

The Canadian Engineer

An Engineering Weekly

THE POWER PLANT OF THE SPANISH RIVER PULP AND PAPER MILLS, LIMITED.

In the issue of *The Canadian Engineer* of June 6th, 1912, there appeared a general description of the plant of the Spanish River Pulp and Paper Mills, Limited. This plant is located at Espanola, on the Soo branch of the Canadian Pacific Railway, forty miles west of Sudbury and one hundred and thirty-eight miles east of Sault Ste. Marie. We herewith present some further data descriptive of the hydraulic and steam power equipment of the plant.

to prepare during the winter months for supply throughout the year.

Five large penstocks convey water from this dam to the turbines, which supply power for grinding the wood to pulp. A sixth penstock supplies water for three other smaller turbines direct-connected to generators, which supply current for operating the numerous motors used in the various parts of the plant. The five grinder turbines

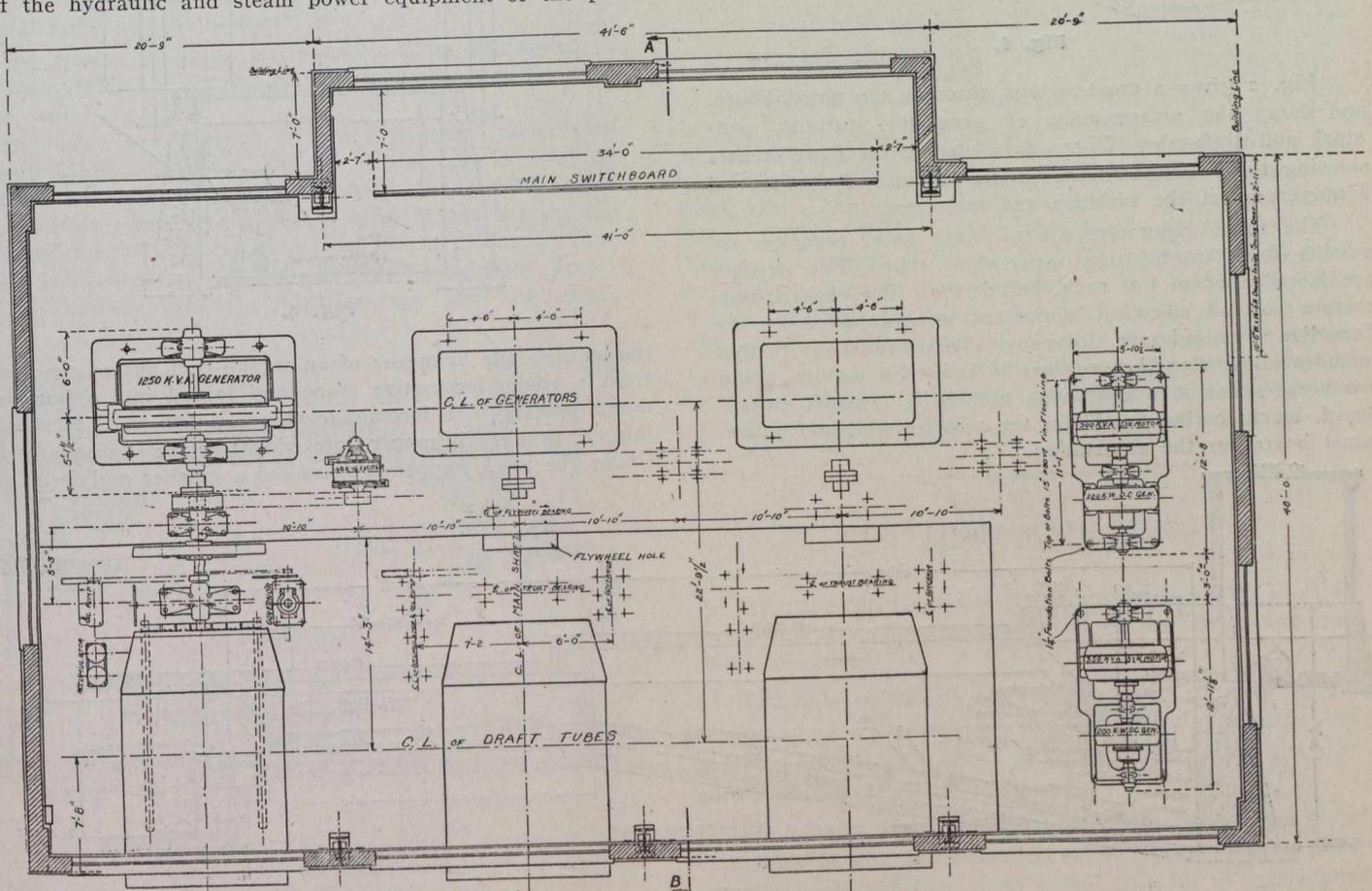


Fig. 1.

The Spanish River runs through the heart of the timber limits owned by this company, which comprise some 6,000 square miles. At Espanola the river runs between two promontories, creating a favorable location for the dam, which is built of concrete, flanked by natural rock formation on either side, and providing a 60-foot head of water. The storage thus provided serves not only to regulate the water supply, but also creates the necessary storage capacity for some 40,000 cords of wood, which it is necessary

have 2,200 horse-power capacity each. The single penstock, which feeds the turbines driving the generators, is 14 feet in diameter, and on reaching the power-house divides into three sections, one supplying each unit. These three turbine units each consist of two 30-in. diameter Hercules water-wheels, 1,650 horse-power capacity, 360 r.p.m. when operating under the 60-foot head.

The penstock is 275 ft. long, the first 25 ft. being made from 5/16-in. plate, and the rest of 3/8-in. The intake is