

furnace, one heating furnace, one furnace, one metal helve and one blower, together with ore crushing rolls, were built in 1850 and later years, with the purpose of developing the iron deposits of the Cobequid mountains, which had been favourably reported upon by Sir William Dawson. The building of the Intercolonial railway near the plant was a favourable factor, and a new company under the chairmanship of Dr. Siemens was formed in 1873 to take over the property. The manufacture of steel by the Siemens open-hearth process, steel rails, cast steel and spring steel, was proposed. The company expended \$2,500,000 in building a modern rotatory furnace, a melting furnace with regenerative gas furnaces and other purposes. Like all pioneer enterprises the company had many difficulties to contend with, and in 1885 the concern was in liquidation.

Raw Materials.—The indifferent success of the early ventures in the manufacture of iron was due to several factors, including the supply and character of the ores and fuel and the extent and nature of the market. Of the iron ore deposits that were known few were satisfactory; the most successful of the early enterprises, those at Normandale and St. Maurice, were discontinued as the beds within reach were exhausted. The supply of fuel occasioned the greatest difficulty. Though Canada was well supplied with hardwoods for making charcoal, these were not always found within reasonable distance of the furnace. Before the end of the period in question the demand for charcoal iron was restricted to certain special uses.

Period from 1880 to 1914.—During the period from 1879 to 1896, the difficulty in smelting the ores of Ontario was such a discouraging factor that no furnaces were in blast. The bounty established in 1883 encouraged the production of pig iron, which fluctuated between 20,000 and 60,000 tons per annum in the next twelve years. The production was contributed by the charcoal furnaces of Quebec, and the Londonderry and New Glasgow furnaces of Nova Scotia. Toward the end of the century activity increased, and in the period from 1900 to 1914 reached a high level.

Nova Scotia Steel and Coal Co.—Prior to 1879 the Nova Scotia Forge Co., with a plant at Trenton, was engaged in manufacturing car axles and in general forge work, depending upon wrought and scrap iron as raw materials. It was found desirable to obtain a supply of mild steel as a substitute for the iron, and a plant was accordingly erected for the manufacture of steel from imported pig iron and scrap by the basic open hearth process. Another step was taken by the erection in 1892 of a blast furnace at Ferrona or North New Glasgow. The manganiferous character of the ores near New Glasgow causing some difficulty, the company acquired in 1894 a large iron deposit on Bell island in Conception bay, Newfoundland, and shipments to the New Glasgow furnace began in the next year. As the supply of coal from the Pictou field proved inadequate, the mining properties of the General Mining Association at Sydney Mines were purchased in 1900, and in the following year the Nova Scotia Steel and Coal Co. was formed to acquire the several enterprises in question. Coke ovens were built at the new property, but in view of the depreciation of coke by transportation and also the shorter distance from the Wabana mines, a new blast furnace was constructed at Sydney Mines in 1904 and the old furnace at New Glasgow was closed down. Additional equipment, consisting of 30 Bauer retort coke ovens, three batteries of 40 Bernard retort ovens, three 40-ton open hearth steel furnaces and a rolling furnace to be used as a mixer, were put in operation during the next year. Two new rolling mills with the necessary power plant were installed at New Glasgow in 1910, and two years afterwards the