

rectifying and measuring equipment would probably cost about \$40,000 to \$50,000 and an additional appropriation for salaries and wages of \$6,500 per year would be required.

Our present equipment could be supplemented by rectifying and regulating and metering equipment at an expenditure of \$10,000 so that it would be adequate for making complete studies of dielectrics, dielectric loss measurements on cables up to 100,000 volts, for studies of the lower voltage lightning arresters and for many other lines of research. This is largely the work of specialists and the man who took charge of it would have to be a high class man and his salary would have to be sufficient so that it would not require to be supplemented by fees from consulting work. We have suitable men on the staff at the present time but the equipment is not available.

The course in Electrical Engineering covers only two years and the field is very wide and is continually being extended. We attempt to give our students a good grounding in fundamentals leaving specialization until after graduation.

A course of lectures on high voltage phenomena would be of comparatively little value unless accompanied by experimental work, but even if time were available, we do not consider that it would be safe to allow undergraduates to experiment with high voltages. The risk is too great where more than one or two men are involved.

We offer as a subject for anthesis in the graduate school, the investigation of the Properties of Dielectrics and Electric Insulators, but so far no men have chosen this subject.

When an application is received for such work from a well qualified man, we will apply for a special appropriation for the apparatus which is absolutely essential for his particular problem and will in time as the demand develops, build up a more complete equipment.

We are quite aware of the importance of high voltage phenomena and the members of the staff have kept fully in touch with commercial developments. We are regularly carrying out breakdown tests on oil and on high voltage cables and flashover tests on insulators. Last year we wrote specifications for the insulation of the highest voltage system operating in Canada. For the last five years the Head of the Electrical Department at McGill has been one of two Canadian members of the Transmission and Distribution Committee of the American Institute of Electrical Engineers which is concerned very largely with high voltage problems.

Yours sincerely,

*C.V. Christie*

Head, Dept. of Elect. Eng.