

and Radcliffe, in Hastings, and Brudenell, Lynedoch and Sebastopol, in Renfrow.

The length of the corundum belt from east to west is about thirty miles and its average breadth is about three and a-half miles. It embraces over 60,000 acres, in all but a few thousands of which the mineral rights are held by the Crown. Another area has been partially explored in the Township of Methuen, in Peterborough County, where corundum of fine quality has been discovered, but the extent of it has not yet been determined.

Under arrangements made by the Ontario Crown Lands Department, several tons of ore were mined in November of last year and taken to the Kingston School of Mining for a mill test, designed to show not merely the proportion of corundum in the dike rock from which it was mined and the quality of it, but also the methods by which the ore could be most successfully treated to separate the mineral from its gangue and prepared for placing it upon the market.

There seems now to be no doubt that operations can be economically carried out upon a commercial scale, and assurances are equally satisfactory as regards the quality of the corundum. The tests made at Kingston show that the rock carries fifteen per cent. of corundum, and the proportion might be considerably increased with careful clobbering at the mines if this was desirable. If treated on a large scale the cost of milling the rock ought not to exceed \$1 per ton, and under careful management it might be reduced to sixty cents per ton of rock, or say of 300 pounds corundum, with an average of fifteen per cent. ore. What gives assurance of cheap production is the existence of abundant water power in the heart of the corundum

belt, on the Madawaska River and its tributaries, which may be electrically developed with a moderate investment of capital.

At present one of the chief uses of corundum is as an abrasive, yet, owing to its scarcity and cost no great quantity is available. The best known deposits are in Georgia and North Carolina, but these are limited in extent and are practically controlled by a combine. Emery has accordingly been the chief natural material used as an abrasive, being found in several countries in large abundance. In recent years, too, an artificial product known as carborundum has grown into favor, and the manufacturers of it are inspired with confidence that they can supply the market to the exclusion of every other kind of abrasive. But experiments recently made, go to show that for the best lines of work corundum is much superior to carborundum, and with the prospect of the opening up of large deposits in the Ontario fields corundum should have nothing to fear in the competition. Corundum certainly possesses one great advantage over its rivals in that it may be put to other uses.

As an ore of aluminium it has a great future if some present difficulties, which appear to be only of a trifling character, are surmounted. Pure corundum, which is alumina, is composed of 46.8 per cent. of oxygen and 53.2 per cent. aluminium, and in the treatment of ore at the Kingston School of Mining corundum has been produced 99.5 per cent. fine. The obnoxious elements consist of silica, sulphur and iron, all three not exceeding the half of one per cent., and means can no doubt be found to separate these from the corundum. At the present time cryolite and bauxite, are the principal ores of aluminium, the former carrying about

thirteen and the latter about twenty-six per cent. of the metal, or say one-quarter and one-half respectively of the metallic aluminium in pure corundum. Three analyses of the Hastings corundum made by Dr. Goodwin gave an average of 96.82 alumina, and the average of corundum concentrates obtained by Prof. DeKalb from a treatment of 1,200 pounds of rock was over ninety per cent. pure. And besides the corundum there is recovered from the rock in the process of treatment about five per cent. of magnetite, containing sixty-nine per cent. metallic iron suitable for the manufacture of the finest steel, or a quantity sufficient to pay the whole cost of milling.

It is the policy of the Ontario Government in dealing with the lands in the corundum belt, to encourage the founding of an industry which will bring the greatest good to the Province, and to that end the proper regulations have been framed and adopted.

WESTINGHOUSE ENTERPRISE.

In our last issue it was stated that this journal had received an invitation from the Westinghouse Machine Co., and the Westinghouse Electric and Manufacturing Co., to be present on July 30th at their works at Pittsburgh, Penn., primarily to inspect some remarkable new engines and electric apparatus which are about to be shipped to England, and incidentally to view the great establishments which are regarded as the model workshops of the United States. The visitors on that occasion saw three 2,500 horse power electrical generators, direct connected to three 2,500 horse power engines, which were constructed for the

CANADA IRON FURNACE CO., LIMITED

Montreal, Radnor and Three Rivers

Manufacturers of the well-known

"C.I.F." Three Rivers Charcoal Pig Iron

Suitable for Car Wheels, Cylinders and Fine Castings, where the utmost strength is required.

UNSURPASSED IN STRENGTH BY SWEDISH, RUSSIAN OR AMERICAN CHARCOAL IRON.

Offices: *Canada Life Insurance Bldg., Montreal.*

CANADA CHEMICAL MANUFACTURING CO.

— MANUFACTURERS OF —

Sulphuric, Nitric, and Muriatic Acids—Commercial and Chemically Pure.

Mixed Acids for Explosives.

Liquid Ammonia, Glauber Salts, Copperas, Muriate Tin, Tin Crystals, Acetic Acid, Nitrate Iron, Bisulphite Soda, Acid Phosphate for Baking Powders and General Chemicals, Fertilizers, etc.

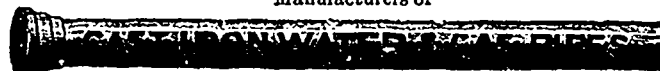
LONDON, - ONTARIO.

MONTREAL PIPE FOUNDRY CO...

SUCCESSORS TO (Limited)

DRUMMOND-McCALL PIPE FOUNDRY CO.

Manufacturers of



"Specials," Hydrants, Valves, Etc.

Offices: - - - Canada Life Building, MONTREAL

DEPARTMENT

MILL and FIRE

Hose

SUPPLIES

W. A. FLEMING