

There was the canal entrance, canal about 500 feet long, forebay and one steel penstock nine feet in diameter. The penstock is carried on several concrete piers for about 150 feet down the slope, and turns along the rear of the power house, terminating in a surge tank extending to an elevation four feet above that maintained in the forebay. No. 1 and No. 2 turbines are connected with the penstock by diverging feeders and No. 3 is connected to the Y connection. (See Big Chute Development Plan.)

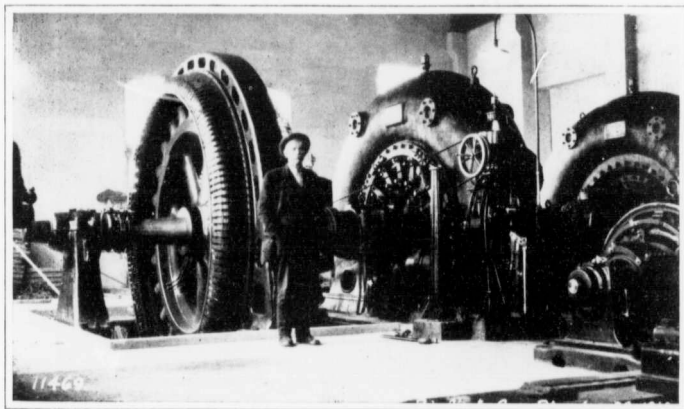
The general works and power station were constructed by Messrs. Pratt & MacDougal, of Midland.

The turbines were built by Wm. Hamilton & Company, of Peterborough, Ontario, and are of the Samson type, and were each designed for 1,300-horsepower capacity at 50 feet head and at 300 revolutions per minute. The exciter turbines have

a capacity of 200-horsepower capacity under 50 feet head at 580 revolutions per minute. The hydraulic turbine governors are all of the Lombard oil pressure design.

Practically all the electrical equipment was manufactured and installed by the Canadian Westinghouse Company. There were three 600-kv-a., 2,200-volt, 60-cycle, 3-phase, 300 revolutions per minute revolving field generators (see photograph). There were two turbine driven exciters, each 100-kw., 125-volt, controlled by a Tirrill regulator. There was one bank of three, 600-kv-a., 2,200 25,000-volt, single-phase, 60-cycle, water-cooled transformers. A second bank of similar transformers was installed in 1912 in the same pocket as No. 1 bank: the first bank being rearranged.

The switchboard consisted of 12 black marine finished marble panels. The switchboard gallery extends six



Interior View of Power House Showing Unit No. 4