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CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS

THE
PRIMARY IRON AND STEEL INDUSTRY
IN
CANADA
1933

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

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DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

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IRON AND STEEL AND THEIR PRODUCTS

THE PRIMARY IRON AND STEEL INDUSTRY, 1933.

Statistics for the primary iron and steel industry cover 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, plates, sheets, strips, rails, wire rods, structural shapes, etc. Thirty-six firms were included in this industry in 1933 and reports were received for 50 different plants or departments including 4 blast furnace departments, 2 ferro-alloy plants, 26 steel furnace divisions and 18 rolling or drawing mills.

Factory sales of pig iron, steel and rolled products were valued at \$18,492,549 in 1933 compared with \$16,197,526 in 1932 and \$36,911,245 in 1931. The 22 works in Ontario accounted for 63 per cent of the total sales for Canada, 6 plants in Nova Scotia provided 20 per cent of the total and 14 works in Quebec accounted for 14 per cent. There were also 4 operating plants in Manitoba, 1 in Alberta and 3 in British Columbia.

Capital employed in 1933 was reported at \$96,444,846 of which \$74,536,432 or 77.4 per cent represented the value of land, buildings and plant equipment. The total for Ontario was \$64,821,820; for Nova Scotia, \$18,380,730; for Quebec, \$11,773,013; for Manitoba, \$1,342,983; and for Alberta and British Columbia, \$126,300.

The average number of employees in the primary iron and steel plants was 5,200 in 1933 compared with 4,847 in 1932 and 8,026 in 1931. About 315 workers were employed in blast furnace departments, 209 in ferro-alloy plants, 1,467 on steel furnaces and 3,207 in rolling mills. Salaries and wages in 1933 totalled \$6,049,189 compared with \$6,131,057 in 1932 and \$11,072,054 in 1931.

(a) PIG IRON -- Production of pig iron in Canada during 1933 totalled 227,317 long tons compared with 144,130 tons in 1932 and 420,038 tons in 1931.

Imports of pig iron during 1933 amounted to 2,459 long tons, a decline of over 48 per cent from the total of 4,753 tons brought in during 1932. Exports were recorded at 11,903 long tons as compared with 2,029 tons in the previous year.

Furnace charges in 1933 included 400,290 long tons of imported ore, 17,992 long tons of mill cinder, etc., 10,879 long tons of scrap, 132,235 short tons of limestone, and 247,974 short tons of coke.

The stocks of pig iron held by the producers at the end of 1933 totalled 109,507 long tons compared with a carryover from 1932 of 117,460 tons.

The four producers of pig iron in Canada have 11 blast furnaces available for use, which, if operated at capacity, could produce 1.5 million tons of pig iron per year. Actual production in 1933 totalled 227,317 tons or about 15 per cent of the rated capacity.

(b) FERRO-ALLOYS - Production of ferro-alloys during 1933 amounted to 30,133 long tons compared with 16,161 tons in 1932.

In 1933 ferrosilicon was recovered as a by-product by 3 manufacturers of fused alumina; 1 chemical manufacturer made some ferro-phosphorus; 1 producer of pig iron made spiegeleisen in the blast furnace; and 1 large manufacturer of ferro-alloys made ferrosilicon, spiegeleisen and calcium silicon.

(c) STEEL INGOTS AND CASTINGS - Steel production advanced 21 per cent in 1933 to 409,979 long tons compared with 339,346 tons in 1932. The 1933 output included 394,059 tons of ingots and 15,920 tons of castings. Practically all of the ingots were transferred to the producers' own rolling mills but only 916 tons of castings were for the producers' own use. Sales of castings amounted to 14,876 tons at \$2,363,226 and sales of ingots were reported at 58 tons valued at \$1,945.

Twenty-six steel plants were in operation during 1933 of which 10 were in Quebec, 7 in Ontario, 3 in Manitoba, 2 in Nova Scotia, 3 in British Columbia, and 1 in Alberta. Four of these concerns operated basic open hearth furnaces only, 18 used electric furnaces only, 2 used both basic open hearth and electric furnaces and 2 used converters. Six concerns made basic open hearth steel ingots, 3 made electric ingots, 18 made electric steel castings, 4 made basic open hearth castings and 2 made converter castings. These plants reported steel furnace equipment as follows: 41 basic open hearth furnaces with a total daily capacity of 5,090 long tons; 4 converters with total capacity of 1,252 tons per day and 27 electric furnaces with total capacity of 561 tons. Two plants were idle during the year, 1 electric furnace in Ontario and 1 basic open hearth furnace in Alberta, their combined capacity being about 87 tons of steel per day.

(d) ROLLED AND DRAWN STEEL - Fifteen plants made hot rolled products; 1 made cold rolled strips and 2 produced cold drawn shapes in 1933. Sales from these works were valued at \$13,876,661 in 1933 compared with \$12,564,130 in 1932. During the year 419,000 tons of iron and steel passed through the mills and 413,000 tons of this came from the producers own works.

Table 1 - PROVINCIAL DISTRIBUTION OF PLANTS IN THE PRIMARY IRON AND STEEL INDUSTRY, 1933.

Provinces	No. of firms	PIG IRON		STEEL INGOTS AND CASTINGS		Rolling mills	Ferro-alloys
		No. of plants	No. of blast furnaces	(x) No. of plants	No. of steel furnaces(x)		
Nova Scotia	4	1	4	2	13	3	...
Quebec	12	...	...	10	17	4	...
Ontario	14	3	7	7	34	10	2
Manitoba	3	...	...	3	4	1	...
Alberta	1	...	...	1	1	...	...
British Columbia.	3	...	...	3	5	...	...
CANADA	36	4	11	26	74	18	2

(x) Not including 2 plants (1 furnace each) which were idle in 1933.

Table 2 - PRINCIPAL STATISTICS OF THE PRIMARY IRON AND STEEL INDUSTRY IN CANADA, 1929-1933.

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
		\$		\$	\$	\$	\$
1929	45	109,446,529	11,218	18,534,681	32,514,596	72,231,995	39,717,399
1930	49	112,079,926	9,723	14,934,325	22,765,648	52,588,935	29,823,287
1931	53	104,512,104	8,026	11,072,054	15,291,414	36,911,245	21,619,831
1932	52	96,323,629	4,847	6,131,057	6,289,483	16,197,526	9,908,043
1933 -							
Nova Scotia .	6	18,380,730	768	903,066	2,276,878	3,763,242	1,486,364
Quebec	14	11,773,013	1,194	1,003,807	722,481	2,553,091	1,830,610
Ontario	22	64,821,820	2,966	3,890,856	4,430,511	11,584,786	7,154,275
Manitoba	4	1,342,983	238	220,168	147,028	479,578	332,550
Alberta and 1)							
Br. Columbia. 3)		126,300	34	31,292	22,033	111,852	89,819
CANADA	50	96,444,846	5,200	6,049,189	7,598,931	18,492,549	10,893,618

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

Table 3 - CAPITAL EMPLOYED, BY PROVINCES, 1932 and 1933.

Provinces	No. of plants	Present value of lands, buildings, machinery, tools and other equipment	Inventory value of materials on hand, stocks in process, fuel and miscellaneous supplies on hand	Inventory value of finished products on hand	Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	TOTAL CAPITAL EMPLOYED
		\$	\$	\$	\$	\$
1932						
Nova Scotia .	6	12,778,141	2,180,257	520,590	1,653,681	17,132,669
Quebec	14	8,830,881	695,185	756,555	1,823,980	12,106,601
Ontario	22	50,777,125	2,161,151	7,393,223	3,965,391	64,296,890
Manitoba	4	1,164,774	189,537	33,202	350,856	1,738,369
Alberta	3	811,583	121,204	49,013	15,000	996,800
Br. Columbia .	3	30,000	10,800	1,500	10,000	52,300
CANADA	52	74,392,504	5,358,134	8,754,083	7,818,908	96,323,629
1933						
Nova Scotia .	6	13,732,552	2,031,633	791,330	1,825,215	18,380,730
Quebec	14	8,947,181	623,671	553,395	1,648,766	11,773,013
Ontario	22	50,880,248	2,008,180	7,168,911	4,764,481	64,821,820
Manitoba	4	896,451	223,764	49,409	173,359	1,342,983
Alberta and 1)						
Br. Columbia. 3)		80,000	800	20,500	25,000	126,300
CANADA	50	74,536,432	4,888,048	8,583,545	8,436,821	96,444,846

Table 4 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1932 and 1933.

Provinces	TOTAL					Salaries	Wages	TOTAL SALARIES AND WAGES
	On salaries		On wages		EMPLOY- EES			
	Male	Female	Male	Female				
	No.	No.	No.	No.				
	No.	No.	No.	No.	No.	\$	\$	\$
1932								
Nova Scotia ...	56	5	540	11	612	87,632	599,879	687,511
Quebec	145	26	1,055	...	1,226	276,445	807,940	1,084,304
Ontario	297	62	2,333	...	2,692	953,172	3,052,735	4,005,907
Manitoba	28	4	202	1	235	91,672	188,611	280,283
Alberta	9	...	50	...	59	14,690	36,408	51,098
Br. Columbia ...	1	...	22	...	23	2,429	19,435	21,864
CANADA	536	97	4,202	12	4,847	1,426,040	4,705,017	6,131,057
1933								
Nova Scotia ...	37	2	719	10	768	65,581	837,485	903,066
Quebec	137	18	1,036	3	1,194	246,928	756,879	1,003,807
Ontario	279	64	2,622	1	2,966	806,801	3,084,055	3,890,856
Manitoba	29	1	207	1	238	67,573	152,595	220,168
Alberta and)								
Br. Columbia)	2	...	32	...	34	2,156	29,136	31,292
CANADA	484	85	4,616	15	5,200	1,189,039	4,860,150	6,049,189

Table 5 - FUEL AND ELECTRICITY USED, 1932 and 1933.

		1	9	3	2	1	9	3	3
Kinds	Unit of measure	Quantity		Cost at works		Quantity		Cost at works	
					\$				\$
Bituminous coal - Canadian .	short ton	61,268			292,205	70,235			319,340
Imported .	short ton	54,045			267,717	58,913			269,260
Anthracite coal	short ton	3,759			40,923	2,898			30,186
Coke (for fuel only)	short ton	68,109			123,803	50,915			119,753
Gasoline	Imp. gal.	367			92	806			195
Kerosene or coal oil	Imp. gal.	3,389			594	3,290			520
Fuel oil	Imp. gal.	3,227,984			197,205	3,679,905			232,099
Wood	cord	187			1,118	103			549
Gas - Manufactured	M cu.ft.	11,223,109			587,510	10,758,233			806,186
Natural	M cu.ft.	50,379			14,098	5,365			2,809
Other fuel	xx	...			36,016	...			46,083
Electricity purchased	K.W.H.	119,473,734			805,841	118,506,652			872,857
TOTAL	xx	...			2,367,122	...			2,699,837
Electricity generated for own use	K.W.H.	14,305,350			...	18,838,725			...

Table 6 - POWER EQUIPMENT, 1932 and 1933.

Kinds	1	9	3	2	1	9	3	3
	Number of units		Total rated horse power		Number of units		Total rated horse power	
Steam engines and steam turbines	155		90,035		152		86,835	
Gasoline, gas and oil engines	13		19,610		13		19,610	
Hydraulic turbines or water wheels	4		1,300		4		1,300	
Total Primary	172		110,945		169		107,745	
Electric motors operated by purchased power	2,689		126,118		2,671		120,444	
TOTAL	2,861		237,063		2,840		228,189	
Electric motors operated by power generated in the same plant	905		32,542		909		33,710	
Total Electric Motors	3,594		158,660		3,580		154,154	
Boilers	192		50,781		183		49,587	

(a) PIG IRON

Table 7 - MATERIALS CHARGED TO IRON BLAST FURNACES, 1933.

Materials		Quantity	Cost at furnace
			\$
Foreign iron ore	long tons	400,290	1,378,198
Mill cinder, scale, etc.	long tons	17,992	57,343
Scrap (net charge)	long tons	10,879	92,421
Limestone -			
From Canadian quarries	short tons	21,888	28,477
From foreign sources	short tons	110,347	140,501
Coke made in Canada -			
From Canadian coal	short tons	135,323	803,659
From imported coal	short tons	80,500	388,211
Imported coke	short tons	32,151	164,378
Other materials	xxx	...	63,052
TOTAL	xxx	...	3,116,240

Table 8 - PRODUCTION OF PIG IRON AND SALES BY THE PRODUCERS, 1933.

Grades	Total tonnage made	Tonnage shipped to producers' own plants	S A L E S	
			Quantity	Selling value at works
	Long tons	Long tons	Long tons	\$
Basic	189,428	151,976	15,648	272,600
Foundry	22,333	234	39,361	732,337
Malleable	15,556	2,029	21,498	337,966
TOTAL	227,317	154,239	76,507	1,402,903

Table 9 - PRODUCTION OF PIG IRON, BY GRADES, 1927-1933 (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
1932	105,058	25,246	13,826	144,130
1933	189,428	22,333	15,556	227,317

Table 10 - PRODUCTION OF PIG IRON, BY PROVINCES, 1927 - 1933. (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
1932	30,697	113,433	144,130
1933	118,514	108,803	227,317

Table 11 - PRODUCTION OF PIG IRON, BY MONTHS, 1929-1933. (Long tons)

Months	1929	1930	1931	1932	1933
January	87,764	87,079	35,592	10,305	20,209
February	93,939	70,600	46,395	10,507	6,144
March	86,176	74,582	57,110	17,989	...
April	79,341	72,339	53,792	16,898	...
May	81,464	80,505	50,511	13,339	...
June	89,873	66,081	55,822	8,163	857
July	99,786	64,676	40,303	7,317	31,689
August	112,528	57,459	23,212	5,992	35,233
September	98,816	49,395	17,585	5,709	30,738
October	91,409	40,079	11,562	6,731	27,002
November	86,516	46,360	14,292	14,149	29,592
December	72,548	38,023	13,862	27,031	36,853
TOTAL	1,080,160	747,178	420,038	144,130	227,317

Table 12 - PRODUCTION OF PIG IRON, BY GRADES AND BY METHOD OF CASTING OR DELIVERY, 1933.

Grades	Delivered in molten condition	Machine cast (Long tons)	TOTAL
Basic	109,651	79,777	189,428
Foundry	27	22,306	22,333
Malleable	1,898	13,658	15,556
TOTAL	111,576	115,741	227,317

Table 13 - SALES OF PIG IRON BY THE PRODUCERS AND SHIPMENTS TO OWN WORKS, 1927 - 1933. (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
1932	89,256	55,440	1,088,532
1933	154,239	76,507	1,402,903

Table 14 - IRON ORE, FUEL AND FLUX CHARGED TO IRON BLAST FURNACES, 1927 - 1933.

Years	Imported iron ore Long tons	Mill cinder, scale, etc. Long tons	Scrap Long tons	Coke Short tons	Limestone Short tons
1927	1,263,990	77,826	43,120	798,803	407,403
1928	1,801,687	127,353	55,588	1,121,864	566,170
1929	1,924,579	120,779	61,955	1,171,171	559,032
1930	1,328,929	94,766	35,909	796,040	401,688
1931	745,951	56,525	16,272	448,845	224,786
1932	253,337	16,297	7,071	155,932	77,086
1933	400,290	17,992	10,879	247,974	132,235

Table 15 - IMPORTS INTO CANADA AND EXPORTS OF PIG IRON, 1927 - 1933.

Years	I M P O R T S		E X P O R T S	
	Long tons	\$	Long tons	\$
1927	40,922	781,832	344	7,752
1928	43,307	791,733	1,043	20,642
1929	32,548	624,891	7,478	151,967
1930	13,643	270,157	593	12,653
1931	7,912	148,951	2,787	55,183
1932	4,753	78,845	2,029	38,816
1933	2,459	43,298	11,903	214,195

Table 16 - BLAST FURNACES IN CANADA, 1933.

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

(b) FERRO-ALLOYS

Table 17 - PRODUCTION OF FERRO-ALLOYS, 1927 - 1933.

Years	Long tons	Years	Long tons
1927	56,230	1931	46,764
1928	44,842	1932	16,161
1929	89,116	1933	30,133
1930	65,223		

(c) STEEL INGOTS AND DIRECT STEEL CASTINGS

Table 18 - MATERIALS USED IN STEEL FURNACES, 1933.

Materials	Companies' own production	Purchased materials	Cost at furnace
	Long tons	Quantity Long tons	\$
(a) Metals:-			
Pig iron	154,827	2,135	46,450
Spiegeleisen and ferromanganese .....	...	4,157	208,046
Ferrosilicon .....	...	2,748	115,319
Other ferro-alloys .....	...	434	90,969
Metals for making alloy steels(nickel,etc) .....	...	...	95,604
Scrap iron or steel, including old rails not intended for re-rolling	600	213,396	1,418,420
Scrap made in works reporting	94,330	...	...
Total Metals .....	...	...	1,974,808

Table 18 - MATERIALS USED IN STEEL FURNACES, 1933. (concluded)

Materials	Companies'	Purchased materials	
	own	Quantity	Cost at
	Production	Long tons	furnace
	Long tons		\$
(b) Ores:-			
Crude iron ore -			
Foreign .....	...	17,740	121,010
Calcined, roasted, or treated ore -			
Foreign .....	...	80	928
Manganiferous ore -			
Foreign .....	...	198	3,203
Chrome, etc. -			
Foreign .....	...	133	2,564
Total Ores .....	...	18,151	127,705
(c) General Materials:-	Short tons	Short tons	
Limestone -			
Canadian .....	...	14,418	38,291
Foreign .....	...	20,114	27,537
Fluorspar .....	...	2,949	31,657
Dolomite .....	...	6,874	30,557
Coke made from Canadian coal .....	...	368	3,928
Coke made in Canada from imported coal .....	...	2,894	19,059
Imported coke .....	...	291	4,143
Anthracite coal .....	...	759	7,333
Bituminous coal .....	...	30	240
Charcoal .....	...	8,733	1,610
Electrodes .....	...	...	78,398
Moulding sands .....	...	8,960	31,307
Firebrick .....	...	...	34,694
Fireclay .....	...	2,904	21,365
Other materials .....	...	...	223,473
Total General Materials .....	...	...	330,752
TOTAL VALUE OF METALS, ORES AND GENERAL			
MATERIALS USED .....	...	...	2,723,263

Table 19 - PRODUCTION OF STEEL INGOTS AND DIRECT CASTINGS AND SALES BY THE PRODUCERS, 1933.

Grades	Total tonnage made	Tonnage shipped to producers' own plants	S A L E S			
			Quantity		Income	
			Long tons	Long tons	from	sales
						\$
Steel Ingots -						
Basic open hearth	378,666	377,931	54		1,620	
Electric	15,393	15,389	4		325	
Direct Steel Castings -						
Basic	5,017	779	4,281		617,469	
Bessemer, including all converters.	288	27	261		61,335	
Electric	10,615	110	10,334		1,684,332	
TOTAL	409,979	394,236	14,934		2,353,171	

Table 20 - PRODUCTION OF STEEL INGOTS AND DIRECT STEEL CASTINGS, BY GRADES, 1927-1933.

Years	STEEL INGOTS		DIRECT STEEL CASTINGS		Total steel ingots and castings	
	Open hearth	Electric	Open hearth	Converter		
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	30,022	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
1932	308,700	19,670	2,616	846	7,514	339,346
1933	378,666	15,393	5,017	288	10,615	409,979

Table 21 - PRODUCTION OF STEEL INGOTS AND DIRECT CASTINGS, BY MONTHS, 1929 - 1933.
(Long tons)

Months	1929	1930	1931	1932	1933
January	116,260	115,200	57,538	25,060	40,766
February	117,445	106,612	82,637	28,469	12,374
March	137,158	117,487	99,341	43,572	11,212
April	122,102	102,681	91,461	36,030	11,384
May	126,372	99,312	75,235	29,239	23,126
June	119,505	95,321	55,605	18,118	31,602
July	129,827	68,424	45,097	27,506	49,076
August	120,282	57,626	52,491	26,710	46,659
September	99,000	55,808	33,390	23,139	38,630
October	115,674	65,431	30,926	17,102	48,496
November	93,648	71,740	28,337	37,088	43,099
December ... (x) ...	80,751	53,936	19,991	27,313	51,555
TOTAL	1,378,024	1,009,578	672,109	339,346	409,979

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

Table 22 - ANNUAL PRODUCTION OF STEEL INGOTS AND DIRECT STEEL CASTINGS, BY PROVINCES, 1927-1933. (Long tons)

Years	Nova Scotia	Quebec	Ontario	Manitoba	Alberta	British Columbia	CANADA
1927	297,637	22,297	567,119	20,318	...	574	907,945
1928	391,783	24,583	780,511	36,486	361	995	1,234,719
1929	407,062	42,212	899,911	27,425	298	1,116	1,378,024
1930	296,552	45,171	639,128	19,121	8,377	1,229	1,009,578
1931	172,529	35,834	442,231	14,020	6,685	810	672,109
1932	68,630	19,010	243,047	6,412	1,880	367	339,346
1933	124,134	18,917	257,615	8,509	206	598	409,979

Table 23 - SALES OF STEEL INGOTS AND DIRECT CASTINGS BY THE PRODUCERS AND SHIPMENTS TO OWN WORKS, 1927 - 1933.

Years	Tonnage shipped	S	A	L	E	S
	to producers'	Tonnage	Income from			
	own plants	sold	sales			
	Long tons	Long tons	\$			
1927	783,580	34,287	6,157,084			
1928	1,190,933	38,444	7,022,696			
1929	1,313,624	61,981	10,283,460			
1930	963,143	48,563	8,013,707			
1931	641,880	30,831	5,143,495			
1932	328,624	11,543	1,913,157			
1933	394,236	14,934	2,365,171			

Table 24 - STEEL FURNACES IN CANADA, 1933.

Table 24 - STEEL FURNACES IN CANADA, 1933.								
Names of Companies and location of Furnaces	F	U	R	N	A	C	E	S
	Type					Number	Total Daily Capacity	
							Long tons	
J. W. Cummings Manufacturing Co. Ltd., New Glasgow, N.S.	Electric	{	Heroult)			1	16-20	
Dominion Steel & Coal Corp. Ltd., Sydney, N.S.	Basic open hearth					12	1,190	
Canadian Brake Shoe & Foundry Co. Ltd., Sherbrooke, P.Q.	Electric					3	27	
Canadian Steel Foundries, Limited, Montreal, P.Q.	Basic open hearth					3	240	
	Electric					1	30	
Canadian Tube & Steel Products Limited, Montreal, P.Q.	Electric	{	Heroult)			2	110	
Hull Iron & Steel Foundries, Ltd. Hull, P.Q.	Electric	{	Heroult)			1	16.5	
Joliette Steel, Limited, Joliette, P.Q.	Electric	{	Greaves Etchell)			1	15	
	Converter					1	4	
Lynn McLeod Engineering Supplies, Ltd. Thetford Mines, P.Q.	Electric	{	Heroult)			1	3	
Manganese Steel Castings, Limited, Sherbrooke, P.Q.	Electric	{	Heroult)			1	4	
Shawinigan Chemicals Limited, Shawinigan Falls, P.Q.	Electric	{	Heroult)			2	3	
Sorel Steel Foundries, Limited, Sorel, P.Q.	Electric	{	Lectromelt)			1	25	
Algoma Steel Corporation, Limited, Sault Ste. Marie, Ont.	Basic open hearth					12	1,750	
	Converter (acid)					1	1,200	
Canada Electric Castings, Ltd. Orillia, Ont.	Electric	{	Heroult)			2	30	
Canadian Atlas Steels, Ltd., Welland, Ont.	Electric	{	Heroult)			1	12	
Dominion Foundries & Steels Ltd., Hamilton, Ont.	Basic open hearth					2	240	
	Electric	{	Heroult)			3	175	

Table 24 - STEEL FURNACES IN CANADA, 1933. (concluded)

Names of Companies and location of furnaces	F U R N A C E S					
	Type		Number		Total daily capacity	
					Long tons	
London Rolling Mills Co. Ltd.(x) London, Ont.	Electric (Heroult)		1		32	
The William Kennedy & Sons, Limited, Owen Sound, Ont.	Converter		1		15	
The Steel Company of Canada, Limited, Hamilton, Ont.	Basic open hearth		10		1,560	
Welland Electric Steel Foundry, Welland, Ont.	Electric (Heroult)		2		15	
Manitoba Rolling Mill Company, Ltd., Selkirk, Man.	Basic open hearth		2		110	
Manitoba Steel Foundries, Limited, Selkirk, Man.	Electric (Moore)		1		36	
Vulcan Iron Works, Limited, Winnipeg, Man.	Electric (Moore)		1		20	
Riverside Iron Works, Limited, Calgary, Alberta	Electric		1		4	
Manitoba Rolling Mill Company, Ltd.(x) Calgary, Alberta	Basic open hearth		1		55	
Consolidated Mining & Smelting Co. Ltd., Trail, B.C.	Electric (Greene)		1		3	
Reliance Foundry Co. Ltd., Vancouver, B.C.	Electric		2		5	
Vancouver Engineering Works, Ltd., Vancouver, B.C.	Converter (acid)		1		33	
	Electric (Greaves Etchell)		1		9	

(x) Not operating in 1933.

Table 25 - SUMMARY OF STEEL FURNACE CAPACITY IN CANADA, 1933.

Type of furnace	Number of furnaces (x)	Total daily capacity (24 hours) (Long tons)
Basic open hearth	42	5,145
Electric	30	593
Converter	4	1,252
TOTAL	76	6,990

(x) Including 2 furnaces which were idle in 1933.

(d) ROLLED AND DRAWN PRODUCTS

Table 26 - MATERIALS USED IN IRON AND STEEL ROLLING AND DRAWING MILLS, 1933.

Materials	Companies'	Purchased materials	
	own make	Quantity	Cost at mill
	Long tons	Long tons	\$
Steel, crude and semi-finished (ingots, blooms, billets, slabs)	413,279	15,847	714,810
Rails, old and scrap	1,289	13,812	163,308
Axles, scrap .....	...	1,622	20,276
Iron muck and scrap bar	880	156	10,992
Iron and steel scrap	1,670	242	1,037
Hot rolled steel for cold rolling or drawing .....	...	5,010	252,872
All other iron and steel	1,770	3,759	187,814
All other materials .....	...	...	44,002
TOTAL .....	...	...	1,395,111

Table 27 - PRODUCTS MADE IN THE IRON AND STEEL ROLLING AND DRAWING MILLS, AND SALES BY THE PRODUCERS, 1933.

Products	Total	Tonnage	S A L E S	
	tonnage made	shipped to producers' own plants	Quan- tity	Value
	Long tons	Long tons	Long tons	\$
Blooms, billets and slabs (except for forging) ..	187,372	177,998	8,691	259,334
Rails	67,835	120	69,052	2,899,750
Structural shapes	16,153	66	15,974	740,200
Merchant bars, including spring steel, alloy steel, tool steel, rounds, squares, flats (6 in. and under) except flats for cold rolling and bars for reinforcing concrete	56,474	6,949	56,667	3,241,735
Bars for reinforcing concrete	16,400	686	16,019	767,373
Wire rods, including chain rods	88,692	61,422	29,111	1,104,532
Spike rods, bolt and nut rods, horseshoe bars, and all other miscellaneous rolled (not forged) forms, not elsewhere specified	7,038	5,173	1,834	111,325
Cold rolled and cold drawn steel shapes	8,049	...	8,028	723,324
Rail fastenings, finished -				
Tie plates	4,071	1	4,074	223,942
Angle splice bars and fish plates	808	1	1,075	73,667
Forgings of iron or steel	3,279	...	3,151	221,661
Railway spikes and pressed spikes	2,918	104	2,857	200,992
Washers	179	62	199	27,592
Scrap iron and steel	1,205	334	925	4,515
Other products including plain sheets, plates, galvanized sheets, horseshoes, etc., which were made by only 1 or 2 concerns in this industry and for which figures cannot be shown separately .....	...	...	...	3,261,719
TOTAL .....	...	...	...	13,876,661

Table 23 - LEADING ROLLED IRON AND STEEL PRODUCTS MADE IN CANADA, 1927-1933.
(Long tons)

Products	Years	Total tonnage made	Tonnage shipped to makers' own plants	Tonnage sold
Beams, billets and slabs (except for forging)	1927 ..	984,627	939,608	48,411
	1928 ..	1,058,321	874,394	80,411
	1929 ..	1,159,045	1,012,312	71,408
	1930 ..	756,778	690,391	60,171
	1931 ..	484,437	483,380	50,499
	1932 ..	220,576	196,434	12,461
	1933 ..	187,372	177,996	8,391
Rails	1927 ..	235,683	274	234,511
	1928 ..	349,189	237	349,007
	1929 ..	383,002	194	381,884
	1930 ..	233,432	212	232,414
	1931 ..	140,145	148	139,971
	1932 ..	45,090	22	45,110
	1933 ..	67,835	120	69,001
Wire rods, including chain rods	1927 ..	115,245	92,896	24,010
	1928 ..	144,309	99,805	45,031
	1929 ..	142,589	111,879	33,651
	1930 ..	108,992	85,867	24,829
	1931 ..	78,133	61,081	18,559
	1932 ..	76,589	49,825	26,561
	1933 ..	88,692	61,422	29,111
Merchant bars	1927 ..	186,916	27,533	157,598
	1928 ..	258,773	59,633	208,144
	1929 ..	244,593	36,191	206,901
	1930 ..	164,541	30,666	143,398
	1931 ..	102,247	21,513	87,441
	1932 ..	53,422	7,143	43,439
	1933 ..	56,474	6,949	50,667
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
	1932 ..	20,513	1,218	19,732
	1933 ..	16,400	686	16,019

DIRECTORY OF PRODUCERS OF PIG IRON, FERRO-ALLOYS, STEEL INGOTS AND DIRECT
STEEL CASTINGS AND ROLLED AND DRAWN STEEL IN CANADA, 1933.

(a) PIG IRON

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

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

DIRECTORY OF PRODUCERS OF PIG IRON, FERRO-ALLOYS, STEEL INGOTS AND
DIRECT STEEL CASTINGS AND ROLLED AND DRAWN STEEL IN CANADA,
1933. (continued)

(b) FERRO-ALLOYS

- | | |
|--|---------------------|
| (x) Abrasive Company of Canada, Ltd. | Hamilton, Ont. |
| (x) Canadian Carborundum Co. Ltd. | Niagara Falls, Ont. |
| Canadian Furnace Co. Ltd. | Port Colborne, Ont. |
| Electro Metallurgical Co. of Canada, Ltd. | Welland, Ont. |
| (x) Lionite Abrasives Company | Niagara Falls, Ont. |
| (x) Exolon Company | Thorold, Ont. |
| (x) These firms produce ferrosilicon 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

- | | |
|---|--|
| Cumming, J.W., Manufacturing Co. Ltd. | Glasgow St., New Glasgow, N.S. |
| Dominion Steel & Coal Corporation, Limited | Sydney, N.S. |
| Canadian Brake Shoe & Foundry Co. Ltd. | 101 Belvidere St., Sherbrooke, P.Q. |
| Canadian Steel Foundries Limited | Longue Pointe, Montreal, P.Q. |
| Canadian Tube & Steel Products, Limited | 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 Limited | Water St., Sherbrooke, P.Q. |
| Shawinigan Chemicals Ltd. (Stainless steel and Alloys Division) | Shawinigan Falls, P.Q. |
| Sorel/Steel Foundries Limited | Limoges St., Sorel, P.Q. |
| Algoma Steel Corporation, Limited | Sault Ste. Marie, Ont. |
| Canada Electric Castings Limited | West St., Orillia, Ont. |
| Canadian Atlas Steels Ltd. | Welland, Ont. |
| Dominion Foundries & Steel Limited | Depew St., Hamilton, Ont. |
| Kennedy, The William, & Sons, Limited | 2nd Ave. W., Owen Sound, Ont. |
| London Rolling Mills Co. Ltd. (not operating in 1933) | Phillips St., London, Ont. |
| The Steel Company of Canada, Limited | Wilcox Ave., Hamilton, Ont. |
| Welland Electric Steel Foundry | 123 Victoria St., Welland, Ont. |
| Manitoba Rolling Mill Company Limited | Selkirk, Man. |
| Manitoba Steel Foundries Limited | Selkirk, Man. |
| Vulcan Iron Works Limited | Pt. Douglas Ave., Winnipeg, Man. |
| Manitoba Rolling Mill Company Limited (not operating in 1933) | East Calgary, Alberta |
| Riverside Iron Works Limited | 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. |

(d) HOT ROLLED IRON AND STEEL

- | | |
|--|------------------------------|
| Canadian Car & Foundry Company Limited | Amherst, N.S. |
| Dominion Steel & Coal Corporation, Limited | Sydney, N.S. |
| Nova Scotia Steel & Coal Co. Ltd. | Trenton, N.S. |
| Canadian Tube & Steel Products Limited | Hamilton St., Montreal, P.Q. |

DIRECTORY OF PRODUCERS OF PIG IRON, FERRO-ALLOYS, STEEL INGOTS AND DIRECT
STEEL CASTINGS AND ROLLED AND DRAWN STEEL IN CANADA, 1933. (concluded)

(d) HOT ROLLED IRON AND STEEL - concluded

Peck Rolling Mills Ltd.	851 Mill St., Montreal, P.Q.
The Steel Company of Canada, Limited	2320 Notre Dame St.W., Montreal, P.Q.
The Steel Company of Canada, Limited	1550 St. Patrick St., Montreal, P.Q.
Algoma Steel Corporation Limited	Sault Ste. Marie, Ont.
Burlington Steel Company, Limited	Sherman Ave. N., Hamilton, Ont.
Canadian Atlas Steels Ltd.	Welland, Ont.
Dominion Foundries & Steel Limited	Depew St., Hamilton, Ont.
London Rolling Mills, Limited	529 Phillips St., London, Ont.
The Steel Company of Canada, Limited	Queen St. N., Hamilton, Ont.
The Steel Company of Canada, Limited	Wilcox Ave., Hamilton, Ont.
Manitoba Rolling Mill Company Limited	Selkirk, Man.
Manitoba Rolling Mill Company Limited (not operating in 1933)	East Calgary, Alberta.

(e) COLD ROLLED STEEL

Stanley Steel Company Limited	Gerrard St., Hamilton, Ont.
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(f) COLD DRAWN STEEL

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

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