

The intake is short and cut at about right angles to the weir channel at the south end of the dam built to take care of the overflow from the upper level.

The fine racks and stop log checks are built in one frame of structural steel in front of the entrance to the concrete wheel chambers. Besides the stop logs, head gates are provided opening in two halves by means of worm geared head gates winches. Two large manholes over the centre of each pair of wheels provide for access to the wheel chambers and are large enough to pass the runners through in case of repairs.

The power house partly covers the wheel chambers, the concrete top of which makes a portion of the switch board gallery which is widened at the centre by a platform extending three feet beyond the face of the bulk head wall.

The power house foundation rests on the solid rock, the wheel pit being excavated to a depth of about ten feet below the surface of the bed rock. The arches over the wheel pit are of concrete but faced on the outside with rough picked masonry of large dimensions, which gives to the entire structure a very substantial appearance. The power house is constructed on a steel frame having brick walls and heavy plank roof.

A hand power crane of twenty-five ton capacity with two trolleys having a span of thirty-eight feet is provided for erecting and handling the machinery. (See photo on next page.)

Provision was made for four hydraulic units, giving an ultimate capacity of approximately 6,000 H.P. Each unit consists of 5-35" New Sampson wheels by Wm. Hamilton & Co., with horizontal shafts directly coupled to a 1,000 K.W. Bullock Generator operating at 2,200 V at 180 R.P.M. and 60 cycles.

The switchboard gallery is about nineteen feet above the main floor of the power house and accessible by means of a flight of iron steps in the centre and two iron ladders at either end of the power house.

At present but one unit is installed with 2-50 KW. exciters 285 R.P.M. Switchboard panels are provided for the control of the generators, exciters and the various feeders.

The arc lights, of which 225 are located along the bank of the canal, were furnished by the G. I. Co., of New York. A three panel switchboard controls the operation of these lamps and each circuit is regulated by a 100 light G. I. regulator capable of maintaining practically constant current with any number of lamps in circuit from 1 to 100—its full capacity.

The current for these circuits is stepped up from 2,200 V. by means of transformers of 60 K.W. each—the transformers being