own steel works.

Ten of the mills were in Ontario, 4 in Quebec, 3 in Nova Scotia, and 1 in each of Manitoba and Alberta.

Table 1 - PRELIMINARY STATISTICS OF THE PRIMARY IRON AND STEEL INDUSTRY IN CANADA, 1927-1931.

Years	No. of plants	Capital employed	Average number of employees	Salaries and wages	(x) Cost of materials at works	Selling (x) value of products at works	Value added by manufacturing
		$		$	$	$	$
1927 ...	36	96,295,734	7,396	11,809,198	18,995,940	45,571,264	26,577,324
1928 ...	40	114,292,363	9,057	15,470,836	27,164,463	62,071,674	34,907,211
1929 ...	45	109,446,529	11,218	18,534,681	32,514,596	72,231,995	39,717,399
1930 ...	49	112,079,928	8,723	14,934,325	22,765,648	52,588,935	29,823,287
1931 -							
Nova Scotia	6	18,430,500	1,849	1,880,158	3,427,289	8,215,412	4,788,123
Quebec	14	42,753,170	1,770	2,205,216	1,770,846	5,408,500	3,637,654
Ontario	22	70,343,568	3,894	6,450,204	9,674,663	21,696,418	12,021,755
Manitoba	4	1,326,472	341	348,875	263,808	999,268	730,460
Alberta	3	1,150,000	122	125,600	116,881	444,600	327,719
Br.Columbia	4	128,000	50	62,001	34,927	147,047	112,120
CANADA	53	104,312,104	8,026	11,072,054	15,291,414	36,911,245	21,619,831

(x) Figures of materials used are of purchased materials only, and production figures cover sales only.

Table 2 - CAPITAL EMPLOYED, BY PROVINCES, 1930 and 1931.

Provinces	Number of plants	Present value of lands, buildings, machinery, tools and other equipment	Inventory value of materials on hand, stocks in process, fuel and finished products on hand	Operating capital, cash, bills and accounts receivable, prepared expenses, etc.	TOTAL CAPITAL EMPLOYED
1930		$	$	$	$
Nova Scotia.....	6	13,260,323	6,275,113	1,973,281	21,508,717
Quebec	13	11,302,262	2,896,219	2,766,480	16,964,961
Ontario	19	49,842,617	12,421,926	8,279,856	70,544,399
Manitoba	4	1,225,116	319,219	298,514	1,842,849
Alberta	3	825,000	230,000	38,000	1,093,000
British Columbia.	4	70,000	31,000	25,000	126,000
CANADA	49	76,525,318	22,173,477	13,381,131	112,079,926
1931					
Nova Scotia	6	12,760,102	4,913,886	756,512	18,430,500
Quebec	14	8,209,890	2,086,263	2,457,017	12,753,170
Ontario	22	50,822,104	10,417,342	9,004,116	70,243,562
Manitoba	4	1,223,099	311,689	292,084	1,826,872
Alberta	3	850,000	235,000	45,000	1,130,000
British Columbia.	4	80,000	28,000	20,000	128,000
CANADA	53	73,945,195	17,992,180	12,574,729	104,512,104

Table 3 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1930 and 1931.

Provinces	On salaries		On wages		TOTAL EMPLOYEES	Salaries	Wages	TOTAL SALARIES AND WAGES
	Male	Female	Male	Female				
						$	$	$
1930								
Nova Scotia	68	7	1,881	18	1,974	173,312	2,399,252	2,572,564
Quebec	169	34	1,975	1	2,179	397,518	2,601,559	2,999,077
Ontario	372	83	4,500	3	4,958	1,269,205	7,439,649	8,708,854
Manitoba	37	6	346	1	390	112,700	322,897	435,597
Alberta	14	..	154	..	168	29,000	106,200	135,200
British Columbia.	4	..	50	..	54	11,215	71,818	83,033
CANADA	664	130	8,906	23	9,723	1,992,950	12,941,375	14,934,325
1931								
Nova Scotia	68	6	1,762	13	1,849	164,428	1,715,730	1,880,158
Quebec	160	31	1,579	..	1,770	416,229	1,788,987	2,205,216
Ontario	390	88	3,416	..	3,894	1,298,120	5,152,084	6,450,204
Manitoba	30	5	305	1	341	95,367	253,508	348,875
Alberta	12	..	110	..	122	34,800	90,800	125,600
British Columbia.	3	..	47	..	50	8,881	53,120	62,001
CANADA	663	130	7,219	14	8,026	2,017,825	9,054,229	11,072,054

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Table 4- FUEL AND ELECTRICITY USED, 1930 and 1931.

Kinds	Unit of measure	1930 Quantity	1930 Cost at works	1931 Quantity	1931 Cost at works
			$		$
Bituminous coal - Canadian	short ton	191,363	875,739	144,686	658,658
Imported	short ton	143,479	677,357	96,993	455,745
Anthracite coal	short ton	6,014	68,477	2,804	31,784
Coke (for fuel only)	short ton	76,911	122,637	57,417	167,240
Gasoline	Imp.gal.	1,787	475	2,701	693
Kerosene or coal oil	Imp.gal.	1,744	386	5,766	759
Fuel oil	Imp.gal.	5,598,742	501,712	6,040,758	391,244
Wood	cord	1,172	6,453	271	2,171
Gas Manufactured	M cu.ft.	24,067,961	1,359,854	15,171,817	843,994
Natural	M cu.ft.	186,692	28,700	139,982	27,637
Other fuel	-	...	115,297	...	102,740
Electricity purchased	K.W.H.	336,929,513	1,425,049	194,573,901	1,076,508
TOTAL	-	...	5,782,136	...	3,757,243
Electricity generated for own use	K.W.H.	18,061,913	...	9,932,556	...

Table 5 - POWER EMPLOYED, 1930 and 1931.

Kind	1930 Number of units	1930 Total h.p. according to manufacturers' rating	1931 Number of units	1931 Total h.p. according to manufacturers' rating
Steam engines and steam turbines	140	87,818	264	90,035
Gasoline, gas and oil engines	11	19,050	13	19,600
Hydraulic turbines or water wheels	4	1,300	4	1,300
Total primary power	155	108,168	281	110,935
Electric motors operated by purchased power	2,284	96,471	2,373	102,301
Total power employed	2,439	204,639	2,654	213,236
Electric motors operated by power generated in the same plant	1,252	65,584	1,367	59,302
Total electric motors	3,536	162,055	3,740	161,603
Boilers	186	49,806	473	55,576

(a) PIG IRON

Table - MATERIALS CHARGED TO IRON BLAST FURNACES, 1931.

Materials		Quantity	Cost at furnace
			$
Foreign iron ore	long tons	745,951	2,896,179
Mill cinder, scale, slags, etc.	long tons	56,525	184,658
Scrap	long tons	13,272	147,180
Limestone -			
From Canadian quarries	short tons	68,868	102,776
From foreign sources	short tons	155,918	194,807
Coke -			
From Canadian coal	short tons	116,880	686,355
From imported coal	short tons	301,477	1,656,332
Imported coke	short tons	50,488	176,859
Firebrick	M	12	648
Fireclay	short tons	168	896
Other materials	-	...	6,911
TOTAL	-	...	6,052,681

Table 7 - PRODUCTION OF PIG IRON AND SALES BY THE PRODUCERS, 1931.

Grades	Total tonnage made	Tonnage shipped to companies' own plants	SALES	
			Quantity	Value
	long tons	long tons	long tons	$
PIG IRON -				
Basic	311,850	303,650	6,365	107,693
Foundry	80,892	1,128	97,183	1,810,101
Malleable	27,296	5,669	36,072	695,717
TOTAL	420,038	316,447	139,620	2,613,511

Table 8 - PRODUCTION OF PIG IRON, BY GRADES, 1927 - 1931 (Long tons)

Years	Basic	Foundry	Malleable	TOTAL
1927	523,701	145,787	40,209	709,697
1928	724,559	233,386	79,782	1,037,727
1929	770,478	221,644	88,038	1,080,160
1930	494,231	193,074	59,873	747,178
1931	311,850	80,892	27,296	420,038

Table 9 - PRODUCTION OF PIG IRON, BY PROVINCES, 1927 - 1931 (Long tons)

Years	Nova Scotia	Ontario	TOTAL
1927	249,549	460,148	709,697
1928	302,756	734,971	1,037,727
1929	310,801	769,359	1,080,160
1930	212,636	534,542	747,178
1931	101,393	318,645	420,038

Table 10 - PRODUCTION OF PIG IRON, BY MONTHS, 1927 - 1931. (Long tons)

Months	1927	1928	1929	1930	1931
January	51,717	85,006	87,764	87,079	35,592
February	50,695	84,691	93,939	70,600	46,395
March	75,637	78,390	86,176	74,582	57,110
April	77,240	74,736	79,341	72,339	53,792
May	78,987	87,811	81,464	80,505	50,511
June	69,437	97,379	89,873	66,081	55,822
July	80,997	95,422	99,786	64,676	40,303
August	63,234	91,522	112,528	57,459	23,212
September	52,470	90,516	98,816	49,595	17,585
October	38,097	95,186	91,409	40,079	11,562
November	37,989	95,426	86,516	46,360	14,292
December (x)	63,197	103,642	72,548	38,023	15,862
TOTAL	709,697	1,037,727	1,080,160	747,178	420,038

(x) Slight errors in monthly production figures have been compensated in December totals.

Table 11 - SALES OF PIG IRON BY THE PRODUCERS AND SHIPMENTS TO OWN WORKS, 1927-1931
(Long tons)

Years	Tonnage shipped to producers' own plants	S A L E S Tonnage sold	Income from sales
			$
1927	521,638	202,848	4,250,792
1928	706,700	258,479	5,085,091
1929	753,889	324,759	6,544,645
1930	510,604	215,304	4,123,562
1931	316,447	139,620	2,613,511

Table 12 - BLAST FURNACES IN CANADA, 1931.

Name of Company	Location	Number of stacks	Total Daily Capacity (Long tons)
Dominion Steel & Coal Corp. Ltd.	Sydney, N.S.	4	1,450
Canadian Furnace Co. Ltd.	Port Colborne, Ont.	1	350
The Steel Company of Canada, Ltd.	Hamilton, Ont.	2	825
Algoma Steel Corporation, Ltd.	Sault Ste. Marie, Ont.	4	1,600

(b) FERRO-ALLOYS

Table 13 - PRODUCTION OF FERRO-ALLOYS, 1927 - 1931.

Years	Long tons
1927	56,230
1928	44,842
1929	89,116
1930	65,223
1931	46,764

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS

Table 14 - MATERIALS USED IN STEEL FURNACES, 1931.

Materials	Companies' own production	Purchased materi	Cost at furnace
	Long tons	Long tons	$
(a) Metals:-			
Pig iron	319,150	8,913	194,27
Spiegeleisen and ferromanganese	...	6,339	355,69
Ferrosilicon	...	2,965	156,11
Other ferro-alloys	...	...	108,11
Metals for making alloy steels (nickel, etc.)	...	157	33,
Scrap iron or steel, including old rails not intended for re-rolling	4,792	241,830	2,950,25
Scrap made in works reporting	154,828	...	...
Total Metals	...	...	3,798,22

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS (continued)

Table 14 - MATERIALS USED IN STEEL FURNACES, 1931 - continued.

Materials	Companies' own production	Purchased materials	
		Quantity	Cost at furnace
	long tons	long tons	$
(b) Ores:			
Crude iron ore -			
Foreign	...	30,813	201,723
Calcined, roasted, or treated ore -			
Canadian	...	58	492
Foreign	...	123	1,793
Manganiferous ore -			
Canadian	...	36	2,130
Foreign	...	1,116	20,702
Chrome, etc. -			
Foreign	...	383	9,220
Total Ores	...	32,529	236,060
(c) General Materials:-			
Limestone -		short tons	
Canadian	...	30,140	74,355
Foreign	...	44,384	57,147
Fluorspar	...	4,969	66,471
Dolomite	...	15,773	76,317
Coke made from Canadian coal	...	974	11,123
Coke made in Canada from imported coal	...	316	3,106
Imported coke	...	840	8,400
Anthracite coal	...	480	4,295
Bituminous coal	...	110	920
Charcoal	...	396	11,214
Electrodes	...	...	120,068
Moulding sands	...	12,816	46,415
Firebrick	...	2,948	43,590
Fireclay	...	2,096	18,630
Other materials	...	...	210,100
Total General Materials	...	...	752,151
TOTAL VALUE OF METALS, ORES AND GENERAL MATERIALS USED	...	...	4,786,433

Table 15 - PRODUCTION OF STEEL INGOTS AND DIRECT CASTINGS AND SALES BY THE PRODUCERS, 1931.

Grades	Total tonnage made	Tonnage shipped to companies' own plants	S A L E S	
			Quantity	Value
	Long tons	Long tons	Long tons	$
Steel Ingots -				
Basic open hearth	612,437	613,402	...	...
Electric	25,017	25,017	...	...
Direct Steel Castings -				
Basic	14,760	3,348	11,057	1,712,865
Bessemer	590	100	490	106,253
Electric	19,305	13	19,284	3,324,377
TOTAL	672,109	641,880	30,831	5,143,495

Table 16 - PRODUCTION OF STEEL INGOTS AND DIRECT STEEL CASTINGS, BY GRADES, 1925-19

Years	STEEL INGOTS		DIRECT STEEL CASTINGS			Total steel ingots and castings
	Open hearth	Electric	Open hearth	Converter	Electric	
1925	734,277	...	9,059	1,732	7,435	752,503
1926	744,103	...	19,831	1,676	10,652	776,262
1927	868,440	134	17,569	2,191	19,611	907,945
1928	1,189,399	602	20,109	2,019	22,590	1,234,719
1929	1,295,162	14,444	35,806	2,590	50,022	1,378,024
1930	925,427	31,461	24,772	2,314	25,604	1,009,578
1931	612,437	25,017	14,760	590	19,305	672,109

Table 17 - PRODUCTION OF STEEL INGOTS AND DIRECT CASTINGS, BY MONTHS, 1927 - 1931.
(Long tons)

Months	1927	1928	1929	1930	1931
January	58,551	84,295	116,260	115,200	57,598
February	55,620	98,820	117,445	106,612	82,637
March	107,381	118,258	137,158	117,487	99,341
April	109,107	112,780	122,102	102,681	91,461
May	96,711	117,655	126,372	99,312	75,235
June	59,940	116,530	119,505	95,321	55,605
July	55,250	82,807	129,827	68,424	45,097
August	77,479	88,677	120,282	57,626	52,491
September	54,250	99,888	99,000	55,808	33,590
October	56,371	108,987	115,674	65,431	30,926
November	80,730	108,463	93,648	71,740	28,337
December (x)	96,555	97,559	80,751	53,936	19,991
TOTAL	907,945	1,234,719	1,378,024	1,009,578	672,109

(x) Slight errors in monthly production figures have been compensated in December totals.

(d) ROLLED AND DRAWN PRODUCTS

Table 18 - MATERIALS USED IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1931.

Materials	Companies' own make	Purchased materials	
	long tons	Quantity long tons	Cost at mil $
Steel, crude and semi-finished (ingots, blooms, billets, slabs)	684,999	57,266	2,242,551
Rails, old or scrap	...	36,269	646,667
Axles, scrap	...	6,256	112,356
Iron muck and scrap bar	2,400	157	10,658
Iron and steel scrap	3,639	1,000	9,859
All other iron and steel	2,114	...	...
Steel bars and rods for cold rolling or drawing	...	7,687	424,024
All other materials	...	...	85,461
TOTAL	...	...	3,551,576

Table 19 - PRODUCTS MADE IN THE IRON AND STEEL ROLLING AND DRAWING MILLS, AND SALES BY THE PRODUCERS, 1931.

Products	Total tonnage made	Tonnage shipped to companies' own plants	SALES Quantity	SALES Value
	Long tons	Long tons	Long tons	$
Blooms, billets and slabs (except for forging)	484,437	483,380	50,499	1,601,299
Rails	140,145	148	135,975	6,238,208
Structural shapes	33,867	600	32,010	1,627,545
Merchant bars, including spring steel rounds, squares, flats (6 in. and under) except flats for cold rolling and bars for reinforcing concrete	102,247	21,513	87,442	4,582,465
Bars for reinforcing concrete	50,296	1,985	51,280	2,613,431
Wire rods, including chain rods	78,133	61,081	18,839	726,442
Spike rods, bolt and nut rods, horseshoe bars, and all other miscellaneous rolled (not forged) forms, not elsewhere specified	26,959	20,808	6,246	312,144
Cold rolled and cold drawn steel shapes	7,802	...	7,802	676,512
Rail fastenings, finished -				
Tie plates	30,402	4	31,661	1,691,098
Angle splice bars and fish plates	8,616	5	9,357	591,407
Forgings of iron or steel	11,512	...	12,827	1,085,340
Railway spikes and pressed spikes	8,461	153	8,670	606,522
Washers	369	65	327	44,926
Scrap iron and steel	4,282	520	2,574	21,423
Other products including plain sheets, plates, galvanized sheets, forged axles, horseshoes, etc. for which figures cannot be shown separately	...	...	...	4,861,154
TOTAL	...	...	...	27,279,916

Table 20 - LEADING ROLLED IRON AND STEEL PRODUCTS MADE IN CANADA, 1927-1931 (Long tons)

Products	Years	Total tonnage made	Tonnage shipped to makers' own plants	Tonnage sold
Blooms, billets and slabs (except for forging)	1927	984,627	939,605	49,429
	1928	1,058,321	874,394	80,461
	1929	1,159,045	1,012,912	74,402
	1930	756,778	690,391	60,171
	1931	484,437	483,380	50,499
Rails	1927	235,683	274	234,521
	1928	349,189	237	349,007
	1929	383,002	194	381,634
	1930	253,432	212	232,414
	1931	140,145	148	135,975
Wire rods, including chain rods	1927	115,245	92,896	24,020
	1928	144,309	99,805	45,032
	1929	142,589	111,879	33,632
	1930	108,992	85,867	24,889
	1931	78,133	61,081	18,839
Merchant bars	1927	186,916	27,533	157,559
	1928	258,773	59,633	208,144
	1929	244,593	36,191	206,605
	1930	164,541	30,666	143,398
	1931	102,247	21,513	87,442

Table 29 - LEADING ROLLED IRON AND STEEL PRODUCTS MADE IN CANADA, 1927 - 1931 (contin
(Long tons)

Products	Years	Total tonnage made	Tonnage shipped to makers' own plants	Tonnage sold
Bars for reinforcing concrete	1927	34,146	974	32,909
	1928	51,102	3,224	46,005
	1929	59,515	3,700	60,738
	1930	63,153	2,243	64,320
	1931	50,296	1,985	51,280

DIRECTORY OF PRODUCERS OF PIG IRON, FERRO-ALLOYS, STEEL INGOTS AND DIRECT STEEL CASTINGS AND ROLLED AND DRAWN STEEL IN CANADA, 1931.

(a) PIG IRON

Dominion Steel & Coal Corporation Ltd.	Sydney, N.S.
Algoma Steel Corporation, Limited	Sault Ste. Marie, Ontario
Canadian Furnace Company, Limited	Port Colborne, Ontario
Steel Company of Canada, Limited	Hamilton, Ontario

(b) FERRO-ALLOYS

(x) Abrasive Company of Canada, Ltd.	Hamilton, Ontario
(x) Canadian Carborundum Co. Ltd.	Niagara Falls, Ontario
Canadian Furnace Company Limited	Port Colborne, Ontario
(x) Exolon Company, Limited	Thorold, Ontario
Electro Metallurgical Co. of Canada, Ltd.	Welland, Ontario
(x) Lionite Abrasives Company	Niagara Falls, Ontario
Shawinigan Chemicals Ltd.	Shawinigan Falls, P.Q.
Superior Alloys Limited	Sault Ste. Marie, Ontario

(x) These firms produce ferro silicon as a by-product in the manufacture of fused alumina. General statistics covering their operations have not been included in the present report.

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS

Cummings Manufacturing Co. Ltd., J.W.	Glasgow St., New Glasgow, N.S.
Dominion Steel & Coal Corporation, Ltd.	Sydney, N.S.
Canadian Brakeshoe & Foundry Co. Ltd.	101 Belvidere St., Sherbrooke, P.Q.
Canadian Steel Foundries Ltd.	Longue Pointe, Montreal, P.Q.
Canadian Tube & Steel Products Ltd.	Hamilton St., Montreal, P.Q.
Hull Iron & Steel Foundries Ltd.	Montcalm St., Hull, P.Q.
Joliette Steel, Limited	Laval St., Joliette, P.Q.
La Compagnie F. X. Drolet	206 rue du Pont, Quebec, P.Q.
Lynn MacLeod Engineering Supplies Ltd.	Thetford Mines, P.Q.
Manganese Steel Castings Ltd	Water St., Sherbrooke, P.Q.
Shawinigan Chemicals Ltd.	Shawinigan Falls, P.Q.
Sorel Steel Foundries Ltd.	Limoges St., Sorel, P.Q.
Algoma Steel Corporation, Ltd.	Sault Ste. Marie, Ontario
Canada Electric Castings Ltd.	West St., Orillia, Ont.
Dominion Foundries & Steel Ltd	Depew St., Hamilton, Ont.
Kennedy & Sons, Ltd. Wm.	1114 - 1st Ave. W., Owen Sound, Ont.
London Rolling Mill Co. Ltd.	Phillips St., London, Ont.

DIRECTORY OF PRODUCERS OF PIG IRON, FERRO-ALLOYS, STEEL INGOTS AND DIRECT CASTINGS, ROLLED AND DRAWN STEEL IN CANADA, 1931 (continued)

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS (continued)

Steel Company of Canada, Ltd.	Wilcox Ave., Hamilton, Ont.
Welland Steel Castings Ltd.	125 Victoria St., Welland, Ont.
Manitoba Rolling Mill Co. Ltd.	Selkirk, Man.
Manitoba Steel Foundries Ltd.	Selkirk, Man.
Vulcan Iron Works Ltd.	Pt. Douglas and Maple Sts., Winnipeg, Man.
Manitoba Rolling Mill Co. Ltd.	East Calgary, Alberta
Riverside Iron Works Ltd.	803 - 24th Ave. S.E., Calgary, Alberta
Consolidated Mining & Smelting Co. Ltd.	Trail, B.C.
Reliance Foundry Co. Ltd.	149 - 4th Ave. W., Vancouver B.C.
Vancouver Engineering Works Ltd.	519 - 6th Ave. W., Vancouver, B.C.
Vulcan Engineering Works Ltd.	Granville Island, Vancouver, B.C.

(d) HOT ROLLED IRON AND STEEL

Canadian Car & Foundry Ltd.	Amherst, N.S.
Dominion Steel & Coal Corp. Ltd.	Sydney, N.S.
Nova Scotia Steel & Coal Corp. Ltd.	Trenton, N.S.
Canadian Tube & Steel Products Ltd.	Hamilton St., Montreal, P.Q.
Peck Rolling Mills Ltd.	851 Mill St., Montreal, P.Q.
Steel Company of Canada, Ltd.	2320 Notre Dame St. W., Montreal, P.Q.
Steel Company of Canada, Ltd.	1550 St. Patrick St., Montreal, P.Q.
Algoma Steel Corporation Ltd.	Sault Ste. Marie, Ont.
Burlington Steel Co. Ltd.	Sherman Ave. N., Hamilton, Ont.
Canadian Atlas Steels Limited	Welland, Ont.
Dominion Foundries & Steel Ltd.	Depew St., Hamilton, Ont.
London Rolling Mill Co. Ltd.	529 Phillips St., London, Ont.
Steel Company of Canada, Ltd.	Queen St. N., Hamilton, Ont.
Steel Company of Canada, Ltd.	Wilcox Ave., Hamilton, Ont.
Manitoba Rolling Mill Co. Ltd.	Selkirk, Man.
Manitoba Rolling Mill Co. Ltd.	East Calgary, Alberta.

(e) COLD ROLLED STEEL

Stanley Steel Co. Ltd.	Gerrard St., Hamilton, Ont.

(f) COLD DRAWN STEEL

Canadian Drawn Steel Co. Ltd.	Gerrard St., Hamilton, Ont.
Union Drawn Steel Co. Ltd.	2 Webber Ave., Hamilton, Ont.

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