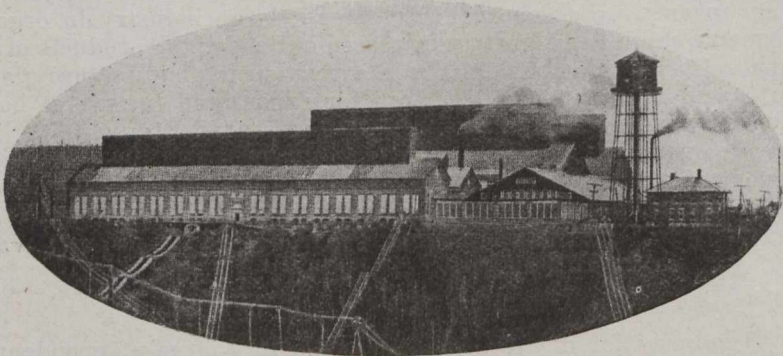


the very first industries to locate at Shawinigan Falls. It is the only electro-chemical works here which is not located in the electro-chemical district to which reference has been made. It is situated on the river front facing the town; near the No. 1 power-house of the Shawinigan Water & Power Company from which it takes part of its electric current though the major portion of the electric current which it uses is generated in its own two power houses. This Company, which is the largest electro-chemical establishment in Canada, is one of the the largest consumers of power at Shawinigan.

Its plant consists, in addition to the two power houses mentioned, of a rotary station, a reduction plant for producing aluminum from its oxide, and a wire mill in which aluminum electrical conductors are made. The plant, which is quite extensive and employs some 500 men, supplies not only practically all the aluminum used in Canada, but also a large proportion of the metal which is exported from this continent to various parts of the world. As regards its wire mill, in which aluminum electrical conductors are produced, nearly all the important aluminum transmission lines in Canada have been made there.

The Shawinigan Foundries Ltd.

Organized in January of this year to take over the Fraser-Brace electric foundry proposition and Normandin Bros' grey iron foundry, the Shawinigan Foundries Ltd has, as president, Mr. J. C. Macartney,



Plant of Northern Aluminum Co., Shawinigan Falls.

as treasurer and secretary Capt. C. M. Hall, and as vice-president and metallurgist, Mr. W. G. Dauncey. The Fraser-Brace proposition was a war-baby started with the object of making pig iron from shell steel scrap, and the plant then consisted of one 6 ton nominal three phase furnace. This furnace is still running on special grades of pig iron for home and outside production and alterations and improvements are contemplated which will enable the new plant to handle special grades of steel. The grey iron foundry, when taken over, was a small and unostentatious affair, with one cupola only. During the present year two other cupolas have been added and extra floor space has been provided.

The firm has devoted a lot of time and attention to special alloy irons to stand abrasive and acid-resisting service. Its efforts in this direction have been so successful that more work is offering than can be handled with the present equipment. A new department has also been organized in which brass, bronze and copper castings are being made, together with several other non-ferrous alloys. The Shawinigan Foundries is the only firm in Canada making its own pig iron. This gives a greater range of physical and chemical characteristics than would be possible had it to go into the open market and buy various grades of pig iron.

The products of the plant include pig iron from the electric furnace; grey iron casting for machinery and construction work; white iron casting to stand abrasive service; special alloy irons to be acid-resisting and to stand severe abrasion; semi-steel, where special, close-grained metal is required; brass, yellow and red; bronze, phosphor-bronze, aluminum, bronze, gunmetal, antimonial lead and a variety of other acid-resisting, non-ferrous alloys. The bulk of the output of the foundry is absorbed by other local firms. The firm looks forward to the time when it will be making its own iron in the electric furnace from Quebec ore. In Norway and Sweden iron is being made by means of power. If power becomes as plentiful as there seems, every prospect of its becoming in this country, it could be used to produce iron more cheaply than that can be produced by means of coal and coke; with their prohibitive price and high freight rates, and, moreover, the article produced would be purer. At present, the firm employs about ninety men.

The Manufacture Of Ferro-Silicon.

Close by the works of the Canada Carbide Company in the electro-chemical district is situated the plant of the Canadian Ferro Alloys Ltd. This plant was erected in 1918 and is entirely of brick and steel construction. It consists of a switch-house, transformer

and wash room. Here are manufactured ferro silico and other ferro alloys.

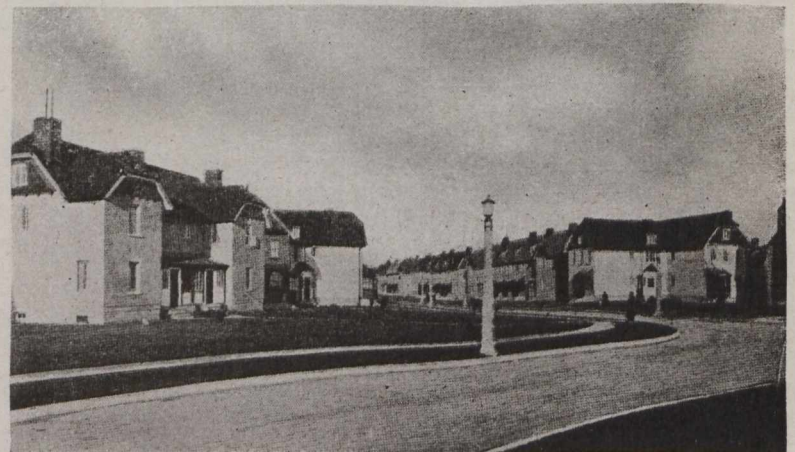
Also in the electro-chemical district, and near the upper end of it, is the large plant, covering about fifteen acres, of the Canadian Aloxite Company, a subsidiary of the Carborundum Company of Niagara Falls. In this, such electro furnace products as aloxite, carborundum and ferro silicon are produced. Carborundum is an artificial abrasive for which during the war, there was a large demand. The high-grade silicon which is turned out at the works is used mainly in the production of transformer and other high-grade steels. The plant is said to have cost somewhere around \$1,000,000 and affords employment to about 130 men.

In 1917 the Prest-O-Lite Company, which also has plants at Toronto, Merriton, Ont., and St. Boniface, Man., constructed a plant at Shawinigan near that of the Carbide Company. It purchases acetylene gas from that company and its plant is used for the purpose of compressing that gas for charging Prest-O-Lite cylinders.

It should be mentioned, in connection with the chemical industries carried on at Shawinigan that the Shawinigan Laboratories Ltd, which did excellent work in the war, has been reorganized as practically the research bureau of the Shawinigan Water and Power Company. It is stated that a number of research chemists and metallurgists are here engaged upon new problems of high importance to the chemical industries of the country. Others of the chemical works at Shawinigan such as the Northern Aluminum Company and the Canadian Aloxite Company have their own well-equipped laboratories and chemists on their plants as has the Belgo-Canadian Pulp and Paper Company which was one of the earliest companies to locate in the town.

Belgo-Canadian Pulp & Paper Co.

This company, whose mill is built on the banks of the Shawinigan river, was organized in Brussels, Belgium, by a group of Belgian financiers. In 1901, it commenced the operation of its groundwood mill, and in the following year its first paper machine was installed. In 1905 its second paper machine was installed. The year 1906 saw the remodeling of the groundwood mill, and the succeeding year witnessed the installation of paper machine No. 3. In 1914 the 60 ton sulphite mill commenced operation and, two years after, paper machine No. 4 was installed. The sulphite mill was also enlarged to 90 ton in 1916. The capacity of this mill was still further increased in 1917. The plant today has a capacity of about 180 tons of groundwood, 90 tons of chemical pulp, and 210 tons of paper, a day. Large additions to the groundwood mill are under construction.



Company's Houses for Employees, Shawinigan Falls.

The Company owns large tracts of forest lands — covering an area of some 1,800 square miles — on the St. Maurice river and its tributaries. From these timber lands the wood used in producing pulp and paper, is cut and floated down the river to the mill. Booms in the Upper Bay direct the logs to a point where they are taken up the bank by a huge conveyor and cut in lengths of about two feet, at the Duplex slasher saw-mill, situated immediately on the banks of the river. The conveyor again takes the blocks and conveys them to the mill on the lower level, where huge steel trestles are used in handling the blocks to the immense storage piles which constitute the winter's supply.

The general manager of the company is Mr. Hubert Bermans, who is also the president of the Canadian Export Co., Ltd. The number of men to whom it affords employment, considerably exceeds 1,000. The Belgo-Canadian Pulp and Paper Co. develops its own power but the water for this purpose is purchased from Ste. Scholastique Water and Power Company.