A day was spent at Trenton visiting the steel works of the same company. Twelve Smythe and five Fraser-Talbot mechanical gas producers furnished the gas necessary to heat three brick open-hearth furnaces, having a total capacity of about 100 tons of metal, and one 50-ton Wellman tilting furnace used as a mixer.

Blast Furnace at Ferrona.

The steel when finished was cast into five-foot ingots, and transferred to soaking pits to equalize the temperature in each mass of steel. From the soaking pits the ingots were taken to the blooming or rolling mill and there rolled and cut into billets, which were reheated and again rolled into rails, fish and bed plates, angle irons, etc. Soft steel with 0.09 per cent of carbon was used for rivets. Hot and cold rolling is carried on in this plant, the best shafting being hot-drawn and double-reeled.

It is interesting to note that the Canadian government pays a bounty of $3.00 per ton on steel made from over fifty per cent of pig iron. This insures better steel, and indirectly causes a larger production of pig than would otherwise be the case.

From New Glasgow the party went by rail to Sydney, Cape Breton, where it was quartered at the Sydney Hotel for the remainder of its stay on the Island.

On Monday, June 23, the party visited the comparatively new plant of the Dominion Iron and Steel Company, of which Mr. David Baker, M. I. T., '85, is general manager. The plant was found to contain in addition to its four 85-foot blast furnaces and its steel-making plant of ten tilting open-hearth furnaces, a complete coal-sizing and washing plant; also eight banks of fifty Otto Hoffmann ovens each, from which 40% of the gas was used in other parts of the works after the tar, ammonia, naphthalene, etc., had been removed in the gas-washing house. An interesting feature in connection with the washing or purification of the gas, was the manufacture of sulphuric acid from very pure Spanish pyrites, for the precipitation of the ammonia as ammonium sulphate from the wash water through which the gas had passed. The four Campbell-designed blast furnaces, together with the sixteen-battery Babcock and Wilcox boiler plant the Allis 1500 horse-power vertical blowing engines with Julian Kennedy air valves, the 2-pass Cowper-Kennedy hot-blast stoves, the ore and flux heaps with the conveyors, etc., gave an excellent idea of modern blast furnace practice.

In the open-hearth plant the students were given ample opportunity to study the construction and operation of the Campbell 50-ton open-hearth furnaces, together with the regenerative system of heating the air for combustion.

Several trips were made to the Company's coal mines at Glace Bay, where the total daily output is in the neighborhood of 13,000 tons of bituminous coal. The coal was found to