

large quantities of the ore were smelted at the works of the Canadian Copper Company. The ore is a nickeliferous pyrrhotite containing, on an average, from $2\frac{1}{2}$ to 9 per cent. of nickel, which is smelted into a copper nickel matte, and in this form is ready for shipment. This matte, when ready for export, contains about 25 per cent. of copper and 20 per cent. of nickel, or 45 per cent. of metal. It is believed that by means of a Bessemer furnace now being erected the matte can be refined so as to contain 85 per cent. of metal. The deposits are very extensive, but the mines have not been sufficiently developed to judge of their precise character. New discoveries of ore are being made from time to time, and it is believed that the Sudbury district contains the largest deposits of nickel ore in the world. Even as far as discovery has yet gone, these mines must prove sources of great wealth, for the world's supply of nickel, apart from these mines, is limited, while efforts are being made to extend the consumption in every possible direction. Among the proposed uses none have attracted so much interest as the use of nickel in alloy with steel to increase the latter's strength. Experiments have been made in France and Germany, which have all been successful, and recently some very important experiments have been made at Annapolis, U.S., more particularly with reference to the use of nickel steel for cannon and armour plate, which seem to have successfully established the superiority of nickel steel for these purposes. Further tests made at Pittsburg showed that the elasticity and tensile strength of nickel steel were almost double the limits reached in the best grades of boiler plate steel, and the new metal seems likely to be used not only for armour plate but for hulls and engines of ships, and indeed for all purposes where a high grade of steel is now used. It is also said to be much freer from both corrosion and fouling, for hulls of ships. This being the case there opens up the possibility of an almost limitless demand for nickel.