

THE ELECTRIC PLANT OF THE MONTREAL COTTON COMPANY.

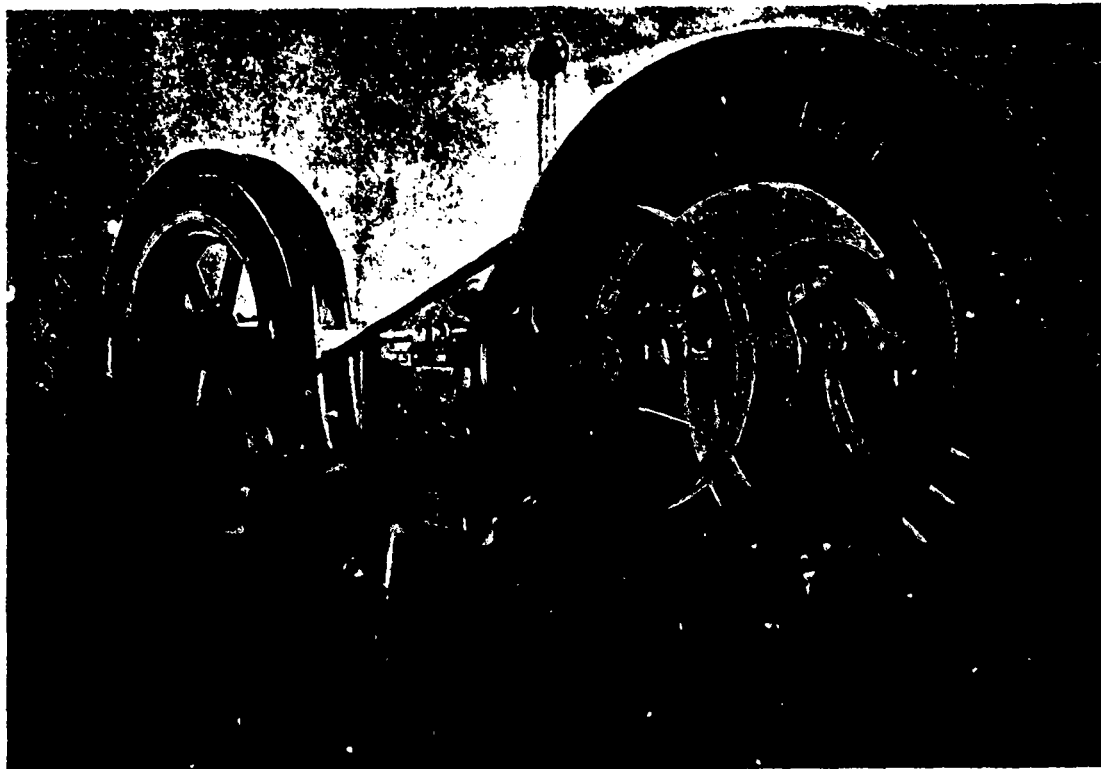
VISIT OF INSPECTION BY THE NEW ENGLAND COTTON MANUFACTURERS' ASSOCIATION.

On October 5th and 6th the New England Cotton Manufacturers' Association assembled in convention at the Windsor Hotel in the city of Montreal. The forenoon of the second day was devoted to a trip to Valleyfield, upon invitation of the General Electric Company, of Schenectady, N.Y., the Canadian General Electric Company, of Toronto and Peterboro, and the Montreal Cotton Company, to inspect the extensive works of the latter company. The main object of the visit, however, was to view the magnificent power house and to witness the application of electric power for cotton manufacturing purposes.

A representative of the ELECTRICAL NEWS accompanied the party. At 9:00 o'clock a special train of five coaches, furnished

understanding of the industrial application of the power, it might be stated that the works of the Montreal Cotton Company comprise eight large buildings, none less than three storeys in height and some reaching five storeys. The works are situated on Lake St. Francis, an expansion of the St. Lawrence, on a canal about twelve miles long, excavated by the Dominion government, a dam being constructed between an island and the mainland to maintain a sufficient supply of water in the canal. At this dam a head of fifteen feet at high water and eleven feet at low water is obtainable. For the cotton mills a head race has been excavated 1,000 feet long and tapering from 230 feet at the entrance to 165 feet wide at the exit, the walls being constructed of concrete faced with cement. By the arrangement of the head race the formation of anchor ice has been avoided.

In the power house, a substantial stone structure, 100 x 55 feet, with solid concrete foundation, there are two wheel-pits, each containing four McCormack 60 inch vertical turbines, making eight in all, built by the S. Morgan Smith Company, of York, Pa., each capable of developing 268 h.p. at 68 revolutions per minute



MONTREAL COTTON COMPANY'S ELECTRIC PLANT.—TWO OF THE 400 K. W. GENERATORS.

by courtesy of the above named electric companies, pulled out of Bonaventure station, and about one hour and a half later the town of Valleyfield, some forty miles from Montreal, was reached. Going direct to the power house, the party was taken charge of by representatives of the General Electric Company and the Canadian General Electric Company, who explained the points of interest concerning the electric plant. Not a few of the cotton manufacturers from the Eastern States expressed surprise at the extensive character, efficiency and economy of operation of the plant, which is one of the most complete in every respect in Canada.

This plant was described in the ELECTRICAL NEWS of March, 1897, but since then important additions have been made, the total capacity of the power house being now taken up. Introductory to some brief details of the electric plant, and to give an

under a 13 feet head. The turbines are directly coupled to four separate jack shafts, two wheels to each, placed in two rows extending the entire length of the power house. The wheels are governed by a Deplogle's relay governor belted to each jack shaft.

THE ELECTRICAL EQUIPMENT.

Directly connected to four jack shafts are four generators of a capacity of 400 kilowatts at 600 volts, of the Canadian General Electric Company's well known three-phase 60-cycle alternating current type. Two of these generators are shown in the accompanying illustration, although it might be erroneously inferred from the illustration that the generators are not parallel in size. For field excitation two 4-pole 17 k.w. machines are belt connected to two of the four generator shafts.

The current is applied directly to the motors without the inter-

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RECENT PLANTS INSTALLED:—Lachine Rapids Hydraulic & Land Co., Montreal, Que., 12,000 h.p.; Chambly Manufacturing Co., Montreal, Que., 20,000 h.p.; West Kootenay Power & Light Co., Rossland, B.C., 3,000 h.p.; Dolgeville

Electric Light & Power Co., Dolgeville, N.Y.; Hook Falls Power Co., Ellenville, N.Y.; Hudson River Power Transmission Co., Mechanicsville, N.Y.; Cataract Power Co., Hamilton, Ont.

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