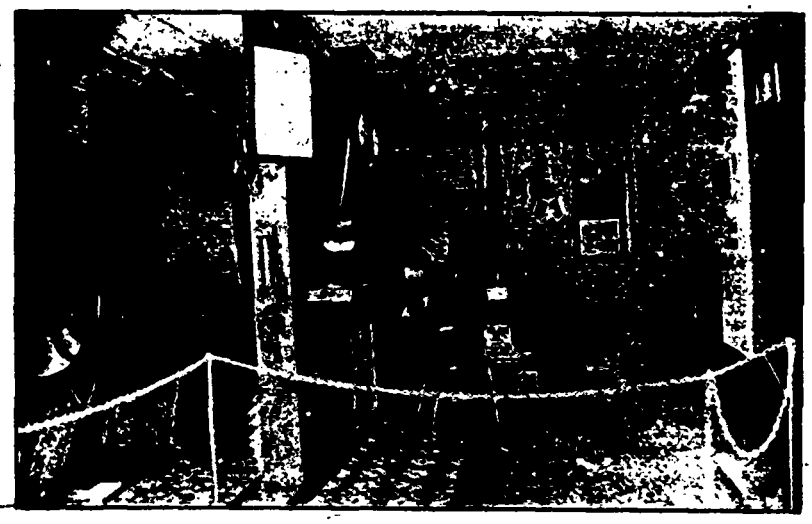
ELECTRIC TRANSMISSION PLANT IN NOVA SCOTIA.

Mr. E. L. Nash,
Manager Lunenburg Gas Co

The Lunenburg Gas Company, Limited, of Lunenburg, Nova Scotia, have recently installed a three-phase long distance transmission plant, to take the place of their direct current steam plant. The new power house is on the Mush-Mush river, one mile from the village of Mahone and eight miles from the town of Lunenburg. The Mush-Mush river is the best of its size in Nova Scotia for power purposes, it having at its head waters five lakes, with a united area of about twelve square miles, the outlets of which are controlled by the company. The dam, sixteen feet high, built of stone and timber, on a ledge of rocks that crosses the river at this point, is perfectly tight, and is one of the best constructed in the province.

The power house is 28 × 36 feet, two stories high, and is a substantial wooden building, with a metal roof. The water wheel is a "New Success" horizontal turbine, thirty-nine inches in diameter, of 105 h.p., built by the S. Morgan Smith Co., of York, Pa. It is so placed in a 12-foot penstock as to make it impossible for it to freeze up in winter. A twenty-four inch endless rubber belt conveys the power to a counter shaft; thence a two-ply endless leather belt transmits it to the generator.



Interior View of Power House—Lunenburg Gas Company.

The generator was built by the Canadian General Electric Co., and is one of their standard 100 k.w. three phase machines, running at 900 revolutions and delivering a 3,200 volt current. The switchboard carrying the necessary station instruments was built also by the Canadian General Electric Company, and is a beautiful piece of apparatus. The wiring of the station is very neatly done. From the station the three-wire pole line runs straight across fields to the main street of Mahone. One large transformer in the middle of the village reduces the current to 104 volts, and a heavy three wire system distributes it to customers.

From Mahone the pole line runs along an old road to Lunenburg. This, like many another old road, is remarkably straight and hilly, enabling the company to have a first-class line. In the town of Lunenburg the old three-wire distribution has been divided into three sections, A B C. B and C have two transformers each, while A has one, the transformer at Mahone making the balance on that phase. The distribution is much better than with the previous system, and as the high voltage current passes along only one back street of the town, the plan gives great satisfaction.

The company have their own telephone line, with Bell instruments at Lunenburg, Mahone, and in the power house.

The pole line was built under contract by Mr. L. C Gelling, of Bridgewater. The water power portion of the plant was planned and constructed by Mr. T. G. Nicol, of Mahone, and the electrical portion by Mr. E. L. Nash, the managing director.

The present directors of the Lunenburg Gas Company are: W. N. Zwicker, president; Chas. S. Marsh, vice-president; L. Joseph Rudolf, A. J. Wolffe, Jas. A. Nirtle, Lunenburg; T. G. Nicol, of Mahone; with Mr. E. L. Nash secretary-treasurer and manager. The company have over twelve hundred lamps running, and more are being added every week. The plant is already a financial success.

Power Station Lunenburg Gas Company.

A novel method of testing the efficiency of coverings for steam pipes electrically is in use. A section of the steam pipe is heated electrically by means of a coil of wire within the pipe. The amount of energy necessary to keep the pipe at a definite temperature is measured. Since the energy supplied is just enough to maintain a constant temperature, it must therefore equal the heat lost from the pipe. Hence, from the electrical energy supplied the heat lost from the outside can be calculated. The new method, which was recently described by Prof. Chas. L. Morton before one of the American learned societies, would seem to be worthy of attention.