Surveys were made and work was started on the clearing of the site in November, 1912, but not until the spring of 1913 was actual construction commenced. Messrs. Eaton and Brownell, of Watertown, N.Y., were the engineers; the H. E. Talbott Company, of Montreal, Que., and Dayton, Ohio, were the contractors; whilst the whole work was under the direct supervision of Mr. G. M. McKee, general manager.

The dam is 1,112 feet in length, the buttress section, abutments, and intake being constructed of reinforced concrete, and the spillway section of British Columbia fir, with a concrete cut-off wall. It was the original intention of the owners and engineers to have constructed the whole structure of reinforced concrete, but owing to local topographical conditions the latter method of construction was The groundwood wet room is 125 feet by 44 feet and is equipped with six horizontal centrifugal screens, manufactured by the P* P. Westbye Company, Hamilton, Ont., four wet machines and a battery of four pulp thickeners, the latter being manufactured by the Sherbrooke Machinery Company, Sherbrooke, Que.

The beater room is 64 feet by 56 feet, and is equipped with three 2,000 beaters and one Jordan beater engine.

The machine room is 52 feet by 273 feet, the paper machine itself being made by the Bagley and Sewall Company, Watertown, N.Y. The distance across the wire of this machine is 160 inches and at a speed of 600 feet per minute its output is rated at 50 tons per day.

For the purpose of supplying steam for the drying process there is a battery of three Babcock and Wilcox



East Abutment and Dam, Under Construction.

finally decided upon. The river bed is composed of a loose stratified shale which disintegrates very rapidly on exposure to the very severe climatic conditions. In the timber spillway there was used 1,242,149 feet of timber which figure includes the construction of a timber apron 50 feet wide behind the dam, which carries the water well away from the base in order to obviate the possibility of scouring.

The penstock leads directly from the control house at the headworks to the power plant and is of steel—15 feet in diameter and 1,581 feet in length. For the greater part of the length the penstock is laid underground. The power plant is 225 feet by 27 feet and is equipped with five horizontal turbines of 1,200 h.p. each, four of which are directly connected to the grinders located in the grinder room adjoining, and one of which is directly connected to a 1,100-kw. alternating current generator which supplies current for the individual motors throughout the mill and for the lighting system of the town of Donnaconna.

The grinder room is 125 feet by 50 feet, and is equipped with twelve Jenckes three-pocket grinders together with sliver screen apparatus. These grinders are coupled in sets of three on the main turbine shafts. water tube boilers equipped with Murphy automatic stokers.

In order to carry out the construction of the headworks and spillway section of the dam it was found necessary to excavate an absolutely new course for the Jacques Cartier River for a distance of some 2,000 feet, owing to the previously mentioned shale river bottom being unsuitable for the otherwise necessary extensive cofferdamming.

During the excavation of this new river bottom, work was being prosecuted on the construction of the concrete section of the dam, which was completed before the water was diverted into the new channel. Closure openings were left in nine panels of the concrete section to take care of the water which had been diverted into the new river channel. Concrete was placed in this section by means of a Lidgerwood cableway operating a I-cu. yd. bottom-dump bucket. The mixture used was in the proportion of 1:2:4 in the deck structure and 1:3:6 in the buttresses and end abutments.

On completion of this section of the dam the river was diverted into its rew channel and a low cofferdam built up-river across the old bed at a point some 50 feet below the point of diversion. Work was then commenced