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on

PRODUCTION OF IRON AND STEEL

in Canada

DECEMBER 1929

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PRODUCTION OF IRON AND STEEL IN CANADA

DECEMBER 1929

Production of pig iron in Canada during 1929 reached a new high level of 1,090,244 long tons. This total replaced the output of 1,067,456 tons in 1918 as the greatest tonnage made during any calendar year for which records are available. Statistics on the output of pig iron were first collected in 1887 when production in Nova Scotia and Quebec amounted to 22,167 tons. Since then the million-ton mark has been surpassed on only six occasions, viz., 1929 at 1,090,244 tons; 1918 at 1,067,456 tons; 1917 at 1,045,071 tons; 1916 at 1,043,979 tons; 1928 at 1,037,535 tons; and in 1913 when 1,008,006 tons were produced.

Record production of pig iron was reflected in the output of steel which rose to 1,379,688 tons from 1,240,214 tons in 1928. Factors contributing to the high output of iron and steel during 1929 as in 1928 were the continued demand for rails and equipment by the railway companies, increased requirements of the automobile industry to take care of larger production, sustained activity in the construction industry, and the growing needs of power development and mining enterprises.

Consumption of pig iron in Canada during 1929 as determined by adding the production of 1,090,244 tons to the imports of 32,549 tons and deducting the exports of 7,478 tons, amounted to 1,115,315 tons. The comparative consumption figure for 1928 was 1,079,621 tons and in 1927 it was 750,275 tons.

PIG IRON.— During December the production of pig iron in Canada was 82,632 tons, a slight decrease from the total of 86,516 tons for November and 20 per cent less than the 103,450 tons produced in December of a year ago. Compared with the figures of the preceding month, data for December showed an increase in the output of foundry iron to 32,436 tons from 19,442 tons, while basic iron dropped to 45,295 tons from 59,914 tons and malleable iron to 4,901 tons from 7,160 tons.

For the twelve months ending December 31, 1929, the production of pig iron at 1,090,244 tons showed a gain of 5 per cent over the total of 1,037,535 tons in the next preceding year. During the year under review about 71 per cent of the total, or 773,944 tons, was made for the further use of the producing firms and the remainder, 316,300 tons, or 29 per cent, was intended for sale. Production for the year included 781,461 tons of basic iron, 234,226 tons of foundry iron, and 74,557 tons of malleable iron.

Taking the population of Canada at 9,796,800 persons in 1929, the per capita production of pig iron amounted to 249 pounds as against 241 pounds in the preceding twelve-month period; 167 pounds in 1927; 178 pounds in 1926; and an average of 136 pounds in 1925.

In 1929 as in 1928 Ontario furnaces produced 71 per cent of the total for Canada; but in 1927 Ontario's output was only 65 per cent of the total tonnage. Nova Scotia accounted for the remainder of the output in each year. Production in Ontario in 1929 started at 67,000 tons in January, dropped to the lowest point for the year, 53,000 tons in February, then advanced month by month, reaching the peak, 82,000 tons in August, after which the output lessened, dropping to 61,000 tons in December. In Nova Scotia, the January production was 21,000 tons. Output then advanced to 41,000 tons in February, the highest monthly total during the year, dropped to 23,000 tons in July, rose to 31,000 tons in August and September and closed at 22,000 tons in December.

Furnace charges for all iron blast furnaces in Canada during the month of December included 148,874 long tons of imported iron ore, 43,439 short tons of limestone and 89,437 short tons of coke. For the whole year furnace charges included 1,925,041 tons of ore, 599,030 tons of limestone and 1,179,710 tons of coke. Of the total limestone 130,239 tons were mined in Canada, and of the coke, 1,087,297 tons were produced in Canada (429,177 tons being from Canadian coal). The balance of the coke and the limestone was imported.

Seven furnaces having a daily capacity of 2,525 long tons or 60 per cent of the total daily capacity of all blast furnaces in Canada, were in blast on December 31. The active furnaces were located as follows: 2 at Sydney, N.S.; 2 at Hamilton, Ont.; 2 at Sault Ste. Marie, Ont.; and 1 at Port Colborne, Ont.

Four companies in Canada are engaged in the production of pig iron, namely, British Empire Steel Corp. Ltd., Sydney, N.S.; Steel Company of Canada, Ltd., Hamilton, Ont.; Algoma Steel Corporation, Ltd., Sault Ste. Marie, Ont.; and Canadian Furnace Co. Ltd., Port Colborne, Ont. These concerns have ready for operation a total of eleven blast furnaces which if worked at capacity could produce about 1.5 million tons of pig iron per year. As production during 1929 amounted to 1,090,244 tons it follows that 73 per cent of capacity was attained in that year.

FERRO-ALLOYS.- Production of ferro-alloys in Canada during December at 6,986 long tons was 6 per cent under the 7,418 tons of November. For the twelve-month period ending December 31, 1929, output aggregated 80,010 tons, an increase of 77 per cent over the total of 45,233 tons for 1928 which in turn was 20 per cent less than the corresponding output of 56,514 tons for 1927. During the year under review production started at 6,475 tons in January, dropped to 5,744 tons in April, the lowest output recorded in the period, then rose gradually to peak production at 7,674 tons in October and closed the year at 6,986 tons in December. As in previous years the output consisted of high-grade ferromanganese and several grades of ferrosilicon. Only 5 plants in Canada, all of which were located in Ontario, produced ferro-alloys during 1929.

STEEL INGOTS AND CASTINGS.- Production of steel ingots and direct steel castings during December at 82,415 tons was the lowest tonnage reported for any month of the year. It was 12 per cent under the output of 93,648 tons for the previous month and 20 per cent below the total of 103,054 tons made in December of last year. Compared with the figures for November, data for the month under review showed a decline in basic open-hearth steel ingots to 73,659 tons from 87,163 tons, while electric ingots rose to 2,730 tons from 1,972 tons and direct steel castings advanced to 6,026 tons from 4,513 tons.

For the year 1929 production of steel at 1,379,688 tons, surpassed by 11 per cent the previous record of 1,240,214 tons established in 1928. In 1927, output totalled 907,638 tons and in 1926 it amounted to 776,888 tons. In 1929, production included 1,309,543 tons of steel ingots and 70,145 tons of steel castings; 95 per cent of the total being for further use by the makers and only 5 per cent intended for sale.

In 1929 production amounted to 116,000 tons in January, rose to the peak for the year of 137,000 tons in March, dropped to 120,000 tons in June, rose again to 130,000 tons in July and then, except in October, declined steadily to the low level of 82,000 tons in December.

Per capita production of steel in Canada amounted to 315 pounds in 1929, as compared with 288 pounds in the previous year, 213 pounds in 1927, an average of 185 pounds in 1926 and 180 pounds in 1925.

During the year 5 companies produced basic steel ingots, 2 made electric ingots and 1 made alloy ingots. Seventeen firms made electric steel castings, 4 made basic castings, 1 made acid O.H. castings and 3 made converter castings.

PRICES.- Prices of pig iron were well maintained throughout the first three quarters of 1929. In October, however, the weight of production records both in Canada and the United States, told upon prices, and No. 1 and No. 2 foundry pig iron were marked down \$1.00 per gross ton in Toronto and Montreal. Following this reduction, No. 1 foundry pig iron was quoted at \$25.00 per gross ton at Montreal, and \$23.60 at Toronto, while corresponding prices for No. 2 foundry pig iron were \$24.50 and \$23.10 per gross ton, respectively.

The price index for "Iron and its Products" rose from 93.2 in 1928 to 93.7 in 1929. Beginning the year at 93.3, the trend was steadily upward until May when the index stood at 94.5. Then following a slight recession in June to 93.9, prices within the group remained practically unchanged for the next four months. During the last quarter prices showed a slightly weaker tendency and the December index of 93.5 was very little above the figures for the first quarter. The steadiness of the index for "Iron and its Products" offered an interesting contrast to the marked fluctuations of the index recording the price movements of non-ferrous metals. In December, particularly during the latter part of the month, pig iron markets were somewhat improved as inquiries became better and a considerable amount of forward buying developed but prices showed no change. The Bureau's index number for Iron and Its Products moved from 93.6 in November to 93.5 in December, due to easier steel sheet quotations.

UNITED STATES.- In the United States the production of pig iron in 1929 established a new high record for the industry, being 5.5 per cent greater than in 1923, the previous best year. Output which averaged 115,851 tons per day throughout the twelve-month period started in January at the rate of 111,044 tons per day, rose steadily to a new daily record of 125,745 tons in May, then dropped gradually to the lowest level for the year of 91,513 tons per day in December. Operations in December, when 20 furnaces were closed down and none blown in, were 8.3 per cent lower than in November and marked the seventh month in succession to show a decline.

PIG IRON AND FERRO-ALLOYS IN CANADA

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

ITEM	DECEMBER 1929			NOVEMBER 1929		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
In blast furnace:						
Basic.....	45,207	83	45,295	59,157	757	59,914
Foundry.....	149	32,287	32,436	145	19,297	19,442
Malleable.....	-----	4,901	4,901	-----	7,160	7,160
TOTAL.....	45,356	37,276	82,632	59,302	27,214	86,516
Ferro-alloys.....	-----	6,986	6,986	-----	7,418	7,418

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

ITEM	1929			1928		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
In blast furnace:						
Basic.....	766,104	15,357	781,461	711,191	13,370	724,561
Foundry.....	7,082	227,144	234,226	7,838	225,298	233,136
Malleable.....	758	73,799	74,557	-----	79,838	79,838
TOTAL.....	773,944	316,300	1,090,244	719,029	318,506	1,037,535
Ferro-alloys.....	-----	80,010	80,010	-----	45,233	45,233

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

			DECEMBER 1929	NOVEMBER 1929	YEAR TO DATE
Imported Iron ore.....	Long tons		148,874	154,220	1,925,041
Canadian Limestone.....	Short tons		10,121	9,603	130,239
Imported Limestone.....	" "		33,318	36,894	468,791
Coke made in Canada:-					
From Canadian coal.....	" "		25,989	30,773	429,177
From Imported coal.....	" "		52,243	54,673	658,120
Imported coke.....	" "		11,205	11,010	92,413

STEEL INGOTS AND CASTINGS IN CANADA

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

ITEM	DECEMBER 1929			NOVEMBER 1929		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
STEEL INGOTS:						
Open Hearth-Basic	73,479	95	73,574	87,043	45	87,088
Acid	-----	-----	-----	-----	-----	-----
Electric	1,916	814	2,730	1,972	-----	1,972
Other	85	-----	85	75	-----	75
TOTAL STEEL INGOTS	75,480	909	76,389	89,090	45	89,135
STEEL CASTINGS:						
Open Hearth-Basic	327	2,435	2,762	307	1,456	1,763
Acid	-----	-----	-----	-----	-----	-----
Bessemer	4	241	245	1	230	231
Electric	29	2,990	3,019	49	2,470	2,519
TOTAL DIRECT STEEL CASTINGS	360	5,666	6,026	357	4,156	4,513
GRAND TOTAL	75,840	6,575	82,415	89,447	4,201	93,648

Table 5 CUMULATIVE PRODUCTION for the TWELVE MONTHS ending DECEMBER

	1929			1928		
	For Own Use	For Sale	TOTAL	For Own Use	For Sale	TOTAL
STEEL INGOTS.						
Open Hearth-Basic	1,284,487	4,187	1,288,674	1,179,332	-----	1,179,332
Acid	-----	-----	-----	-----	-----	-----
Electric	13,637	814	14,451	9,199	184	9,383
Other	6,418	-----	6,418	7,883	183	8,066
TOTAL STEEL INGOTS	1,304,542	5,001	1,309,543	1,196,414	367	1,196,781
STEEL CASTINGS:						
Open Hearth-Basic	2,453	26,046	28,499	2,346	18,360	20,706
Acid	24	7,254	7,278	-----	-----	-----
Bessemer	60	2,685	2,746	103	1,938	2,041
Electric	201	31,421	31,622	377	20,309	20,686
TOTAL DIRECT STEEL CASTINGS	2,738	67,407	70,145	2,826	40,607	43,433
GRAND TOTAL	1,307,280	72,408	1,379,688	1,199,240	40,974	1,240,214

Table 6 AVERAGE MONTHLY PRODUCTION OF
PIG IRON, STEEL INGOTS AND CASTINGS
IN CANADA, 1916 - 1927.
(In 1000's of Long Tons)

YEAR	MONTHLY AVERAGE		YEAR	MONTHLY AVERAGE	
	Iron	Steel		Iron	Steel
1916.....	87	106	1922.....	32	40
1917.....	87	130	1923.....	73	74
1918.....	89	140	1924.....	49	54
1919.....	68	77	1925.....	48	63
1920.....	81	92	1926.....	63	64
1921.....	50	56	1927.....	59	76

TABLE 7 PRODUCTION OF PIG IRON BY MONTHS AND BY PROVINCES, AND STEEL
INGOTS AND CASTINGS BY MONTHS IN CANADA (In 1000's of
Long Tons) 1928-1929.

MONTH	PIG IRON				STEEL			
	Nova Scotia		Ontario		Total Canada		Total Canada	
	1928	1929	1928	1929	1928	1929	1928	1929
January.....	22	21	43	67	65	88	84	116
February.....	24	41	41	53	65	94	99	117
March.....	26	32	52	54	78	86	118	137
April.....	25	24	50	55	75	79	113	122
May.....	24	24	64	57	88	81	118	126
June.....	24	25	73	65	97	90	117	120
July.....	21	23	74	77	95	100	83	130
August.....	23	31	69	82	92	113	89	120
September.....	24	31	67	68	91	99	100	99
October.....	25	24	68	67	93	91	109	116
November.....	30	22	65	65	95	87	108	94
December.....	35	22	68	61	103	83	103	82
TOTAL.....	303	320	734	771	1,037	1,091	1,241	1,379
MONTHLY AVERAGE.....	25	27	61	64	86	91	103	115

Table 8. BLAST FURNACES IN CANADA, 1929.

Name of Company	Location	Number of Stacks	Total Daily Capacity (Long Tons)
British Empire Steel Corporation, Ltd.	Sydney, N.S.	4	1,400
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
TOTAL		11	4,175

Table 9. DESCRIPTION OF FURNACES AT END OF DECEMBER 1929

Condition of Furnace	Number of Furnaces	Total Daily Capacity	
		Long tons	Per cent
In blast.....	7	2,525	60
Banked	-	-	-
Blown out.....	4	1,650	40
Total furnaces reporting.....	11	4,175	100

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