

NORTH EASTERN DISTRICT MEETING



Providence, R. I.
April 26-28, 1950

Headquarters:
Sheraton-Biltmore Hotel



Industrial Trust Building

PROVIDENCE, R. I.

Sheraton-Biltmore Hotel

MEETING FEATURES

A program of broad interest has been arranged for the 3-day meeting of the North Eastern District to be held in Providence, R. I., April 26-28, 1950. Meeting headquarters will be in the Sheraton-Biltmore Hotel. A variety of subject matter appropriate for the locality of the meeting will be presented in eight technical sessions. A special program for the women, inspection trips to nearby industries, an informal banquet and dinner in the evenings assure a busy time. In addition, the Board of Directors of the Institute will meet at the Sheraton-Biltmore Hotel on Thursday, April 27.

On Friday morning, April 28, a Student Branch Conference will be held consisting of two technical sessions,

one for undergraduate students and one for graduate students. Following this conference, there will be a luncheon at noon on Friday for the Student Chairmen and Student Branch Counselors.

Information on all features may be obtained at the registration desk. The bulletin board near the registration desk will contain notices concerning time and point of departure for all inspection trips and other information of general interest. Please consult it frequently.

Entertainment: On Tuesday evening, April 25th, the District Executive Committee will meet for dinner. Wednesday

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NORTH EASTERN DISTRICT MEETING—PROGRAM—Providence, R. I.—April 26-28, 1950

ADVANCE COPIES OF PAPERS

Members may obtain preprints of technical papers at the uniform price of **30¢ each (60¢ each to non-members)** by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. District papers denoted by DP.** are intended for presentation only, and are not available. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Most of the papers ultimately will be published as AIEE PROCEEDINGS and in the TRANSACTIONS.

Wednesday, April 26

8:30 a.m.—Registration

9:30 a.m.—Insulated Conductors

Room A
HERMAN HALPERIN, Presiding

- 50-107. Power Factor Measurements on Polyphase and Multi-Conductor Cable Using Single Phase Bridges. E. W. Greenfield, Anaconda Wire and Cable Co.
- 50-108. Electrical Cables for the Mining Industry. R. B. ACO.* McKinley, B. J. Mulvey, General Electric Company.
- 50-121. Failures of Rubber Insulation Caused by Soil Microorganisms. J. T. Blake, D. W. Kitchin, O. S. Pratt, Simplex Wire and Cable Company.

9:30 a.m.—Instruments and Measurements

Sheraton Room
F. N. TOMPKINS, Presiding

- 50-109. A New High Accuracy Counter-Type Tachometer. T. M. Berry, C. L. Beattie, General Electric Co.
- 50-110. A Direct Reading High Voltage Capacitance Bridge. A. H. Foley, General Electric Company.
- DP.** The Use of Electrical Strain Gages in Dimensional Measurement. E. L. Watlet, Brown and Sharpe Manufacturing Company.
- 50-111. Power Measurement by the Hook-on Method. A. J. Corson, A. L. Nylander, General Electric Company. Presentation by title only.
- 50-116. A New Device for Calibrating Watthour Meters. H. F. Robison, W. H. Wickham, Commonwealth Edison Company. Presentation by title only.
- 50-118. Resistance Wire Strain Gages As Elements of the Wheatstone Bridge. Vincent Petrucelly, Jr., American Machine and Foundry Company. Presentation by title only.

2:00 p.m.—Rotating Machinery

Room A
W. R. HOUGH, Presiding

- 50-37. Analysis of Synchronous Machine Short Circuits. R. D. Camburn, Commonwealth Services, Inc.; E. T. B. Gross, Illinois Institute of Technology. Presentation by title only.
- 50-119. Variable Speed Drive, Constant Frequency Alternator. G. G. Gould, E. Krupotich, Naval Ordnance Laboratory.



Providence County Courthouse

- 50-120. Calculation of Capacitor-Excited Induction Generator Performance. J. B. Friauf, Bureau of Ships.
- 50-117. Equivalent Circuits of the Shaded-Pole Motor with Space Harmonics. Gabriel Kron, General Electric Company.

2:00 p.m.—Mining and Metal Industry and Management

Sheraton Room
E. W. DAVIS, Presiding

Wire Drawing Applications

- DP.** Electrical Equipment for Wire Drawing Machines. W. E. Zelley, John A. Roebling's Sons Company.
- DP.** Installation of Wire Drawing Equipment. N. C. Dunbar, John A. Roebling's Sons Company.

The Engineer in Large Scale Affairs

- DP.** The Responsibilities of a Consulting Engineer. L. L. Bosch, Jackson and Moreland, Engineers.
- DP.** The Responsibilities of a City Manager. John Atkinson, City Manager, Cambridge, Massachusetts.

Thursday, April 27

9:30 a.m.—Computing Devices

Room A
J. W. FORRESTER, Presiding

- DP.** Digital Computers in Control Systems. C. R. Wieser, Massachusetts Institute of Technology.
- DP.** Electrostatic Memory for Information Systems. S. H. Dodd, Massachusetts Institute of Technology.
- DP.** Computer Experience in Extending Tube Life. E. S. Rich, Massachusetts Institute of Technology.

DP.** Marginal Checking—Preventive Maintenance for Electronic Equipment. G. C. Sumner, Massachusetts Institute of Technology.

DP.** New Developments in Pulsed Circuit Test Equipment. R. Rathbone, Massachusetts Institute of Technology.

9:30 a.m.—General Industry Applications, Textile Industry

Sheraton Room
R. J. DEMARTINE, Presiding

- DP.** Use and Misuse of Electrical Equipment in Textile Mills. S. Cowan, Factory Insurance Association.
- DP.** How Fires Start in Industry. (Movie) C. F. Hedlund, Factory Mutual Insurance Company.
- DP.** Electronics in the Textile Industry. L. T. Jester, General Electric Company.
- DP.** Application of Single Motor Drives to Textile Finishing. Textile Industry Subcommittee.

2:00 p.m.—Basic Sciences

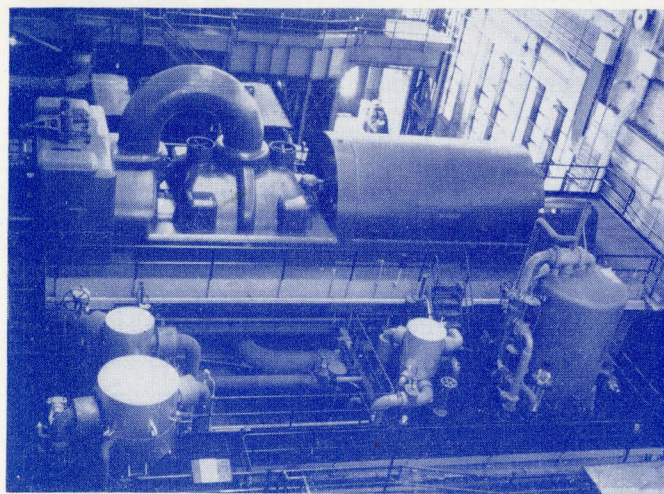
Room A
N. S. HIBSHMAN, Presiding

- 50-115. The Calculation of the Capacitance of Coaxial Cylinders of Rectangular Cross-Section. G. M. Anderson, Carnegie Institute of Technology.
- DP.** Density Distribution of Transient Currents in Conductors. L. M. Vallese, Duquesne University.
- DP.** The La Place Transform. A. Boyajian, General Electric Company.
- DP.** The Use of the Heaviside Null-Unit Function in Operational Systems Based on the La Place Transformation. J. J. Smith, P. L. Alger, General Electric Company.

2:00 p.m.—Special Industry Applications and Heating

Sheraton Room
O. E. SAWYER, Presiding

- 50-112. Determination of Effective Oil Temperature in a Transformer. M. F. Beavers, General Electric Co.



Manchester Street Station, Narragansett Electric Co.

DP.** Conductive Rubber Radiant Heating Panels. R. C. Cassidy, United States Rubber Company.

50-113. Transverse Flux Induction Heating. R. M. Baker, Westinghouse Electric Corporation.

50-114. Classification of the Reference Frames of a Synchronous Machine. Gabriel Kron, General Electric Company.

2:00 p.m.—Inspection Trip
Owens-Corning Fiberglas Corp.

Friday, April 28

9:30 a.m.—Undergraduate Student Branch Papers

9:30 a.m.—Graduate Student Branch Papers

12:00 m.—Student Branch Chairman's and Counselors' Luncheon

2:00 p.m.—Inspection Trips

Brown and Sharpe Mfg. Co.
Narragansett Electric Co.
United Electric Railways Co.
United States Rubber Co.

ACO.* Advance copies only available; not intended for publication in TRANSACTIONS.

DP.** District paper; no advance copies are available; not intended for publication in TRANSACTIONS.

Advance Registration: Please register in advance by promptly filling in and mailing the advance registration card enclosed with this mailed announcement. Complete your registration at the Registration Desk on arrival at the meeting. Identification badges will be prepared for those who register in advance and these will be available at the Registration Desk. A registration fee of \$2.00 will be charged all members and \$3.00 for all nonmembers. No fee will be required of enrolled students and the immediate families of members.

Hotel Accommodations: It is essential that hotel reservations be made directly with the Sheraton-Biltmore Hotel at least ten days in advance of the meeting. Room rates are as follows:

	One Person	Two Persons
Rooms with double bed		
With tub bath	from \$4.00	\$6.50
With tub and shower	from 5.75	8.25
Rooms with twin beds		
With tub bath	from \$5.75	\$8.75
With tub and shower	from 6.25	8.75
Salon Suites, Parlor and Bedroom		\$18.00 per day

NORTH EASTERN DISTRICT MEETING COMMITTEE

E. R. Coop, *General Chairman*
E. M. Adams, *Finance*
E. G. Sturdevant, *Technical Program*
R. H. Porterfield, *Publicity*
F. N. Tompkins, *Student Program*
H. C. Rankin, *Hotel and Registration*
H. A. Baines, *Entertainment*
H. R. Blomquist, *Trips and Transportation*
Mrs. H. C. Rankin, *Ladies Program*

day evening, April 26th, there will be a banquet at the Sheraton-Biltmore Hotel, to which the ladies are cordially invited. Dress will be informal. At that time we will have as our principal speaker, Mr. Truman H. Safford of the Charles T. Main Company. His subject will be "Water Power in New York and New England." There will also be a dinner meeting, Thursday, April 27, at the Johnson's Hummocks Sea Grill. This dinner will also be open to the ladies and dress should be informal. The principal speaker at this dinner will be Professor Charles H. Smiley of Brown University, who will give an illustrated talk on his recent trip through Siam.

Ladies Program: A varied and interesting program has been prepared for the ladies visiting the meeting. The schedule of events for the ladies is as follows:

Wednesday, April 26

8:00 a.m.—Registration.

1:00 p.m.—A "Get Acquainted" luncheon and bridge will be held at the Warwick Country Club, overlooking Narragansett Bay.

6:30 p.m.—Ladies invited to attend the Banquet at the Sheraton-Biltmore Hotel with the men. Dress informal.

Thursday, April 27

9:00 a.m.—The visiting ladies will board busses for a scenic tour of historic Newport, visiting the Breakers, beautiful mansion of the late Cornelius Vanderbilt, and other points of interest, a ride around the Ten Mile Drive, and luncheon at Christy's on the Wharf at Newport. This will be an all-day trip.

6:00 p.m.—Ladies invited to attend the Banquet at Johnson's Hummocks Grill with the men. Dress informal.

Friday, April 28

10:00 a.m.—There will be a tour of the Trifari, Krussman & Fishel, Inc. plant, makers of the lovely Trifari costume jewelry, returning to the hotel by 12 noon. No formal entertainment has been planned for Friday afternoon, but individual arrangements will be made for those remaining in the city for sightseeing, shopping, etc., or ladies may join men on inspection trips.

Inspection Trips: The following inspection trips have been arranged for those attending the North Eastern District Meeting. A nominal fee for transportation will be charged based on length of trip. All those participating in these trips are requested to register and use transportation facilities as arranged by the Committee in Charge.

Owens-Corning Fiberglas Corporation: This plant is one of the largest and newest of its type, producing glass yarn and glass cloth for industrial and general use. The tour will cover all phases of the manufacture and finishing of fiberglas, from its initial stage where glass is melted under pressure, forced through spinnerettes, and wound, to the final stages where the yarn is woven into plain or intricate designs and dyed in processes similar to those used in glazing pottery. The finishing process where glass cloth is heated to a semi-fluid state in order to mould in the finished appearance, yet retain individual fiber characteristics, should be particularly interesting.

A tour through the plant's Research and Development Laboratory will also be included. Here you may glimpse things to come in the glass textile field. This trip will highlight electrical equipment used in high-speed production processes as well as provide many points of interest to all viewing the production of this newer type of textile material.

This trip is scheduled for Thursday afternoon, April 27.

Brown and Sharpe Manufacturing Company: Machine tools of latest design, featuring advanced applications of electrical controls will be shown in operation. In addition to the application of general individual motor drives, examples of unit motor drives for various functional operations will be shown. Use of electrical controls for the operation of machines, including the more recently developed "Automatic Cycle, Sizing and Spark Timing Arrangements for Grinding Machines," will be exhibited in operation. Electronic gaging equipment will also be shown in use. Guests will also be shown the manufacture of the famous Johansson Gage Blocks.

This trip is scheduled for Friday afternoon, April 28.

Manchester Street Plant—Narragansett Electric Company: Members and guests of the AIEE will have an opportunity to visit the Manchester Street Station of the Narragansett Electric Company. In the last few years the Narragansett Electric has installed three 50,000 Kw turbo generators, operating at 11,500 volts, 3,600 RPM, 1,200 PSI and 950°F. Steam may be obtained from either oil or powdered coal. Each generator is connected through the nearby Franklin Square Substation to 11.5/115 Kv transformers and 115 Kv cable to the New England Electric System. Station service for each machine is obtained from transformers connected directly to its generator leads with an alternate source from the 11.5 Kv bus at Franklin Square.

This trip is scheduled for Friday afternoon, April 28.

Vehicle Maintenance Shops—United Electric Railways Company: On this trip you will inspect the maintenance shop of the major transit company in Rhode Island in which is maintained the fleet of 275 trackless trolleys and 200 motor buses serving a population of 590,000 persons living in the metropolitan areas of Providence, Pawtucket and Woonsocket. From its Stores Department, stocking some 17,000 parts, ranging from cotter pins to complete motor and engine assemblies, to the temperature controlled paint spray booth handling 1,200 paint jobs annually, this shop is one of the most modern vehicle maintenance shops in the country. It has been designed to provide adequate facilities for the operation of a unique system of protective maintenance developed on this property and copied by many outstanding transit companies throughout the world.

This trip is scheduled for Friday afternoon, April 28.

U. S. Rubber Company, Bristol, R. I.: The manufacture of copper wire and cable from the rod form to the completed product will be seen at this plant. Processes include drawing to size, annealing, tinning, formation of a conductor, insulating, conductor and cable covering. Types produced are bare wire, weather proof, rubber insulated braided, rubber insulated lead covered, rubber insulated neoprene jacketed, and thermo-plastic insulated conductors.

This trip is scheduled for Friday afternoon, April 28.

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