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DOMINION BUREAU OF STATISTICS - CANADA

Dominion Statistician: R. H. Coats, B.A., F.S.S. (Hon.), F.R.S.C.

Mining, Metallurgical and Chemical Branch

Chief: S. J. Cook, B.A., A.I.C., F.C.I.C.

THE NICKEL-COPPER INDUSTRY IN CANADA, 1927.

Mining, smelting and refining of the nickel-copper ores from the Sudbury district showed continued prosperity in 1927, according to a statement just issued by the Dominion Bureau of Statistics. More ore was treated by the smelters, a larger tonnage of matte was produced and a greater production of refinery products was obtained than in 1926.

The Creighton mine and the smelter at Coppercliff, Ontario, were operated without interruption during the year by the International Nickel Company, Limited. On the Frood property diamond drilling indicated high-grade ore at depth, and sinking of a shaft was begun. A depth of 2,500 feet was reached in 1927 and it was expected the objective of 3,000 feet would be reached early in 1928. At Port Colborne, Ontario, the nickel refinery was operated continuously to meet the market requirements for nickel. The new electrolytic unit ran to capacity throughout the year; it is understood that the company plans to enlarge its electrolytic refining department and eventually to produce electrolytic nickel entirely. In addition to electrolytic nickel, this refinery produces refined nickel, nickel oxide, metals of the platinum group, and converter copper carrying gold and silver which is exported to the United States for refining. Bessemer matte is exported directly from the smelter at Coppercliff to Huntington, West Virginia, for the manufacture of monel metal.

The Mond Nickel Company, Limited, operated the Garson, Worthington, Levack and Frood extension mines and the smelter at Coniston and utilized the bessemer gases for the manufacture of high-grade sulphuric acid for which a splendid market has been established. The Worthington mine, which had been in operation for about 20 years, caved in late in the year but, fortunately, due to the care exercised by the operating staff at the mine, no lives were lost. At this company's Frood extension property a deep shaft was being sunk to develop the large ore body indicated by diamond drilling. At the Clydach refinery in Wales where the nickel-copper matte from the Coniston smelter is treated, the products are pure nickel, copper sulphate, gold and silver and the metals of the platinum group.

During 1927 the industry produced 1,305,917 tons of ore containing 27,564 tons of copper and 43,574 tons of nickel. The smelters treated 1,350,214 tons of ore and concentrates and produced 31,848 tons of matte, which contained 51,937,215 pounds of copper and 79,246,144 pounds of nickel. Shipments of matte to the Canadian refinery amounted to 39,942 tons and export shipments to Great Britain and the United States for refining, totalled 33,541 tons.

Capital employed in this industry amounted to \$69,436,704 of which \$38,893,815 was invested in lands, buildings, plant, machinery and tools at the mines and \$17,954,652 at the smelters; cost of materials and stocks on hand at the mines, smelters and refinery, \$6,789,455 and cash, trading and operating accounts and bills receivable, \$5,798,782.

Salaried employees at the mines, smelters and refinery numbered 173 people and salaries totalled \$544,167. Of the 3,347 wage-earners, 1,590 were employed in and about the mines and 1,757 at the smelters and refinery; wages for the year totalled \$4,919,446. Both companies' mines were operated 310 days during the year and the smelters 365 days. During the month of highest employment the mines had 1,240 men working 8 hours or less per day; 425 men, 9 hours per day; 12 men working 10 hours; and 1 man over 10 hours. The smelters and refinery employed 1,614 men on the 8 hour shift; 215 men, 9 hours per day; 97 men, 10 hours; and 3 men over 10 hours. Fuel and electricity cost \$2,354,007 of which \$325,535 was expended for electric power, \$1,185,365 for coke, \$600,487 for bituminous coal and \$197,509 for fuel oil. Power employed consisted of 17 steam engines with a rating of 4,655 horse power, 1 oil engine rated at 53 horse power and 710 electric motors capable of producing 5,130 horse power. There were also 12 boilers rated at 5,200 horse power.

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DEPARTMENT OF THE HISTORY OF ARTS
AND ARCHITECTURE
CHICAGO, ILLINOIS
OFFICE OF THE DIRECTOR
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AND ARCHITECTURE
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PRINCIPAL STATISTICS OF THE NICKEL-COPPER INDUSTRY IN CANADA, 1926 and 1927.

	1	9	2	6	1	9	2	7
Number of firms.....				2				2
Number of mines.....				6				6
Number of smelters.....				2				2
Number of refineries.....				1				1
Capital employed.....				\$ 68,015,349				\$ 69,436,704
Number of employees:-								
On salary.....				160				173
On wages.....				3,131				3,347
Total.....				3,291				3,520
Salaries and wages:-								
Salaries.....				\$ 494,913				\$ 544,167
Wages.....				\$ 4,359,065				\$ 4,919,446
Total.....				\$ 4,853,978				\$ 5,463,613
Estimated value of matte exported and refinery products produced.....				\$ 20,864,707				\$ 21,594,078

OUTPUT FROM NICKEL-COPPER MINES AND SMELTERS, 1926 and 1927.

	1	9	2	6	1	9	2	7
Ore mined.....Tons				1,322,050				1,305,917
Ore shipped.....Tons				1,322,050				1,305,917
Content of ores, etc., shipped:-								
Copper.....lb.				55,096,719				55,128,978
Nickel.....lb.				90,110,865				87,147,139
Ores, concentrates treated at smelters.Tons				1,309,782				1,350,214
Matte produced.....Tons				78,643				81,848
Content of matte:-								
Copper.....lb.				48,318,735				51,937,215
Nickel.....lb.				78,076,003				79,246,144
Matte shipped to Canadian refineries.Tons				34,042				39,942
Matte exported to Foreign smelters...Tons				34,908				33,541

PRODUCTION IN CANADA AND EXPORTS OF NICKEL, 1926 and 1927.

	1	9	2	6	1	9	2	7
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Pounds	\$	Pounds	\$	Pounds	\$	Pounds	\$
PRODUCTION -								
Nickel in matte and speiss exported (a).....	34,028,211	6,125,078	31,584,097	5,685,138				
Refined and electrolytic nickel produced.....	25,627,602	6,423,401	28,469,996	7,497,436				
Nickel in oxides and salts sold... ..	6,058,481	1,825,684	6,744,624	2,079,597				
Total.....	65,714,294	14,374,163	66,798,717	15,262,171				
EXPORTS -								
Nickel, fine.....	24,698,400	6,386,387	29,015,800	7,896,211				
Nickel contained in matte.....	39,177,400	6,074,497	36,458,800	5,784,623				
Nickel oxide.(b).....	5,196,100	1,600,986				
Total.....	63,875,800	12,460,884	...	15,281,820				

(a) Nickel in matte and speiss exported valued at 18 cents per pound.

(b) Nine months 1927.

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