

NORTH EASTERN DISTRICT MEETING

AND STUDENT BRANCH CONVENTION

Headquarters: Hotel Van Curler



SCHENECTADY, N. Y.
April 29 - May 1, 1942



Research Laboratories of the General Electric Company—Rice Hall to the Left

SPECIAL FEATURES

Members and guests are cordially invited to attend the meeting. Seven conference sessions and an unusually large number of special features, some requiring proof of U. S. citizenship, are scheduled, in addition to the general session, three technical sessions, and a student session.

The City of Schenectady was originally a Dutch settlement founded by Arendt Van Curler in 1661. Industrially it is notable as the home of the American Locomotive Company and the General Electric Company. The city has a population of about 90,000. Since January 1, 1936, it has operated under the Plan C, City-Manager-Council Form of Government Charter.

Wednesday, April 29

The Opening Session will be addressed by well-known men in the fields of engineering and research on the subject of the work being done by the electrical industry to win the war and peace to follow.

Dinner and Entertainment will be held from 7:00 to 9:30 p.m. for men only, with novel radio sketches presented by members of the Schenectady Section. The program will be headed by Frazier

Hunt, C.B.S. radio commentator. Mr. Hunt, world traveller, reporter, and former war correspondent, has lived through great events, seen history in the making, and come in contact with generals and private soldiers, Nobel winners and illiterate peasants. He has shaken hands and talked with as many of the world's great men and women as any living person. General Douglas MacArthur, Gandhi, Hitler, Lenin, Mussolini, Pancho Villa, Helen Keller, Sun Yat-sen, the Duke of Windsor, Chiang Kai-shek, Ramsay MacDonald, Coolidge, Hoover, and Franklin D. Roosevelt—these are a few of the famous people he has known. Tickets \$2.00 each.

Thursday, April 30

A Special Luncheon, open to all, will be held. An address will be made by Lewis A. Wilson, New York State Deputy Commissioner of Education. This luncheon will adjourn at 2:00 p.m. for the Conference on Vocational Education. This program is sponsored jointly by the Schenectady Sections of the A.S.M.E. and the A.I.E.E. Tickets for the luncheon \$1.25.

Rice Hall Program entitled "New Developments" will be given in Rice Hall of the General Electric Company by the Research Labora-

(Continued on page 4)

ADVANCE COPIES OF PAPERS

Preprints of technical papers may be obtained by mail by remitting price indicated to the A.I.E.E. Order Department, 33 West 39th Street, New York, N. Y.; if purchased at A.I.E.E. headquarters or at the meeting 5c less per copy. For convenience an order form is enclosed. Only numbered papers will be available in advance-copy form. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Coupon books in \$5.00 denominations are available for those who wish to avoid remittance by check or otherwise. Most of the papers ultimately will be published in **ELECTRICAL ENGINEERING** or the **TRANSACTIONS**.

Wednesday, April 29

9:00 a.m.—Registration

10:00 a.m.—General Session

T. M. Linville, Presiding

Address of Welcome: Everett S. Lee, Vice-President, North Eastern District

Address: "AIEE Progress." H. H. Henline, National Secretary

Address: "War-Time Electrical Research." L. A. Hawkins, Executive Engineer, Research Laboratory, General Electric Company

Address: "War-Time Electrical Engineering." R. C. Muir, Vice-President, General Electric Company

Address: "Planning for Peace." D. C. Prince, President, AIEE

2:00 p.m.—Electronics and Communication

S. B. Ingram, Presiding

†C.P. Ultra-High Frequency Phenomena. Simon Ramo, General Electric Company

†C.P. The Use of High-Frequency Modulation for Communication. H. Duval, Jr., General Electric Co.

†C.P. Regulated Rectifiers in Telephone Offices. D. E. Trucksess, Bell Telephone Laboratories, Inc.

42-81. High-Frequency Coaxial-Line Calculations. H. H. Race and C. V. Larrick, General Electric Co. 20 cents by mail.

2:00 p.m.—Conference on Mercury Power Plants

A. R. Smith, Presiding

†C.P. Fundamentals of Mercury. A. R. Smith, Managing Engineer, Turbine Dept., General Electric Co.

†C.P. Up-to-Date Mercury Developments. A. J. Nerad, Research Laboratory, General Electric Co.

†C.P. Mercury Apparatus Design. L. A. Sheldon, Turbine Engg. Dept., General Electric Co.

†C.P. Special Instruments. T. T. Woodson, Research Laboratory, General Electric Co.

†C.P. Mercury Plant Operation and Maintenance. T. M. Doran, Turbine Engg. Dept., and Frank Horrocks, Mercury Power Station, General Electric Co.

†C.P. Mercury Applications. H. N. Hackett, Construction Engg. Dept., General Electric Co.

4:00 p.m.—Inspection Trip—General Electric Television Studio WRGB

7:00 p.m.—Dinner and Entertainment

Featuring: Frazier Hunt, C.B.S. Radio Commentator
Radio Sketches by Schenectady Section, AIEE

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9:00 a.m.—Power and Machinery

C. M. Gilt, Presiding

42-85. Standardized Load-Center Unit Substations for Low-Voltage A-C Systems. E. M. Hunter and J. C. Page, General Electric Co. 20 cents by mail.

42-84. Calorimetric Method for Determining Efficiencies of Electric Machines. Victor Siegfried and C. W. Thulin, Worcester Polytechnic Institute. 15 cents by mail.

42-75. Theory of the Brush-Shifting A-C Motor. Part III—Power-Factor Correction. A. G. Conrad, F. Zweig, and J. G. Clarke, Yale University. 20 cents by mail.

42-76. Theory of the Brush-Shifting A-C Motor. Part IV—Speed Control with Power-Factor Correction. A. G. Conrad, F. Zweig, and J. G. Clarke, Yale University. 25 cents by mail.

42-80. High-Voltage Fusing of Transformer Banks. H. H. Marsh, Jr., and G. B. Dodds, Duquesne Light Co. 15 cents by mail.

9:00 a.m.—Conference on Conservation of Critical Materials by the Use of Substitutes

A. L. Rumsey, Presiding

†C.P. In the Telephone Field. J. R. Townsend, Bell Telephone Laboratories, Inc.

†C.P. In the General Electric Company. John Horn, Engg. General Dept.

10:00 a.m.—Inspection Trip—Technical Training Program—Mont Pleasant High School

10:30 a.m.—Conference on Power Problems Presented by Municipal Blackouts in the Albany District.

J. L. Harvey, Presiding

†C.P. Speaker: C. F. Monnier, New York Power and Light Co.

12:00 m.—Joint Luncheon with A.S.M.E.

W. H. Timbie, Presiding

Address: "Needs and Trends in Vocational Education." Lewis A. Wilson, New York State Deputy Commissioner of Education.

2:00 p.m.—Joint Conference with A.S.M.E. on Vocational Education

W. H. Timbie, Presiding

Address: Alonzo Grace, Commissioner of Education, State of Connecticut

Abstracts of papers appear in

42-77. The Technical High School Trains for Life. C. E. *A.C.O. Crofoot, Principal, Mont Pleasant Technical High School, Schenectady. 15 cents by mail.

Address: "The New Vocational High School Project for Schenectady." W. H. Pillsbury, Superintendent of Schools, Schenectady

2:00 p.m.—Conference on Operation of Mercury-Arc Rectifiers

C. C. Herskind, Presiding

Sponsored by the Rectifier Subcommittee of the Committee on Electrical Machinery, this conference is planned to provide an opportunity for a discussion of mercury-arc rectifier operating experience.

4:30 p.m.—Rice Hall Program

A program entitled "New Developments," presented by Research Laboratory and General Engg. Laboratory, General Electric Co. Restricted to U. S. citizens only, entering plant via 4:15 p.m. bus from hotel.

6:00 p.m.—North Eastern District Executive Committee Dinner Meeting

8:15 p.m.—Steinmetz Memorial Lecture

Memorial Chapel, Union College

Lecture: "Co-operation versus War." Comfort A. Adams, Past President, and Lamme Medalist, AIEE

Friday, May 1

9:00 a.m.—Student Session

E. A. Walker, Presiding

Titles and authors of selected papers to be announced

12:00 m.—Student Luncheon

E. A. Walker, Presiding

Address: "The Effect of War on Young Engineers Inducted into Industry." M. M. Boring, General Electric Co.



ALCO: G-E 2000-HP Diesel-Electric Locomotive for Passenger and Freight Service

2:00 p.m.—Selected Subjects

J. J. Orr, Presiding

42-78. Reactance and Skin Effect of Concentric, Tubular Circuits. H. B. Dwight, Massachusetts Institute of Technology. 25 cents by mail.

42-82. Temperature Aging Tests on Class A Insulated Fractional Horsepower Motor Stators. J. A. Scott and B. H. Thompson, General Electric Co. 15 cents by mail.

42-79. Thermal Co-ordination of Motors, Control, and Their Branch Circuits on Power Supplies of 600 Volts and Less. B. W. Jones, General Electric Co. 15 cents by mail.

42-86. Selenium Rectifiers and Principles of Their Design. J. E. Yarmack, International Telephone and Radio Mfg. Co. 25 cents by mail.

42-83. Rectifier Terminology and Circuit Analysis. C. H. Willis, Princeton University, and C. C. Herskind, General Electric Co. 15 cents by mail.

2:00 p.m.—Conference on Statistical Methods for Quality Control

R. E. Wareham, Presiding

†C.P. Quality Control in Relation to Engineering Tolerances. H. F. Dodge, Bell Telephone Laboratories, Inc.

†C.P. Quality Control and the War. Lieut.-Colonel L. E. Simon, War Department, Aberdeen Proving Ground

2:00 p.m.—Conference on Diesel Electric Locomotives

J. C. Davidson, Presiding

†C.P. Opening Remarks: J. C. Davidson, American Locomotive Co.

†C.P. Anti-Vibration Mounting of Diesel Locomotives. E. L. Thearle, General Electric Co.

†C.P. Diesel Locomotive Motors and Control. J. W. Tecker, General Electric Co.

†C.P. Commercial Testing of Diesel Locomotives. M. C. Swanson, American Locomotive Co.

Sound Motion Picture—"Railroadin'" — Presented by American Locomotive Co., General Electric Co., and the American Railroads.

2:00 p.m.—Inspection Trip to Schenectady General Depot, U. S. Army. U. S. citizens only

4:00 p.m.—Student Branch Counselors Meeting

7:00 p.m.—Banquet, Reception, and Dance

Everett S. Lee, Presiding

"Liberal Arts in the Life of the Engineer." W. O. Hotchkiss, President, Rensselaer Polytechnic Institute

"Technical Arts in the Life of the Engineer." D. R. Fox, President, Union College

"The AIEE in the Life of the Engineer." D. C. Prince, President, AIEE

†C.P.—Conference Paper; no advance copies are available; not intended for publication in TRANSACTIONS.

*A.C.O.—Advance Copies Only available; not intended for publication in TRANSACTIONS.

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tory and the General Engineering Laboratory. Members and guests attending must be United States citizens and must enter the General Electric Plant only in buses departing from the Hotel Van Curler at 4:15 p.m. sharp. Round trip 25 cents.

The 15th Steinmetz Memorial Lecture will be given at 8:15 p.m. in the Memorial Chapel on the Union College campus. The lecture will be delivered by Comfort A. Adams on the subject of "Co-operation vs. War." Dr. Adams was President of the Institute in 1918-19 and the 1940 Lamme Medalist. He is best known for his contributions to the theory and design of a-c machinery and his work in the field of electric welding. He organized and was the first President of the American Welding Society.

The lecture is made possible by the Steinmetz Memorial Foundation established by funds contributed by the personal friends and associates of Dr. Steinmetz. The income is administered by the Schenectady Section of the Institute for the purpose of holding the lectures. Distinguished men, whose careers are akin to Dr. Steinmetz's great human and scientific interest, are honored by selection and in turn do honor to Dr. Steinmetz. Buses leave hotel at 7:45 p.m.—round trip 25 cents.

Friday, May 1

Student Luncheon. The students attending the meeting will be the guests of the General Electric Company at luncheon at the Hotel Van Curler. They will be addressed by M. M. Boring on "The Effect of War on Young Engineers Inducted into Industry." Tickets can be purchased by older members wishing to attend.

The Banquet will be held at the Hotel Van Curler at 7:00 p.m. with informal talks by several distinguished guests and presentation of prizes by Vice-President Everett S. Lee. Mr. and Mrs. Lee will receive members and guests in the solarium at 9:30 and dancing will follow in the Ballroom from 10:00 until 1:00. Tickets for the banquet and dance \$2.75 each. Students' tickets \$1.75.

Ladies' Program

Wednesday

12:00 m.—Luncheon at the Gideon Putnam Hotel, State Reservation Grounds, Saratoga Springs—Visiting ladies guests of the Ladies' Committee.

4:00 p.m.—WRGB Television Studios

7:30 p.m.—Bridgework party in Van Curler Garden Room

Thursday

10:00 a.m.—Trip to Mohawk Carpet Mills at Amsterdam, N. Y. Ladies will be guests of the Mohawk Carpet Mills for lunch. Round trip 25 cents.

8:15 p.m.—Steinmetz Memorial Lecture

Friday

10:00 a.m.—Visit grounds and gardens at Union College. Visitors will delight in the venerable old buildings and the 27 acres of gardens and groves. This distinguished Liberal Arts College was chartered in 1795.

3:00 p.m.—Tea and music at the home of Mrs. Harry A. Winne.

7:00 p.m.—Banquet, reception, and dance.

Sports

Golfing will be available for men and women at the Mohawk Golf Club and the Edison Country Club. Tennis courts will be available at both clubs, weather permitting. Black-top, hard surface tennis courts also will be available. No tournaments will be arranged.

Trips

Television Studio WRGB. An inspection trip and demonstration will be staged at the studios at 4:00 p.m. on Wednesday.

Mont Pleasant High School. Technical courses and facilities will be inspected Thursday morning at 10:00 a.m. Round trip 25 cents. **Schenectady General Depot** of the United States Army will be inspected at 2:00 p.m., Friday. Bus fare 25 cents. United States citizens only.

Hotel Reservations should be made *early* by writing directly to the hotel preferred.

Hotels	Single with Bath	Double with Bath
Van Curler (Headquarters)	\$3.50	\$6.00
Mohawk	\$2.00 up	
Foster	1.50 up	
Roosevelt	1.50 up	



City Hall of Schenectady—Seat of Progressive Government under the Plan C City-Manager-Council Form of Charter

Please Register in Advance by filling in and mailing promptly the advance registration card and complete your registration upon arrival at the meeting. A registration fee of \$2.00 will be charged all nonmembers except Enrolled Students and the immediate families of members. *Please also fill in* the card for trips. This information should reach Schenectady by April 15.

Committees

District Meeting: Everett S. Lee, Chairman; R. G. Lorraine, Secretary; E. B. Alexander, D. E. Chambers, H. D. Griffith, C. F. Harris, T. M. Linville, J. M. Murray, G. M. L. Sommerman.

Executive: T. M. Linville, Chairman; P. L. Alger, G. W. Brucker, J. W. Butler, D. E. Chambers, C. E. Crofoot, F. E. Danford, J. C. Davidson, J. J. Farrell, K. R. Geiser, J. L. Harvey, S. A. Holme, C. E. Kilbourne, Wm. Kruesi, E. S. Lee, Mrs. E. S. Lee, H. H. Race, A. L. Rumsey, F. M. Sebast, R. V. Shepherd, Mrs. A. C. Stevens, R. C. Sogge, I. A. Terry, E. A. Walker.

Meetings and Papers: H. H. Race, Chairman; R. F. Franklin, O. C. Rutledge, J. J. Smith.

Vocational Education Conference and Luncheon: P. L. Alger, Chairman; C. E. Crofoot, H. H. Race, R. V. Shepherd.

Hotels and Registration: J. W. Butler, Chairman; R. C. Buell, B. H. Caldwell, N. H. Meyers, W. E. Miller, B. R. Prentice, T. W. Schroeder.

Publicity: S. A. Holme, Chairman; G. W. Dunlap, J. A. Pauze, E. Littlejohn Robinson, K. B. Wagner.

Trips: I. A. Terry, Chairman; F. E. Crever, L. J. Goldberg, W. E. Jacobsen, W. M. Nelson.

Finance: K. R. Geiser, Chairman.

Smoker and Sports: R. C. Sogge, Chairman; E. H. Bancker, J. W. Cooke, J. J. Farrell, C. G. Fick, J. J. Huether, C. C. Leader, Simon Ramo, A. C. Stevens, C. A. Woodrow.

Reception: G. W. Brucker, Chairman; B. D. Bedford, R. B. Bodine, W. K. Boice, S. B. Crary, S. B. Farnham, R. H. Greene, M. N. Halberg, C. C. Herskind, W. C. Hutchins, H. L. Kellogg, C. J. Koch, P. H. Light, D. H. McAllister, M. M. Morack, L. W. Morton, L. M. Nowacki, H. E. Peterson, A. W. Rankin, T. R. Rhea, W. Ridgway, August Schmidt, C. J. Semrad, D. S. Snell, A. Stephenson, E. R. Summers, H. D. Taylor.

Student Meeting: E. A. Walker, Chairman; A. G. Conrad, L. C. Holmes, C. E. Kilbourne, Victor Siegfried.

Student Hospitality: W. R. Kruesi, Chairman; R. M. Gager, L. C. Holmes, C. E. Kilbourne, E. A. Walker.

Banquet: F. E. Danford, Chairman; Fremont Felix, R. B. Russ, R. H. Spry, A. L. Thurman, P. W. Worthen.

Ladies' Entertainment: Mrs. A. C. Stevens and Mrs. E. S. Lee, Co-Chairmen; Mrs. P. L. Alger, Mrs. S. B. Crary, Mrs. D. R. Fox, Mrs. T. M. Linville, Mrs. R. G. Lorraine, Mrs. R. C. Muir, Mrs. D. C. Prince, Mrs. H. H. Race, Mrs. R. C. Sogge, Mrs. A. R. Stevenson, Jr., Mrs. W. C. White, Mrs. H. A. Winne, Mrs. T. A. Worcester.

Issued by

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