Inter-department Correspondence

McGILL UNIVERSITY

August 30th, 1933.

Sir Arthur W. Currie, G.C.M.G.,K.C.B.,LL.D.,
Principal,
McGill University, Montreal.

Dear Sir Arthur,

I am enclosing a letter from C. M. Benett suggesting that he be given permission to use the standardizing equipment at McGill to assist him in private practice. A copy of my reply is attached.

Benett has no lack of self confidence, but we do not rate him high as an engineer. He would be impossible as an associate, particularly if he were in a position where he might think that he was doing us a favour.

Yours faithfully,

C. V. Christie.

Head, Department of Electrical Engineering.

August 30th, 1933.

C. M. Benett, Esq.,
22 Chesterfield Ave.,
Westmount, Que.

Dear Mr. Benett,

We have your letter of August 27th confirming our telephone conversation and have given consideration to the various questions raised.

We regret that we cannot place our laboratory equipment at your disposal as you suggest, it would be too dangerous a precedent.

In your second paragraph you speak of the "nebulous state of dielectric practice". I spoke of dielectric theory not practice, the practice is not nebulous.

When we require a capacitance bridge we will have no difficulty in the design and construction of it, as the members of our staff have had a very wide experience in the construction and operation of standardizing equipment and the experience of the research laboratories of the Bureau of Standards at Washington is ours for the asking.

The troubles we have experienced in cable testing have been due to deficiencies of the cable companies, and we have had no serious difficulty in overcoming them here. We are not concerned with the design of bushings.

Yours sincerely,

C. V. Christie

Head of the Department of Electrical Engineering.

22 Chesterfield Ave.,
Westmount, P.Que.,
August 27th, 1933.

Professor C.V.Christie,
Engineering Bldg.,
McGill University,
Montreal.

Dear Professor Christie,

This letter is to confirm our recent conversation over the telephone.

I was laid off by the Northern Electric Co. on June 31st of this year, and it has become apparent that firms are not taking men on their payroll. On the other hand, I have seen evidence of the fact that it is possible to do work on factory process improvement for which companies would be willing to pay without entailing any addition to their permanent staff.

In order to carry out the above idea, I felt an association with McGill University would tend to put me in touch with industry and would permit the use of apparatus to carry on with some development work. Having this in mind, I suggested to you the possibility of giving instruction on the subject of dielectrics including their characteristics and application to the high and low tension fields, as I understand this phase of ebgineering is not covered to any extent in the present course. If not applicable to the undergraduate work it might apply to the graduate studies. The feeling that you have regarding the nebulous state of dielectric practice of to-day would be dispelled, I think, if I could give you an outline of my proposal. However, you felt there was no room on the present course, and that your staff of demonstrators was complete.

As an alternative I have two suggestions to make. I will undertake the setting-up of a bridge method of measuring capacity, power factor and watts loss of dielectrics up to 150,000 volts. The commercial price of this apparatus including a low loss condenser varies from $1500 to $2500 in the States. Utilizing

Professor C.V.Christie,
McGill University,
Montreal.

some of your present apparatus this set-up should not cost more than $200 to $400 for apparatus and material. This work probably could be completed by your staff, but only at the expense of a lot of trouble and time, and it is my particular experiance that is essentially offered. This would permit a throrough study of dielectrics and facilitate the handling of tests on dielectric materials and apparatus that is required by industry to-day.

A second undertaking, which was not mentioned in our convessation, is the design and construction of single conductor cable terminals for test up to 150,000 volts and three conductor cable terminals to 100,000 volts. The single conductor terminals cost about $1000 to $1200 per set in the States, but could be completed for $100 to $200. The three conductor terminals are not to be obtained on the market and would cost about $200 to $300 to construct the set. I understand from my association with the Northern Electric Co. that considerable difficulty was encountered at McGill regarding the terminals on cable life testing.

I am not asking any remuneration for this work, but in return I would like the use of your apparatus when it does not interfere with your own work.

I would very much appreciate your consideration of this matter, and would be glad if you would bring this letter to the attention of Sir Arthur Currie.

Yours truly,

C.M.Benett.

C.M.Benett.

C. V. CHRISTIE, M.A. B.Sc.,
PROFESSOR
E. G. BURR, B.Sc.,
ASSISTANT PROFESSOR
G. A. WALLACE, M.Sc.,
ASSISTANT PROFESSOR

TEL. UPTOWN 5920

DEPARTMENT OF ELECTRICAL ENGINEERING

McGILL UNIVERSITY

MONTREAL

August 25th, 1933.

Sir Arthur W. Currie, G.C.M.G.,K.C.B.,LL.D.,
Principal,
McGill University, Montreal.

Re: The High Voltage Laboratory at McGill and the Inclusion of Instruction in High Voltage Phenomena in the Course in Electrical Engineering.

Dear Sir Arthur,

Following our conversation of yesterday regarding the development of a modern high voltage laboratory at McGill and the inclusion of instruction in high voltage phenomena in the course in Electrical Engineering, I beg to offer the following comments.

To develop a high-voltage laboratory which would enable us to test the apparatus used on the large power systems of today would require equipment for at least 1,000,000 volts at 60 cycles and a lightning generator of the same or higher voltage for impulse testing. A large and expensive building would be required with an open space of some acres around it for outdoor structures and tests. The laboratory would have to be located outside the city and would require a staff to operate and maintain it and a power supply of probably 5000 kilowatts at least.

Such a laboratory would easily cost over $1,000,000 and the yearly operating expenses including the cost of power might run to $25,000 to $50,000.

The National Research Council expect to establish a high voltage laboratory in Ottawa in the future, and we are not justified in attempting to develop such a laboratory at McGill University.

Our present high voltage laboratory is equipped to develop 200,000 volts, 60 cycles but the capacity of the transformers is small and we have no accurate metering equipment. The present building is large enough to house a transformer capable of developing 350,000 volts or even 500,000 volts which would enable us to test apparatus for use on systems up to 132,000 volts. The necessary machinery and

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 a thesis 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.

McGILL UNIVERSITY
MONTREAL

FACULTY OF ~~APPLIED SCIENCE~~ Engineering
XXXXXXXXXX
OFFICE OF THE DEAN

November 24th, 1931.

Sir Arthur Currie, G.C.M.G., K.C.B., LL.D.

Principal.

Dear Sir Arthur:-

I have discussed with Professor Christie the question of provision of additional equipment for the Communications Laboratory in his Department.

There is an unusually large entry of students this session on account of the industrial situation. Some of those who are working in this Laboratory are not proceeding to a higher degree, but none the less they require the equipment which Professor Christie asks for, if a satisfactory course is to be given.

Many of those registered are our own graduates in Electrical Engineering who, finding themselves out of employment, are utilizing the opportunity by returning to College for advanced work which will be helpful to them when they return to work in industry. I feel, therefore, that Professor Christie's request should be favourably considered.

Yours faithfully,

E. Brown

Dean.

To Mr Glasco
Please keep these
consider next
Monday morning
25/11/31 Currie

C. V. CHRISTIE, M.A., B.Sc.,
PROFESSOR
E. G. BURR, B.Sc.,
ASSISTANT PROFESSOR
G. A. WALLACE, M.Sc.,
ASSISTANT PROFESSOR

TEL. UPTOWN 5920

DEPARTMENT OF ELECTRICAL ENGINEERING
McGILL UNIVERSITY
MONTREAL

November 23rd, 1931.

Sir Arthur Currie,
Principal,
McGill University,
Montreal, P.Q.

Dear Sir:

A serious condition has arisen due to the large registration in the graduate work of the Department of Electrical Engineering.

Last year we had three graduate students, but this year, ten men have registered and the equipment of the Communication Laboratory is not complete enough to enable them to carry on their research work and some new apparatus must be purchased if their work is not to be seriously hampered.

The value of the apparatus required by these men amounts to a total of $1032.00, but we hope to be able to obtain some of the items as donations and to get special discounts on others and, therefore, ask that you grant to the Electrical Department a special appropriation of $750.00 or $800.00 for this purpose.

This equipment will all be useful for undergraduate and graduate students in the future.

I have discussed this matter with Dean Brown and he has expressed his approval of this application.

Yours sincerely,

C. V. Christie

Head of the Department of
Electrical Engineering.

The Shawinigan Water & Power Co.
Power Building Craig St. West
Montreal,
Canada

April 16th., 1930.

Sir Arthur W. Currie, G.C.M.G., K.C.B.
Principal and Vice-Chancellor,
McGill University,
Montreal, Que.

Dear Sir:-

Thanks very much for your letter of April 11th.

The writer will be pleased to call upon you sometime in the near future and discuss this matter with you.

Again thanking you for your interest,

I am,

yours very truly.

J. K. Wilson.

J. K. Wilson
P.

JKW.FER.

Commercial & Distribution Department.

March 31st, 1930.

Mr. J. K. Wilson,
The Shawinigan Water & Power Co.,
Power Building, Craig St. W.,
M o n t r e a l .

Dear Mr. Wilson, -

I was away nearly all last week and have not had a chance up to the present even to answer your letter of March 21st, much less give it any study.

Let me say at this moment that I am much impressed with the outline, and will comment further in the course of a few days.

Yours faithfully,

Principal.

April 11th, 1930.

J. K. Wilson, Esq.,
Shawinigan Water & Power Company,
Power Building,
M o n t r e a l .

You will remember my brief acknowledgment of your letter of March 21st. I have now had time to go over your report more carefully and have taken counsel with some of my colleagues.

I may say that in a general way engineering schools, ours included, have been studying and experimenting with such methods as are proposed in the report. Frankly, we hesitate over the proposal to provide a special curriculum for public utilities or to extend unduly the present curriculum in that direction, on the ground that such a step may prove unsound educationally. Without specific information as to the subjects proposed for such a curriculum, it is impossible to answer such questions as:

Are they teachable to ordinary students in the University, or may they be better learned in the light of experience and under the stimulus of responsibility? Will they replace other subjects of equal educational value? Are they premature in the earlier years of the undergraduate course, or in any year of that course? If teachable in the University should they be reserved for graduate work? Are the proposed subjects

equally desirable for students entering the transportation or manufacturing or mining fields as for those looking to service in public utilities?

These and similar questions naturally occur to one. Our experience with the special courses in transportation twenty years ago will help to answer some of them when details are known. We would warmly welcome a round-table conference to thresh out this aspect of the matter.

Specifically, one may comment as follows:-

Educational.

1-a. The object is excellent; but see above.

1-b. Good; but ineffective if overdone.

1-c. Excellent if really effective speakers are used.

1-d. Excellent.

2. Excellent. This is done to some extent already.

3. Excellent. This is in complete harmony with the policy we are endeavoring to carry out in connection with summer work.

4-a & 4-b. This should be effective. Most of our students are fairly well decided as to the course they will follow, when they enter our first year.

Executive and Personnel Work.

These suggestions are well in line with the ideas which we have been urging and which several corporations in different fields have gone some way towards adopting.

I would go a little farther and suggest co-operation with the utilities in further graduate training, both inside and outside the University. Special men might be sent back to the University for post-graduate work. It is perhaps equally important to give our graduates who cannot come back some direction in self-education.

Once more let me say that my colleagues and myself would very gladly welcome a round table conference.

Principal.

McGILL UNIVERSITY
MONTREAL

FACULTY OF APPLIED SCIENCE
OFFICE OF THE DEAN

April 8th, 1930.

Sir Arthur Currie, G.C.M.G., K.C.B.,
Principal.

Dear Sir Arthur:-

I am returning herewith the Report of the Committee of the Canadian Electrical Association on Co-operation with Educational Institutions which was communicated by Mr. J.K. Wilson. I have gone over this report carefully and so have several of my colleagues. In a general way engineering schools, McGill included, have been studying and experimenting with such methods as ~~we~~ are proposed in the report, for years.

We hesitate over the proposal to provide a special curriculum for public utilities or to extend unduly the present curriculum in that direction, on the ground that such a step may prove unsound educationally. Without specific information as to the subjects proposed for such a curriculum it is impossible to answer such questions as the following: Are they teachable to ordinary students in the University, or may they better be learned in the light of

experience and under the stimulus of responsibility? Will they replace other subjects of equal educational value? Are they premature in the earlier years of the undergraduate course, or in any year of that course? If teachable in the University should they be reserved for graduate work? Are the proposed subjects equally desirable for students entering the transportation or manufacturing or mining fields as for those looking to service in public utilities? These and similar questions naturally occur to one. Our experience with the special courses in transportation twenty years ago will help to answer some of them when details are known. We would warmly welcome a round-table conference to thresh out this aspect of the matter.

Specifically one may comment as follows:

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2. Excellent. This is done to some extent already.

3. Excellent; this is incomplete harmony with the policy we are endeavoring to carry out in connection with summer work.

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Executive & Personnel Work.

These suggestions are well in line with the ideas which we have been urging and which several corporations in different fields have gone some way to adopting.

I would go a little further and suggest co-operation with the utilities in further graduate training both inside and outside the University. Special men might be sent back to the University for post-graduate work. It is perhaps equally important to give our graduates who cannot come back some direction in self education.

Yours faithfully,

H. R. MacKay

The Shawinigan Water & Power Co.
Power Building Craig St. West
Montreal,
Canada

March 21st., 1930.

The Principal,
McGill University,
Montreal, Que.

Dear Sir:-

We attach a copy of the suggested plan drawn up by a Committee of the Canadian Electrical Association for co-operation with educational institutions in Canada, together with the executives' instructions regarding this plan.

We would appreciate it very much if you would advise us if you think this plan is workable and if the Universities would co-operate with us.

Yours very truly.

J. K. Wilson

Merchandise Department.

JKW.FER.

To Dean H. M. MacKay:
For study, comment and return, please.

The Shawinigan Water & Power Co.
Power Building Craig St. West.
Montreal,
Canada

March 20th., 1930.

REPORT OF COMMITTEE ON CO-OPERATION
WITH EDUCATIONAL INSTITUTIONS -

Suggested Plan.

The general plan of co-operation submitted in the following proposal divides itself in two main divisions:

1. Educational Work
11. Executive and Personnel Work

Educational Work.

1. Encouraging the adoption and development of curriculums and courses in Public Utilities at the colleges and universities.

a. Under this heading will come measures to awaken and stimulate interest among the colleges in this branch of industrial and economic education and to assist in broadening such courses after adoption by the Colleges.

This means that it will be necessary to have close relationship and sympathetic understanding, mutually on the part of the Educational Committee towards the work going on in the Colleges, and the College Authorities towards the work being done by the Committee.

The aim of the Committee will be to bring about a development and extension of such courses and curriculums until they do justice to the importance of the subject which means that courses should be made available in each of the four years of the student's college career.

b. Arrangements to be made for talks before incoming freshmen classes by men who have personality and ability to picture the utility industry, stressing the romantic and public service sides of the business, thus helping to attract the students into the Public Utilities courses.

lch

c. Arrangements to be made as a matter of educational interest for addresses by conspicuous and leading figures in the utility industry, nationally known if possible, before the whole student body.

d. The supplying of educational literature to the college libraries, to the professors, and the students interested in the Public Utility courses and engineering courses bearing on the industry as a whole.

2. Co-operation on the part of utilities and manufacturers in the utility industry with the Universities, with a view of lending and supplying apparatus to the Colleges, especially to the engineering departments of the Colleges.

3. Advanced students in the Public Utility Courses should be given the opportunity of getting some actual practice by having turned over to them, under supervision the responsabilities of operating various parts of the plant of the utility companies. This feature would add greatly to the educational value of the courses.

4. The carrying on of the educational work in the high schools, and preparatory schools.

a. Supplying Speakers to the various schools with special stress to be laid on talks which will require the use of motion pictures.

b. Arranging trips on the part of school classes to power stations in the neighbourhood of the school.

Executive and Personnel Work

The Executive and Personnel work suggested by the Committee is so styled because it proposes to carry out through the executive suthority in the utility companies interested, a plan to assimilate and develop by personnel work, the graduate students made available by the Universities.

This work is most important; without an intelligent solution of the problem of developing college men who go to Public Utilities from the Utility Courses, the whole educational plan will fail.

Executive Work: a. The pledge of each Company to take into its organization a specified number of graduates from the Colleges who have shown ability to enter this field on the basis of their college records.

b. Each Company, so far as it is able during vacation time, to commission professors in the folleges to undertake special work in the utilities and the assignment of students taking the utility courses to summer work.

Personnel Work: An Executive in each Company should be appointed and should, in additiont to his executive duties, have the work of supervising and controlling the duties of the college men who enter the utility companies for over a period of at least two years.

We give a few suggestions as to the general attitude which would govern the companies in dealing with college material:

a. Each student should be given a personal interview which should not be hurried or formal and should be of such a nature that the student will feel free to speak confidentially of his prospects and ambitions.

b. Those who show promises should be offered a definite job and advised that they will be under the personal guidance of the executive.

c. After entering the employ of the Company, these men should be given the hard and rough work in the first year or two, on the theory that such work is necessary to an understanding of labour and the handling of men; this applies particularly to operating work.

d. The authority of the Executive should be understood to include the right to hire or dismiss and the right to transfer and also authority over wages, even where the student is not working in the department directly reporting to the Executive.

General Observations

The plan suggested may be difficult to put into effect wholly, but certain parts can be taken up, thus putting the whole plan into effect gradually.

Executives instructions -

1. That the report of the standing committee be accepted as an excellent basis for further advancement in educational and personnel work, and that it be used by member companies as a general guide in this work.

2. That particular care be taken in the use of Educational matter to see that the following conditions are fulfilled:

    a. It shall be typed or printed in Canada.

    b. It shall deal with Canadian conditions, and not, except for feference, feature the industry in other countries.

    c. It shall deal with its subject matter in such a manner that it will not be considered by the public as promotional propaganda.

FACULTY OF APPLIED SCIENCE,
McGILL UNIVERSITY.

The men named below obtained the Degree of Bachelor of Science in Electrical Engineering, taking the Communication Engineering Course as part of the requirements for the Degree.

Graduated - Session 1927-28.

Name.	Address.
Benjamin, Archie	2688 Hutchison Street, Montreal.
Boyd, David	122 George V. Ave, Lachine, P.Q.
Buchanan, Edward Trevor	299 Clifton Avenue, Notre Dame de Grace, Montreal.
Budden, Arthur Napier	1509 MacKay Street, Montreal.
Cole, James Maitland	800 Grosvenor Ave., Westmount.
Curtis, Arthur Elbert, Jr.	Stanstead, P.Q.
Fong, William Hin	Home: Canton, China. (Past city address 1106 St. Urbain St., Montreal.)
Fulton, Fraser Fowler	117 Lansdowne Street, Fredericton, New Brunswick.
Gagnon, Elmore Gerald	6007 Esplanade Ave., Montreal.
Godwin, Harold Brandon	St. Anne de Bellevue, P.Q.
Groleau, Arnold John	84 Chesterfield Ave., Westmount.
Hayes, Ronald Abram Hughson	Bloomfield Station, Kings County, New Brunswick.
Lyons, Walter	1051 Boston Road, New York, N.Y.
Nightingale, Matt Simons	42 Ballantyne Avenue North, Montreal West, P.Q.
Palmer, William Henry, ...	Heart's Content, Newfoundland.
Ransom, Howard Charles Linley...	18 Melbourne Avenue, Westmount.
Rhodes, Donald	469 Melrose Avenue, Montreal.
Richardson, John Maxwell	c/o Imperial Bank of Canada, West End Branch, St. Thomas, Ontario.
Smith, Arnold Wilshire	Hillcrest, Alberta.

Graduated - October 1927.

Bryant, James Sanborn	6973 De la RocheStreet, Montreal.
Hooper, William Henry	c/o F.A. Heney, Westboro, Ont.
Savage, Meyer Henry	221 Mance Street, Montreal.

(continued)

Graduated - Session 1926-27.

Name.	Address.
Bennett, Arthur Joseph	Maniwaki, P.Q.
Blackmore, Cyril Leslie	17 Leslie St.,St.John's, Newfoundland.
Branscombe, Arthur Forrester	439 Victoria Ave.,Westmount.
DesBrisay, Aretas Wm. Young	Petit Rocher, New Brunswick.
Hicks, Ben Church, ...	Box 119, Bridgetown,N. S.
Johnson, Edward Lawrence, ...	9 Elgin St.,Welland, Ont.
Keene, Thomas Ross	164 Marlowe Ave.,Montreal.
Moffat, Thomas Stuart	926 Heywood Ave.,Victoria,B.C.
Moore, Lewis Nicholas	427 Sunnyside Ave.,Ottawa.
Moore, William Herbert	466 Grosvenor Ave.,Westmount.
Silver, Ralph Charles	*Engineering Building, McGill University.
Stewart, Leslie Baxter	P.O.Box 403, Antigonish, N.S.

N.B. The addresses given above are the <u>home addresses</u> as they appear on the students' record cards(*exception), and doubtless the men can be reached through same, although most of them are in engineering positions elsewhere.

July 17th,1928.

MEMORANDUM

Electrical Engineering Teaching Position

desired by

Walter Krausnick, Ph. D.

B.S. in E.E. University of Missouri, 1909
M.S. in Science, Texas A. & M. College, 1928
Ph.D. (Electrical Engineering) University of Michigan, 1930

Personal Information.

Born July 28, 1888, at St. Louis, Mo. of American born parents of German descent.

Married, 1919. 2 children.

Height, 5 ft. 9 1/2 in. Weight 175 pounds.

Health - excellent - Religion, Liberal Protestant.

Practical Electrical Engineering Experience.

2 years General Electric Test at Schenectady, New York.
5 years construction, inspection, valuation and sales work.

Military Record.

Mexican Border Service 1916.
World War, 1917 - 1919, 1 year in U.S., 1 year in France. After the Armistice, served for some time as Instructor in Electricity at the University of the A.E.F. at Beavre, France.
At present, Captain, Engineers, Officers Reserve Corps, U.S. Army.

Teaching Experience.

1 year, Professor of Electrical Engineering at Christian Brothers College, St. Louis, Mo., 1914 - 1915.
1 year, Instructor in Electrical Engineering at Case School of Applied Science, Cleveland, Ohio, 1919 - 1920.
6 years as Instructor, Assistant Professor and Associate Professor of Electrical Engineering at the College of Engineering of Newark, N. J., 1920 - 1926. Taught D.C. and A.C. Machinery and Theory Courses, both class and laboratory. Planned the courses, laid out and installed the laboratory and wrote the A.C. laboratory manual still in use. Valuable experience was obtained on cooperative courses and also with the evening junior technical college connected with the College of Engineering. The position at Newark was given up when it was decided to obtain advanced degrees.

2 years as Assistant Professor of Electrical Engineering at Texas A. & M. College at College Station, Texas, 1926 - 1928. At the end of the two years graduate work there while teaching full time the M.S. degree in Science was obtained. The thesis for that degree was on the "Use of Poyntings Vector and Energy Flow Diagrams in Electrical Engineering Teaching."

Graduate Work

Besides the work at Texas A. & M. College work was done at Columbia University and Texas University Summer Schools.

The year 1928 - 1929 was spent as Fellow in Physics at Rice Institute, Houston, Texas, the first years work for the Ph.D. degree being done in the basic mathematics and physics underlying the fundamentals of engineering science.

The year 1929-1930 was spent at the University of Michigan where the Ph.D. was obtained this June, the dissertation embodying the results of a Cathode Ray Oscillograph study of the "Reignition of the Electric Arc on A.C.", a problem of practical application and importance in the switching of A.C. circuits. It is expected that this paper will shortly be published in the Journal of the A.I.E.E.

Graduate Courses in Economics, Biology and Mathematical Statistics which have also been taken indicate a wider range of interest than merely technical engineering work. At present a peper is being prepared on the "Relation between Skew Frequency Curves" for the Annals of Mathematical Statistics.

Memberships.

Member of the A.I.E.E.
Member of the American Statistical Association.
Have been member of the American Physical Society of the A.I.E.E. and the Society of American Military Engineers but have suspended membership in them while working for graduate degrees.
Not a member of any fraternal order or secret society.

References.

Professor J. C. Peet, Head of the E.E. Department, College of Engineering, 367 High Street, Newark, New Jersey.
Dean F. C. Bolton, School of Engineering, Texas A. & M. College, College Station, Texas.
Dr. Arnold Romberg, Department of Physics, University of Texas, Austin, Texas.
Dr. Benj. F. Bailey, Head of E.E. Department, University of Michigan, Ann Arbor, Michigan.

Additional Information.

Any other information desired as well as photograph will be sent to interested persons asking for them. For the present use the summer address of Brighton, Nova Scotia, Canada.

Walter Krausnick

May 7th, 1926.

Professor Walter Krausnick,
The College of Engineering,
The Newark Technical School,
Newark, New Jersey.

Dear Sir:-

I beg to acknowledge receipt of your letter of April 29th with reference to a position in the Department of Electrical Engineering at this University.

Your letter is being passed on to the Department and I assure you will receive every consideration.

Yours faithfully,

Principal.

H. & B.

Engineering Building,
McGill University.

MONTREAL - April 21st. 1926.

Adrien Beaudry, Esq., K.C.,
President,
Quebec Public Service Commission,
Court House,
Montreal, P.Q.

Dear Sir,

I have the honour to apply for appointment to the Electrical Commission of the City of Montreal as the representative of your Commission, which position is now vacant through the death of Dr. L. A. Herdt.

My request for consideration of this application is based on my professional record set forth in the attached memorandum, and on the fact that owing to my long association with the late Dr. Herdt, I am conversant with the work of the said Commission.

I respectfully hope that your Commission will do me the honour of appointing me your representative for the carrying on of the important work of the Electrical Commission of Montreal.

Yours truly,

MEMORANDUM of professional experience of E.Godfrey Burr.

I have been on the staff of the Electrical Engineering Department, McGill University, since 1907, and at present hold the rank of Assistant Professor.

I am Vice-Chairman of Electrical Sectional Committee, Canadian Engineering Standards Association, Ottawa.

In association with the late Dr. Herdt I have had experience in underground conduit design and construction as follows:-

Ottawa Electric Company 1911, and at various later dates to 1925.
City of Outremont 1914.
Ottawa Electric Railway 1923.

Also in association with the late Dr. Herdt I have been connected, amongst others, with the following engineering works:

Electrical Installations of Hydro Electric Developments-
1913,E. B. Eddy Co. Hull, P.Q.
1914,Ottawa & Hull Power Co., Hull, P.Q.
1915,Hawkesbury Electric Light, Bell Falls, Rouge River, P.Q.
1920,Bathurst Co., Grand Falls, Nipisiguit River, N.B.
1925,Ottawa River Power Co. Bryson, P.Q.

Valuations and Reports.

1917, Montreal Tramways valuation.
1919 and 1922,Ottawa Electric Rly. valuations.
1919,Ottawa Electric Co. valuation.
1921,Hydro Radial Enquiry report.
1923,Quebec Rly. valuation.
1920,Toronto Railway valuation.
1925,Quebec New England Hydro-Electrical Corporation valuation.
1925,Canadian Light & Power Co. valuations.

The majority of the work since 1920 was carried out under our joint names.

Burrd

Beauty

Chamberlain

Public Service Commission

3 members. 3 only appointed now.

4th "

Created by Local Legislature.

Function powers to adjudicate on
all matters between people
and public utilities.

Herdt was appointed by this
Commission as its representative
on Electric Service Commission

which is body to whom city
has delegated by legislative act
its powers to control & conduct
city which must be used by public
utilities

Herdt - was Chairman
Beaubien - city
Kelsch - public utilities
Others members

CANADIAN PACIFIC RAILWAY COMPANY
STEAMSHIP GENERAL PASSENGER DEPARTMENT

WM. BALLANTYNE,
STEAMSHIP GENERAL PASSENGER AGENT
H. M. MACCALLUM,
ASSISTANT STEAMSHIP GENERAL PASSENGER AGENT
H. B. BEAUMONT,
ASSISTANT STEAMSHIP GENERAL PASSENGER AGENT

4-3/6-HMM

MONTREAL, Jan 27th, 1926

INTERNATIONAL ELECTRICAL TECHNICAL CONVENTION
NEW YORK -, APRIL 10th, 1926

Col. W. Bovey,
McGill University,
Montreal.

Dear Col. Bovey,

Referring to telephone conversation 26th instant.

This will confirm our advice that 125 male delegates accompanied by 75 ladies are expected from Europe.

This group will naturally be interested in power development and it is felt that if they could be invited to inspect power plants at Niagara Falls, they might then be induced to visit Toronto and Montreal were an invitation extended by the Shawinigan Power people. Naturally the objective would be to have them return to Europe on one of our ships from either Montreal or Quebec.

I understand Dr. Barnes of McGill is the President of the Canadian Section and would very much appreciate your undertaking to place the matter before him.

Yours very truly,

H. M. MacCallum

F. CREEDY, M.I.E.E.
A.C.G.I., ASSOC. AMER.I.E.E.
ELECTRICAL AND
MECHANICAL ENGINEER.

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INST. ELEC. ENG.
Ayrton Premium (1923).

TELEPHONE: EALING 947.

43, MADELEY ROAD,
EALING, W.5. London England

Aug 13th. 1926

YOUR REF.

MY REF.

The Principal
McGill University.

Dear Sir

As I understand the Professorship of Electrical Engineering at McGill University is vacant, I should be very glad if a form of application could be sent to me, if candidatures from this country are desired

Yours faithfully.

F. Creedy.

Re Promotion of Christie

June 7th, 1926.

Brigadier-General A. McNaughton,C.M.G.,D.S.O.,
Department of National Defence,
OTTAWA.

My dear General:-

Thank you very much for your letter of June 4th.

You have put your finger on a very important point when you say that the greatest menace to the successful developing of many of our University departments is this matter of inbreeding. I have seen many evidences since my association with McGill.

In connection with the Department of Electrical Engineering, it would seem as if we had an opportunity now to strengthen the department by the addition of a man of the type you describe, but there are other conditions which, I think, in the end will influence us to promote Christie. If so, we must try to add to the staff a younger man and one who gives promise of ability to work intelligently on research problems. Christie has been here for over twenty years. He is a B.A. and an M.A. of McGill and, of course, all his experience has been here, which enables us to form a true appreciation of his qualifications and his character, but, on the other hand, it tends to propagate the very faults of which you speak. He is a successful teacher and in fact has done almost as much teaching as all the other members of the Department combined. Perhaps he has been called upon to do too much

teaching, and for that reason has neglected the research side. He stands very high with the Electrical companies in Montreal, being the Consulting Engineer of Shawinigan.

I have had a small committee (on which Sir Herbert Holt and Mr. Julian Smith sat) examining the qualifications of those we might invite to come to McGill. Sir Herbert and Mr. Smith spoke very highly, and the latter enthusiastically, of Christie, regarding him in some respects superior to Herdt when Herdt was Christie's age. Holt and Smith have both voted for Christie's promotion and I think I shall agree, because I hesitate to put a man at the head of the Department over him in view of his long association with the Department, his academic qualifications, his teaching ability and the respect he has won for himself in the electrical business world. None appreciates more fully than I do what you have said about the paucity of electrical research at McGill, but I think I must try to mend the defect in another way. I shall endeavour to give Christie more time for research, but my greatest hope will lie in the appointment of a man of promise from outside as an Assistant.

With many thanks for your frank letter and with all good wishes, I am,

Yours faithfully,

CANADA

QUOTE NO.....

Department of National Defence

Ottawa, Canada

ADDRESS REPLY TO
THE DEPUTY MINISTER

Personal

4th June, 1926.

Dear General:-

I have your letter of June 1st, regarding the appointment of a Professor of Electrical Engineering to fill the place of the late Dr. L.A. Herdt.

I feel very strongly that advantage should be taken of this opportunity to infuse some new blood into the Electrical Department and to obtain, as head of it, a man who will bring the Department back to some standing in Electrical Research.

Owing to Dr. Herdt's long illness and his absorption, in later years, in the economic aspects of the work, I am afraid that McGill has ceased to figure in the technical papers and discussions presented to the Institute of Electrical Engineers in London or to the American Institute of Electrical Engineers in New York; the two principal associations of English speaking peoples concerned with this phase of engineering research.

I am keenly interested in the development of this work at McGill and each time I have been in Montreal I have made it a point to walk through the laboratories and to inquire what is being done. I have failed to find any evidence of any real research being undertaken and this despite the fact that there are many problems within the scope of the material resourses and equipment available.

Electrical In 1914 McGill's best chance for useful research was in the study of High Voltage Phenomena. After several years of work a High Voltage Laboratory had been created which compared favourably with that of any university on the North American Continent with the possible exception of Leland Stanford in California. Since Hague and I left for overseas and, except for some routine testing at moderate voltages, this equipment has been unused and as late as last year I found some of my own old working diagrams pinned on the boards. The study of Transient Phenomena was also well advanced in 1914 but this too has not been proceeded with, although much useful research in it has been done elsewhere with great credit to the colleges at which it was carried out. These are only two of the fields which might have been exploited during the past few years.

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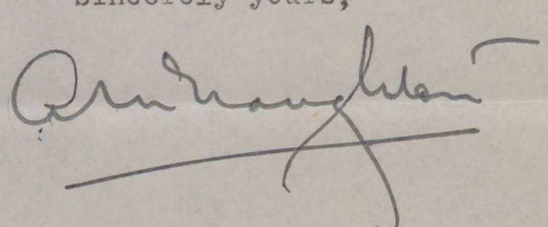
1772-39-376

I have no feelings whatsoever against the present staff, they are all personal friends of mine with whom I worked most amicably many years ago but they have not kept McGill in its rightful place in the forefront of research and, in consequence, I do not hesitate to record my opinion that a candidate for appointment to the chair should be sought elsewhere.

Further, as you know, I hold very strong views on the absolute necessity in an educational institution of securing at all costs a turn-over of staff, particularly of those of intermediate seniority. The advantages from new ideas and fresh enthusiasm and personal contact with what is being done elsewhere cannot be over-estimated and far outweigh any slight discontinuity in policy or in the instruction of the students which may result.

With kind regards and best wishes.

Sincerely yours,



Sir Arthur W. Currie, G.C.M.G., K.C.B.,
Principal and Vice Chancellor,
McGill University,
Montreal, P.Q.

June 1st, 1926.

Brigadier-General Andrew McNaughton, C.M.G.,D.S.O.,
Department of National Defence,
Ottawa.

My dear Andy:-

This is only a brief note to ask you to let me have your opinion regarding the headship of the Department of Electrical Engineering.

Bovey told me of certain feelings you had with reference to one of the senior members of the staff. In filling Dr. Herdt's position I may not be able to follow your suggestions, but I should very much like to have them just the same, together with any other comments you feel disposed to make regarding the future of the Department.

With all good wishes, I am,

Yours faithfully,

May 27, 1926.

Julian C. Smith, Esq.,
619, Sydenham Avenue,
Westmount.

Dear Mr. Smith:-

As you know, the death of Dr. Herdt has left us without a head for the Department of Electrical Engineering and I am inviting Sir Herbert Holt and yourself to be good enough to give us the benefit of your knowledge and experience and to serve on a small committee which will consider the question of a successor. The committee will have its first meeting on Monday next, when we will lunch at the Mount Royal Club with Sir Herbert Holt and I trust that you will be able to join us.

Yours faithfully,

Principal .

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Marysville, N.B. August 11th. 1931.

Mr. A. O. Dawson, LL.D.,
Canadian Cottons Ltd.,
Montreal, P.Q.

Dear Mr. Dawson,-

My son, Jim, intends to work for a B. Sc. Degree in Electrical Engineering at McGill, and I have written the Dean for information.

I thought after writing the letter, you would have been glad to get the information for us.

Jim is rather anxious to know the amount of credit he will get for his four years at R.M.C. and information as to Tuition, etc.

No doubt, we will hear from the College in a few days, but I thought where your family was so deeply interested in McGill, that you would be able to give us first hand information.

Sincerely yours,

Jos Dolphin

Jos Dolphin
Manager.

Prof Chisholm

August 19th, 1931.

Mr. Jos. Dolphin,
Manager,
Canadian Cottons Ltd.,
Maryville, N.B.

Dear Sir,

Your letter of August 11th to Mr. A.O. Dawson has been handed to me for reply. I regret the delay in giving you the desired information, but it seems probable that your original letter must have gone astray as we have no record of it here.

A man who has completed his four years course at R.M.C. and is recommended by the authorities there, is admitted to the third year in Electrical Engineering at McGill University.

I am mailing under separate cover, a copy of the Announcement of this Faculty.

Yours sincerely,

Head of the Department
of Electrical Engineering.