

The Hochelaga Power House of the Montreal Street Railway

WRITTEN FOR THE CANADIAN MANUFACTURER BY HARRY L. SHEPHERD, MONTREAL.

The new power station is situated on Notre Dame street, two and one-half miles east of McGill street. The building is a brick, steel and concrete structure, 60 feet in height, with a ground area of 180 feet by 150 feet, and is made of fireproof material throughout, the window frames and sash being of cast iron glazed with wire glass. The floors are of reinforced concrete, supported by steel floor beams. The doors of the building are covered with sheet iron. An offset on the south side of the building forms the cable house, in which the switchboard is located. If necessary the building can be extended eastward,

Westinghouse, one 1,000 K.W. and one 2,000 K.W. Canadian General Electric 600 volt direct current generators, each driven by a McIntosh and Seymour engine, with space provided for a second 2,000 K.W. unit. The condensers, of the barometric type, are bolted to the exhaust nozzles of the engines and are supported by cast iron columns, which rest on steel framework in the engine room basement.

In the engine room basement are three steam-driven dry vacuum pumps, the feed water heaters, the oil pumps and filters and the air compressor. Below the basement floor are the condenser hot wells and a concrete tunnel

date all the pumps necessary for the ultimate capacity of the power house. The present capacity of the station, including the future 2,000 K.W. unit, is one-half of the ultimate capacity.

The pumps draw water from the "wet well," separated from the dry well by the foundation wall of the power station. As the variation of the water level of the river between extreme high water and extreme low water is about 35 feet, the concrete intake tunnel had to be carried down to a depth sufficient to supply the pumps with water at any stage of the river level. The water can be shut off from the "wet well" by means of gates operated by hand

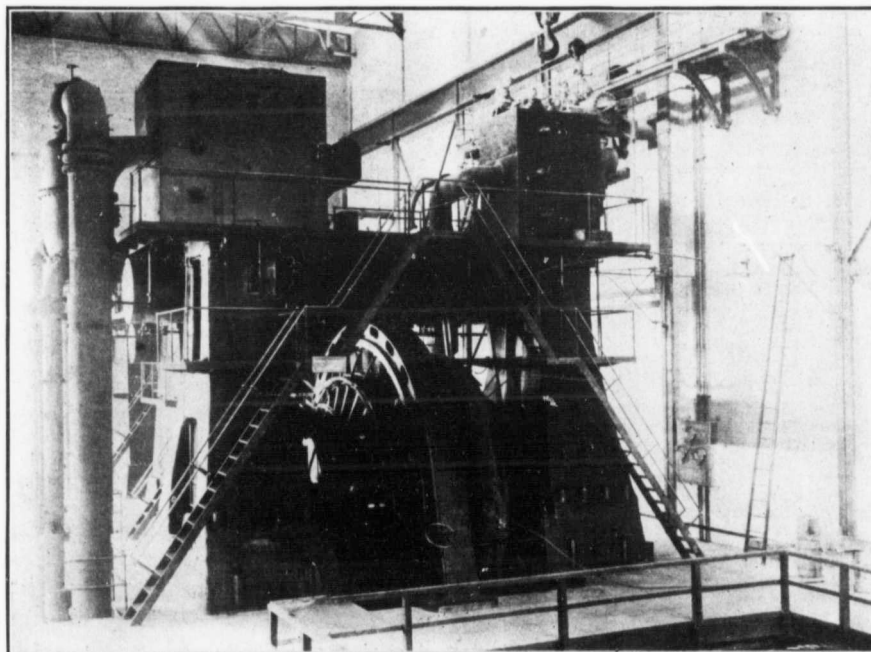


Fig. 1.—The 2000 K. W. Canadian General Electric Unit.

and to allow for this the east end has been closed in with a temporary board wall covered with sheet iron. The building foundations, the engine and auxiliary foundations, tunnels, walls, etc., are all of reinforced concrete.

GENERAL LAYOUT OF THE PLANT.

The plant is divided into two parts by a brick and steel division wall, the engine room and the switchboard gallery being to the south and the boiler room to the north.

On the main floor of the engine room there are one 1,000 K.W. Canadian

into which the hot wells discharge. The tunnel discharges into a reservoir located under the cable house basement floor. From this reservoir a 48-inch steel pipe carries the discharge water from the condensers to the River St. Lawrence, a distance of about one hundred yards south of the power station.

The boiler feed pumps, the service pumps and the circulating pumps are located in the "dry well" (at the east end of the engine room), which measures about 60 feet by 40 feet and is 17 feet below the engine room basement floor. It is of ample size to accommo-

date all the pumps necessary for the ultimate capacity of the power house.

In the offset of the engine room, known as the "cable house," is located the switchboard gallery, which is 8 feet above the engine room floor. A portion of the bus structure, the field rheostats and the series field shunts are located on the cable house floor, below the switchboard gallery.

On the main floor of the boiler room are two rows of boilers facing each other, grouped in batteries of two. The room is designed for twelve boilers, or three batteries on either side of the fir-