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PRODUCTION OF IRON AND STEEL

IN CANADA

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## PRODUCTION OF IRON AND STEEL IN CANADA

December 1926

During 1926 Canada's primary iron and steel industry showed considerable improvement in quantity production over the previous year, largely because of the pronounced prosperity of the construction and automotive industries, and the improved condition of Canadian railways as reflected by large orders for rails and new equipment. Production of pig iron totalled 737,503 long tons, an increase of 29 per cent over the total for 1925, while steel ingots and direct steel castings at 776,888 tons showed little change from the 752,695 tons of 1925. While the greater tonnages indicated some general improvement in the iron and steel business in Canada, the returns to the industry were restricted by the lower prices prevailing during the year. Imports of European steel into the Maritime provinces and foreign iron into the eastern United States, both at low valuations, tended to keep prices down.

PIG IRON - For the month of December the production of pig iron in Canada amounted to 53,971 long tons, a slight increase over the 52,345 tons reported for the previous month, but a little below the output of 54,889 tons in December of a year ago.

During the 12 months of 1926 the cumulative production was 737,503 tons or 29 per cent over the 570,397 tons of 1925, and 24 per cent more than the 593,024 tons of 1924. In 1923 production totalled 880,018 tons. During the year under review 461,028 tons, or 63 per cent of the total, were produced for the further use of the makers and the balance, 276,475 tons or 37 per cent, was intended for sale. Production for the year included 477,700 tons of basic iron, 218,155 tons of foundry iron and 41,648 tons of malleable iron.

Taking the population of Canada at 9,390,300 persons in 1926, the per capita production of coke pig iron amounted to 176 pounds, as against 136 pounds in the previous year, 144 pounds in 1924, an average of 216 pounds in 1923 and 96 pounds in 1922.

Ontario produced 488,000 tons of pig iron or 66 per cent of the year's output as against 65 per cent of the total in 1925; the balance was accounted for by Nova Scotia in both years. Plants in Ontario produced 32,000 tons in January and this rate was maintained until April when rail orders caused a sharp rise to 47,000 tons. The maximum of 51,000 tons was attained in May and production was maintained around this level until November when it fell off sharply to 30,000 tons; the year ended with production showing a slight upward trend at 31,000 tons in December. Nova Scotia started the year with an output of 25,000 tons in

January, which proved to be the maximum for any month during the year. Production declined to 20,000 tons in February, remained around that figure until July, then dropped sharply in August to the low for the year of 14,000 tons, increased to 22,000 tons in October, when substantial rail orders were received, and closed the year at 23,000 tons in December.

Furnace charges for the month of December included 96,995 long tons of imported iron ore, 59,886 short tons of coke and 30,880 short tons of limestone. During the year blast furnace charges totalled 1,313,011 long tons of imported iron ore, 822,279 short tons of coke and 400,540 short tons of limestone. For each long ton of iron made, the charge to the furnaces included 3,988 pounds of ore, 2,229 pounds of coke and 1,086 pounds of limestone.

Five furnaces, having a total daily capacity of 1,825 tons per day or about 36 per cent of the total capacity of all blast furnaces in Canada, were in blast on December 31st. The active furnaces were located as follows: 2 at Sydney, N.S.; 2 at Hamilton, Ont.; and 1 at Sault Ste. Marie, Ontario. There are 15 iron blast furnaces in Canada, which if operated at capacity the year round could produce 1.8 million tons of pig iron. Actual production in 1926 amounted to 737,503 tons so that about 41 per cent of the total possible output was produced during the year. In 1925, corresponding figures showed an output amounting to 32 per cent of the total possible production.

PRICES - Pig iron prices were unchanged in December, No. 1 foundry at Toronto being still quoted at \$25.80 and No. 2 foundry at \$25.30. At Montreal, No. 1 foundry was \$28.20 and No. 2 foundry at \$27.70. The Bureau's index number for iron and its products advanced from 145.7 in November to 146.0 in December, due mainly to an increase in the price of mild steel billets.

A review of the price trend for 1926 shows that iron and its products fluctuated within narrower limits and at lower levels than in 1925. Based on 1913 prices as 100, the Bureau's index was 147.5 in January, the high point of the year. It gradually declined to 143.5 in June, the low point of the year, and then rose slightly each month to 146.0 in December. In 1925, the highest point for the year was reached at 158.8 in February and the lowest at 147.1 in November.

FERRO-ALLOYS - Production of ferro-alloys at 3,804 tons in December showed a gain of 15 per cent over the 3,308 tons of November. For the 12 months' period the total output was 37,954 tons or 48 per cent over the 25,709 tons reported for 1925 and compares with 26,400 tons in 1924, and 28,961 tons in 1923. Over one-half of this year's output was highgrade ferromanganese and the balance was ferrosilicon. Only 3 plants in Canada reported a production of ferro-alloys during 1926.

**STEEL INGOTS AND DIRECT STEEL CASTINGS** - In December the production of steel ingots and direct steel castings in Canada was 58,493 tons or 8 per cent over the 54,311 tons of November. Production in December, 1926 amounted to 62,353 tons.

For the 12 months ending December 31st, 1926, the cumulative production of steel ingots and castings totalled 776,888 tons, an increase of 3 per cent over the 752,695 tons of the previous year. In 1924 the output was 650,690 tons and in 1923 amounted to 884,770 tons. This year's figures included 743,550 tons of steel ingots and 33,338 tons of direct castings as compared with 733,855 tons of ingots and 18,840 tons of castings in 1925. Per capita production of ingots and castings amounted to 185 pounds during the year under review, 180 pounds in 1925, an average of 158 pounds in 1924 and 217 pounds in 1923.

Production of steel ingots and direct castings totalled 69,000 tons in January, dropped to 53,000 tons in February, then rose sharply until in May the maximum for the year was reached at 92,000 tons. Output in August reached the lowest point for the year at 46,000 tons and the output then averaged about 58,000 to 59,000 tons per month until December when a slight increase was recorded.

During 1926 four firms in Canada reported a production of steel ingots from basic open hearth furnaces, 3 concerns made basic open hearth castings, 3 made converter castings and 9 firms produced direct castings from electric furnaces.

In the United States pig iron production during December averaged 99,712 tons per day, or about 7.5 per cent less than the daily rate in November. The December rate was the first to fall below 100,000 tons per day in 1926. There was a net loss of 9 furnaces during the month, 4 having been blown in and 13 shut down. The output of coke pig iron for the year totalled 39.1 million tons, as compared with 38.4 million tons in 1925 and the record of 40.1 million tons in 1923.

PIG IRON AND FERRO-ALLOYS IN CANADA

Table 1. PRODUCTION FOR THE CURRENT AND PRECEDING MONTH (Tons of 2240 lb.)

ITEM	DECEMBER 1926			NOVEMBER 1926		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
In blast furnace:						
Basic.....	34,135	1,216	35,351	23,519	908	24,427
Foundry.....	103	18,517	18,620	310	26,922	27,232
Malleable.....					686	686
TOTAL.....	34,238	19,733	53,971	23,829	28,516	52,345
Ferro-alloys.....		3,804	3,804		3,308	3,308

Table 2. CUMULATIVE PRODUCTION FOR THE TWELVE MONTHS ENDING DECEMBER  
(Tons of 2240 lb.)

ITEM	1926			1925		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
In blast furnace:						
Basic.....	458,726	18,974	477,700	422,803	1,710	424,513
Foundry.....	2,302	215,853	218,155	304	101,690	101,994
Malleable.....		41,648	41,648	936	42,952	43,888
TOTAL.....	461,028	276,475	737,503	424,045	146,352	570,397
Ferro-alloys.....		37,954	37,954		25,709	25,709

Table 3. BLAST FURNACE CHARGES - DECEMBER, NOVEMBER AND YEAR TO DATE

		DECEMBER	NOVEMBER	YEAR TO DATE
Canadian Iron ore	Long tons			
Imported Iron ore	" "	96,995	93,659	1,313,011
Coke	Short tons	59,886	58,627	822,278
Limestone	" "	30,880	23,554	400,540



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STEEL INGOTS AND CASTINGS IN CANADA

Table 4 PRODUCTION FOR THE CURRENT AND PRECEDING MONTH (Tons of 2240 lb.)

	DECEMBER 1926			NOVEMBER 1926		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
<b>STEEL INGOTS:</b>						
Open Hearth-Basic	54,697		54,697	51,246		51,246
Acid						
Bessemer						
Other	1,613		1,613	870		870
<b>TOTAL STEEL INGOTS</b>	<b>56,310</b>		<b>56,310</b>	<b>52,116</b>		<b>52,116</b>
<b>STEEL CASTINGS:</b>						
Open Hearth-Basic	149	880	1,029	103	1,037	1,140
Acid						
Bessemer	10	130	140	12	115	127
Electric	3	1,011	1,014	18	910	928
<b>TOTAL DIRECT STEEL CASTINGS</b>	<b>162</b>	<b>2,021</b>	<b>2,183</b>	<b>133</b>	<b>2,062</b>	<b>2,195</b>
<b>GRAND TOTAL</b>	<b>56,472</b>	<b>2,021</b>	<b>58,493</b>	<b>52,249</b>	<b>2,062</b>	<b>54,311</b>

Table 5 CUMULATIVE PRODUCTION for the TWELVE MONTHS ending DECEMBER

	1926			1925		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
<b>STEEL INGOTS.</b>						
Open Hearth-Basic	726,852	25	726,877	722,603		722,603
Acid						
Bessemer						
Other	16,673		16,673	11,252		11,252
<b>TOTAL STEEL INGOTS</b>	<b>743,525</b>	<b>25</b>	<b>743,550</b>	<b>733,855</b>		<b>733,855</b>
<b>STEEL CASTINGS:</b>						
Open Hearth-Basic	1,902	17,553	19,455	1,540	7,471	9,011
Acid						
Bessemer	87	1,551	1,638	78	1,674	1,752
Electric	85	12,160	12,245	34	8,043	8,077
<b>TOTAL DIRECT STEEL CASTINGS</b>	<b>2,074</b>	<b>31,264</b>	<b>33,338</b>	<b>1,652</b>	<b>17,188</b>	<b>18,840</b>
<b>GRAND TOTAL</b>	<b>745,599</b>	<b>31,289</b>	<b>776,888</b>	<b>735,507</b>	<b>17,188</b>	<b>752,695</b>

Table 6 AVERAGE MONTHLY PRODUCTION OF  
PIG IRON, STEEL INGOTS AND CASTINGS  
IN CANADA, 1913 - 1924.

(In 1000's of Long Tons)

YEAR	MONTHLY AVERAGE		YEAR	MONTHLY AVERAGE	
	Iron	Steel		Iron	Steel
1913	84	87	1919	68	77
1914	58	62	1920	81	92
1915	68	76	1921	50	56
1916	87	106	1922	32	40
1917	87	130	1923	73	74
1918	89	140	1924	49	54

TABLE 7 PRODUCTION OF PIG IRON BY MONTHS AND BY PROVINCES, AND STEEL  
INGOTS AND CASTINGS BY MONTHS IN CANADA (In 1000's  
Long Tons) 1925-26.

MONTH	PIG IRON						STEEL	
	Nova Scotia		Ontario		Total Canada		Total Canada	
	1925	1926	1925	1926	1925	1926	1925	1926
January	8	25	20	32	28	57	27	69
February	9	20	21	30	30	50	37	53
March	23	22	41	31	64	53	108	59
April	23	21	37	47	60	68	88	80
May	24	22	39	51	63	73	100	90
June	20	21	26	50	46	71	63	81
July	-	20	21	47	21	67	22	65
August	4	14	23	45	27	59	25	46
September	12	18	23	46	35	64	37	59
October	26	22	48	48	74	70	109	64
November	29	22	40	30	69	52	73	54
December	24	23	31	31	55	54	62	58
TOTAL	202	250	370	488	572	738	751	778
MONTHLY AVERAGE	17	21	31	41	48	61	63	65



Table 8. BLAST FURNACES IN CANADA, 1926

Name of Company	Location	Number of Stacks	Total Daily Capacity (Long Tons)
British Empire Steel Corporation, Ltd.	Sydney, N.S.	8	2,475
Canadian Furnace Co., Ltd.	Port Colborne, Ont.	1	325
The Steel Company of Canada, Ltd.,	Hamilton, Ont.	2	725
Algoma Steel Corporation, Ltd.	Sault Ste. Marie, Ont.	4	1,500
TOTAL		15	5,025

Table 9. DESCRIPTION OF FURNACES AT END OF DECEMBER

Condition of Furnace	Number of Furnaces	Total Daily Capacity	
		Long tons	Per cent
In blast	5	1,825	36
Banked	-	-	-
Blown out	10	3,200	64
Total furnaces reporting	15	5,025	100

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