

WINTER CONVENTION

JANUARY 24—28, 1938

AMERICAN
INSTITUTE OF
ELECTRICAL
ENGINEERS



ENGINEERING
SOCIETIES
BUILDING
33 West 39th Street
NEW YORK

American Institute of
Electrical Engineers



Winter
Convention
Program

January 24-28
1938

GENERAL INFORMATION

A PROGRAM enlarged to 16 technical sessions, 1 general session, 5 conference sessions, and important committee meetings and trips, yet not without social functions—the smoker, dinner-dance, Edison Medal presentation and lecture—has been arranged by your committees. For a complete schedule of events and index to details see page 3.

Please register promptly on arrival at the convention. A registration fee of \$2 will be charged all non-members, except Enrolled Students and the immediate families of members.

Get tickets at once for the smoker, the dinner-dance and dance-buffet supper, and inspection trips, as the number which can be accommodated is limited. For the trips, tickets should be secured by 4 o'clock on the previous day.

Information on all features of the convention may be obtained at the registration desk. The Institute rooms and offices on the tenth floor of the Engineering Societies Building are open to members.

Efforts will be made to deliver telegrams and messages promptly. Any mail for members received during the convention will be held at registration desk until called for; letters undelivered at the close of the meeting will be forwarded to latest mailing address.

Technical Sessions and Discussions are governed by the "Conduct of Technical Sessions" at the discretion of the chairman presiding. The Institute will appreciate your courtesy and cooperation in strictly abiding by the decisions of the chairman in all matters.

In general papers will be presented in abstract, 10 minutes being allowed for each presentation, unless otherwise arranged by the presiding officer.

Preference will be given to those who have explained in advance their intention to discuss papers. Usually 5 minutes are allowed to each discussor for the discussion of a single paper or of several papers on the same general subject. Names and affiliations should be clearly announced from the platform. Discussions should be typewritten, double spaced (original and two carbon copies), and left with the chairman. Otherwise they should be sent to C. S. Rich, A.I.E.E., 33 West 39th Street, New York, N. Y., before February 11.

Winter Convention

SCHEDULE OF EVENTS AND INDEX

Committee Meetings	Page 20
Inspection Trips	Pages 14-16
Ladies' Program	Page 17
Officers and Committees	Pages 18, 19

Monday, January 24

	Index Page
9:00 A.M.—Registration	2
10:00 A.M.—Communication	4
10:00 A.M.—Symposium on Modern Electric Vehicles	4
2:00 P.M.—Symposium on a New Carrier Telephone System for Toll Cable	5
2:00 P.M.—Symposium on Modern Electric Vehicles	5
2:00 P.M.—Conference on Radiation Fields	5, 6

Tuesday, January 25

9:30 A.M.—Lightning Protection	6
9:30 A.M.—Symposium on Electronics I	6
9:30 A.M.—Conference on Education	6
2:00 P.M.—Relays and Reactors	7
2:00 P.M.—Symposium on Electronics II	7
2:00 P.M.—Conference on Sound and Vibration Measure- ment	7, 8
6:30 P.M.—Smoker and Dinner	8

Wednesday, January 26

10:00 A.M.—General Session	9
2:00 P.M.—Board of Directors' Meeting	
2:00 P.M.—Instruments and Measurements	9
2:00 P.M.—Electric Welding	10
2:00 P.M.—Basic Sciences	10
8:00 P.M.—Edison Medal Presentation and Lecture	10

Thursday, January 27

9:30 A.M.—Power Transmission	11
9:30 A.M.—Electrical Machinery I	11
9:30 A.M.—Conference on Linear Networks	11
9:30 A.M.—Conference on Definitions	12
2:00 P.M.—Television	12
2:00 P.M.—Cables and Research	12
2:00 P.M.—Electrical Machinery II	13
7:00 P.M.—Dinner—Dance—Buffet Supper	13

Friday, January 28—Trips

9:30 A.M.—Bell Telephone Laboratories, Inc.	16
10:00 A.M.—RCA Television Studio—N.B.C.	16
1:00 P.M.—Westinghouse Meter Works—Newark	16
2:00 P.M.—S.S. "Monarch of Bermuda"	16
A.M. and P.M.—National Broadcasting Company Studios ..	16
A.M. and P.M.—Museum of Science and Industry	16

American Institute of Electrical Engineers

MONDAY

9:00 a.m.—Registration

10:00 a.m.—Communication

(In Auditorium)

W. L. EVERITT, Presiding

Coupling between Parallel Earth-Return Circuits under D-C Transient Conditions, K. E. Gould, Bell Telephone Laboratories, Inc. Sept., p. 1159

***Printing Telegraph Operation of Way Wires**, G. S. Vernam, Postal Telegraph-Cable Co.

***A System of Electric Remote-Control Accounting**, L. F. Woodruff, Massachusetts Institute of Technology

A New Single-Channel Carrier Telephone System, H. J. Fisher, M. L. Almquist, and R. H. Mills, Bell Telephone Laboratories, Inc. Jan., p. 25

10:00 a.m.—Symposium on Modern Electric Vehicles

(Room One, Fifth Floor)

G. I. WRIGHT, Presiding

***The P.C.C. Street Car**, C. F. Hirshfeld, Transit Research Corp.

Application of Modern Electric Vehicles to Urban Transportation, C. M. Davis, General Electric Co. Jan., p. 57

Electrical Equipment for Modern Urban Surface Transit Vehicles, S. B. Cooper, Westinghouse Electric & Mfg. Co. Jan., p. 50

***Results of Operation of P.C.C. Cars in Pittsburgh**, Thomas Fitzgerald, Pittsburgh Railways Co.

***Modern City Transportation**, E. J. McIlraith, Chicago Surface Lines

Transportation Luncheon at the Engineers' Club.

Tickets available at the door of this meeting—\$1.50 each

Technical Papers

Reference is given to each paper published in ELECTRICAL ENGINEERING in advance. Page numbers for the January issue refer to the TRANSACTIONS section of that publication. All papers which have not been published in ELECTRICAL ENGINEERING, designated by an asterisk, are available in preprint form at the registration desk. Price 5c per copy. If ordered by mail—Price 10c per copy.

(Also see note on Technical Sessions and Discussions, page 2.)

Winter Convention

2:00 p.m.—Symposium on a New Carrier Telephone System for Toll Cable

(In Auditorium)

W. L. EVERITT, Presiding

Introductory Address: Broad-Band Wire Transmission Systems, H. A. Affel, Bell Telephone Laboratories, Inc.

***A Carrier Telephone System for Toll Cables,** C. W. Green and E. I. Green, Bell Telephone Laboratories, Inc.

***Cable Carrier Telephone Terminals,** R. W. Chestnut, L. M. Ilgenfritz, and A. Kenner, Bell Telephone Laboratories, Inc.

***Crystal Channel Filters for the Cable Carrier System,** C. E. Lane, Bell Telephone Laboratories, Inc.

***Crosstalk and Noise Features of Cable Carrier Telephone System,** M. A. Weaver, R. S. Tucker, and P. S. Darnell, Bell Telephone Laboratories, Inc.

2:00 p.m.—Symposium on Modern Electric Vehicles—Continued

(Room One, Fifth Floor)

G. I. WRIGHT, Presiding

Modern Trolley-Coach Operation, Edward Dana, Boston Elevated Railway. . . Dec., p. 1461

Modern Trolley-Coach Operation, J. H. Polhemus, Portland Electric Power Co. . . Dec., p. 1483

***Operating Experiences with Gas-Electric-Drive Motor Buses,** R. H. Stier, Philadelphia Rapid Transit Co.

Address: Electrically-Propelled Rubber-Tired Highway Vehicles for Mass Transportation, Martin Schreiber, Public Service Co-ordinated Transport; including a motion picture on new developments and a preview of a sound on film picture, entitled "Your Neighborhood."

2:00 p.m.—Conference on Radiation Fields

(Room 603)

ERNST WEBER, Presiding

Electromagnetic Radiation and the Impedance Concept, S. A. Schelkunoff, Bell Telephone Laboratories, Inc.

(Continued on page 6)

American Institute of Electrical Engineers

Sound Production and Collection (emphasizing electrical and acoustical analogies), H. F. Olson, Victor Division, RCA

Elastic Waves in Solids and Surface Waves of Fluids, H. Poritsky, General Electric Co.

TUESDAY

9:30 a.m.—Lightning Protection

(In Auditorium)

J. P. McKEARIN, Presiding

Characteristics of the New Station-Type Autovalve Lightning Arrester, W. G. Roman, Westinghouse Electric & Mfg. Co. July, p. 819

***Discharge Currents in Distribution Arresters—Part II,** K. B. McEachron and W. A. McMorris, General Electric Co.

***Distribution Transformer Lightning Protection Practise II,** L. G. Smith, Consolidated Gas, Electric Light & Power Company of Baltimore

Some Engineering Features of Petersen Coils and Their Application, E. M. Hunter, General Electric Co. Jan., p. 11

***Test and Operation of Petersen Coil on 100-Kv System of Public Service Company of Colorado,** W. D. Hardaway, Public Service Company of Colorado, and W. W. Lewis, General Electric Co.

9:30 a.m.—Symposium on Electronics I

(Room One, Fifth Floor)

H. M. TURNER, Presiding

***Electronic Speed Control of Motors,** E. F. W. Alexander and M. A. Edwards, General Electric Co., and C. H. Willis, Princeton University

The Thyatron Motor at the Logan Plant, A. H. Beiler, American Gas and Electric Co. Jan., p. 19

***Phanotron Rectifiers As a Direct Current Supply for Elevator Motors,** C. C. Clymer and R. G. Lorraine, General Electric Co.

***Thyatron Control of Direct-Current Motors,** G. W. Garman, General Electric Co.

9:30 a.m.—Conference on Education

(Room 603)

O. W. ESHBACH, Presiding

12 noon—Luncheon of Student Branch Counselors

(At the Town Hall Club, 123 W. 43rd St.)

Winter Convention

2:00 p.m.—Relays and Reactors

(In Auditorium)

J. P. McKEARIN, Presiding

A System Out of Step and Its Relay Requirements, L. N. Crichton, Westinghouse Electric & Mfg. Co.
Oct., p. 1261

A High-Speed Distance-Type Carrier-Pilot Relay System, E. L. Harder, B. E. Lenehan, and S. L. Goldsborough, Westinghouse Electric & Mfg. Co.
Jan., p. 5

***The Application and Performance of Carrier Current Relaying,** Philip Sporn and C. A. Muller, American Gas and Electric Co.

Temperature Limits for Short-Time Overloads for Oil-Insulated Neutral Grounding Reactors and Transformers, V. M. Montsinger, General Electric Co.
Jan., p. 39

***Harmonic Current Restrained Relays for Differential Protection,** L. F. Kennedy and C. D. Hayward, General Electric Co.

***Some Schemes of Current-Limiting Reactor Applications,** F. H. Kierstead, General Electric Co.

2:00 p.m.—Symposium on Electronics II

(Room One, Fifth Floor)

H. M. TURNER, Presiding

***Sharp Cut-Off in Vacuum Tubes, with Applications to the Slide-Back Voltmeter,** C. B. Aiken and L. C. Birdsall, Purdue University.

***Thyratron Reactor Lighting Control,** E. D. Schneider, General Electric Co.

***An Electronic Arc Length Monitor,** Walther Richter, A. O. Smith Corp.

***A New Type Vacuum Seal,** W. Endres Bahls, Radiotron Division, RCA

2:00 p.m.—Conference on Sound and Vibration Measurement

(Room 603)

P. L. ALGER, Presiding

This conference will constitute an open meeting on progress in the sound measurement field and related questions. The program tentatively arranged includes the following principal topics.

1. The proposed A.I.E.E. Test Code on Apparatus Noise Measurement will be reviewed, including consideration of

(Continued on page 8)

TUESDAY—Continued

changes that have been proposed since its publication; with a view to rendering a final report to the Standards Committee, recommending the publication of the code in pamphlet form.

2. Several speakers will present proposals for the development of noise measurement standards or specifications for particular lines of apparatus, following the general procedure of the A.I.E.E. Test Code. If the interest and the progress shown warrant it, the committee may undertake to organize a formal Institute session on the subject with published papers at the Summer Convention.

3. There will also be a general discussion of methods of measuring vibration, including the velocity and acceleration, as well as the amplitude of the motion. The desirability of the committee's sponsoring definitions and measurement methods in this field to supplement the work on sound measurement will be considered. The meeting will be open to all Institute members or others interested in sound and vibration measurement problems.

Informal Speakers

Fundamental Sound Measurements, C. R. Hanna, Westinghouse Electric & Mfg. Co.

Experiences with the Sound Level Meter Standards, J. M. Barstow, Bell Telephone Laboratories, Inc.

Sound Measurement Work at the Bureau of Standards, V. L. Chrisler, National Bureau of Standards.

Experiences with Noise Specification Tests, A. P. Fugill, The Detroit Edison Co.

Vibration Measurement Methods, C. W. LaPierre, General Electric Co.

6:30 p.m.—Smoker and Dinner

One of the finest smokers will be held at the Hotel Commodore, Lexington Avenue and 42nd Street—dinner, dancing acts, quartets, vaudeville, music—New York night club and radio performers. The Grand Ballroom and West Ballroom, with its lounge and service bar, have been reserved. Tickets \$3.50 per person, including tax—tables seat 10—all seats reserved.

Winter Convention

WEDNESDAY

10:00 a.m.—General Session

(In Auditorium)

Since the early days of the depression technological development in relation to economics has become of increasing importance and direct vital interest to all engineers. Early last April in the 11th Steinmetz Memorial Lecture on "Engineering Progress and Economic Progress" delivered by Dr. Moulton the present business recession was forecast and its contributing causes were discussed. The Institute is fortunate in having one so prominent in the economic field as Dr. Moulton, President of The Brookings Institution, Washington, D. C., to address this session. No engineer can afford to miss his discussion of this problem. Except for very brief preliminaries, which will take only a few minutes, the entire meeting will be devoted to his address. The ladies are cordially invited to attend.

Presiding: W. H. HARRISON, President, A.I.E.E.

Opening Remarks: President Harrison

Convention Activities: T. F. Barton, Chairman,
Winter Convention Committee

Presentation of Alfred Noble Prize to Dr. G. M. L. Sommerman

Address: Technological Development in Relation to Economics, Dr. H. G. Moulton, President, The Brookings Institution

2:00 p.m.—Instruments and Measurements

(In Auditorium)

H. C. KOENIG, Presiding

***A New Alternating Current Network Analyzer,** H. P. Kuehni and R. G. Lorraine, General Electric Co.

***A Stabilized Amplifier for Measurement Purposes,** H. A. Thompson, General Electric Co.

Electrical Studies of Living Tissue—II—Correlation between Tissue Response and Voltage Distribution, A. G. Conrad, H. W. Haggard, and B. R. Teare, Yale University . Jan., p. 1

A New Correlation of Sphere-Gap Data, D. W. Ver Planck, Yale University . Jan., p. 45

(Continued on page 10)

American Institute of Electrical Engineers

WEDNESDAY—Continued

2:00 p.m.—Electric Welding

(Room One, Fifth Floor)

W. E. CRAWFORD, Presiding

Recent Advances in Resistance Welding, A.I.E.E.

Resistance Welding Subcommittee, C. L. Pfeiffer,
Chairman Jan., p. 37

Mechanical High-Speed Resistance-Welder Control, F. H. Roby, Square D Co. Sept., p. 1145

***Interpretation of Oscillograms of Arc-Welding Generators in Terms of Welding Performance**, K. L. Hansen, Harnischfeger Corp.

***The Rating of Resistance Welding Transformers**, C. E. Heitman, Edward G. Budd Mfg. Co.

2:00 p.m.—Basic Sciences

(Room Two, Fifth Floor)

E. E. DREESE, Presiding

Matrices in Engineering, L. A. Pipes, The University of Wisconsin Sept., p. 1177

***Resonant Non-Linear Control Circuits**, W. T. Thomson, Kansas State College

***Sub-Harmonics in Circuits Containing Iron**, I. A. Travis and C. N. Weygandt, University of Pennsylvania

***The Properties of Three-Phase Systems Deduced with the Aid of Matrices**, M. B. Reed, The University of Texas

***Critical Conditions in Ferro-Resonance**, P. H. Odessey and Ernst Weber, The Polytechnic Institute of Brooklyn

8:00 p.m.—Edison Medal Presentation

To GANO DUNN

(In Auditorium)

Lecture—

"New York World's Fair, 1939"

Speaker, STEPHEN F. VOORHEES

Senior Partner of Voorhees, Gmelin & Walker

Illustrated description and discussion of—purposes and theme—general plan—engineering problems of the site and improvements—the financial structure—architectural aspects of buildings—landscaping—illumination—possibilities of water, light and flame—sculpture—mural painting.

Winter Convention

THURSDAY

9:30 a.m.—Power Transmission

(In Auditorium)

RAYMOND BAILEY, Presiding

- *Transmission Line Transients in Motion Pictures, L. F. Woodruff, Massachusetts Institute of Technology
- *Lightning Strength of Wood in Power Transmission Structures, Philip Sporn, American Gas and Electric Co., and J. T. Lusignan, Jr., Ohio Brass Co.
- *Recovery Voltage Characteristics of Typical Transmission Systems and Relation to Protector-Tube Application R. D. Evans and A. C. Monteith, Westinghouse Electric & Mfg. Co.
- Switching Surges with Transformer Load-Ratio Control Contactors, L. F. Blume and L. V. Bewley, General Electric Co. . . . Dec., p. 1464
- *Protection Features for the Joint Use of Wood Poles Carrying Communication Circuits and Power Distribution Circuits above 5,000 Volts, J. O'R. Coleman, Edison Electric Institute, and A. H. Schirmer, Bell Telephone Laboratories, Inc.

9:30 a.m.—Electrical Machinery I

(Room One, Fifth Floor)

J. L. HAMILTON, Presiding

- *Coordination of Power Transformers for Steep-Front Impulse Waves, V. M. Montsinger, General Electric Co.
- Corona Voltages of Typical Transformer Insulations under Oil, F. J. Vogel, Westinghouse Electric & Mfg. Co. . . . Jan., p. 34
- A Formula for the Reactance of the Interleaved Component, H. B. Dwight and L. S. Dzung, Massachusetts Institute of Technology
Nov., p. 1368

9:30 a.m.—Conference on Linear Networks

(Room 603)

E. L. BOWLES, Presiding

Informal Speakers

- R. S. Burington, Case School of Applied Science
- E. A. Guillemin, Massachusetts Institute of Technology
- W. N. Tuttle, General Radio Company

(Continued on page 12)

THURSDAY—Continued

9:30 a.m.—Conference on Definitions

(Room 604)

M. G. MALTI, Presiding

This conference of the Subcommittee on Definitions of the Committee on Basic Sciences will consider the definitions in Group 05 of the Final Revised Report of the Sectional Committee on Definitions of Electrical Terms (C-42). According to present arrangements for the conference each member of the subcommittee will present a set of suggested definitions and after each presentation discussion will be invited.

It is planned to invite to the conference all members of the following committees: Basic Sciences, Sectional Committee on Electric and Magnetic Magnitudes and Units (Committee C-61) and Sectional Committee on Definitions of Electrical Terms (Committee C-42), Subcommittee No. 1.

The personnel of the Subcommittee on Definitions of the Committee on Basic Sciences is: M. G. Malti, Chairman; Leigh Page, and Ernst Weber.

2:00 p.m.—Television

(In Auditorium)

W. L. EVERITT, Presiding

Address: Current Field Work in Television, Ralph R. Beal, Radio Corporation of America

Address: The Coaxial Cable System for Television Transmission, M. E. Strieby, Bell Telephone Laboratories, Inc.

2:00 p.m. Cables and Research

(Room One, Fifth Floor)

W. B. KOUWENHOVEN and R. D. EVANS, Presiding

Oil Oxidation in Impregnated Paper, J. B. Whitehead, The Johns Hopkins University, and T. B. Jones, Bell Telephone Laboratories, Inc.

Dec., p. 1492

***Mechanical Uniformity of Paper-Insulated Cable**, K. S. Wyatt, D. L. Smart, and J. M. Reynar, The Detroit Edison Co.

***The Current Carrying Capacity of Rubber Insulated Conductors**, S. J. Rosch, Anaconda Wire and Cable Co.

Short-Circuit Protection of Distribution Networks by the Use of Limiters, C. P. Xenis, Consolidated Edison Company of New York, Inc. Sept., p. 1191

Winter Convention

2:00 p.m.—Electrical Machinery II

(Room Two, Fifth Floor)

J. L. HAMILTON, Presiding

Stray-Load Losses of D-C Machines, E. W. Schilling, Michigan College of Mining and Technology, and R. W. Koopman, University of Kansas Dec., p. 1487

D-C Machine Stray-Load-Loss Tests, Victor Siegfried, Worcester Polytechnic Institute Oct., p. 1285

Unsymmetrical Short-Circuits on Water-Wheel Generators under Capacitive Loading, C. F. Wagner, Westinghouse Electric & Mfg. Co. Nov., p. 1385

***Overvoltages Caused by Unbalanced Short Circuits (Effect of Amortisseur Windings)**, Edith Clarke and C. Concordia, General Electric Co., and C. N. Weygandt, University of Pennsylvania

Alternator Short-Circuit Currents under Unsymmetrical Terminal Conditions, A. R. Miller and W. S. Weil, Jr., Lehigh University Oct., p. 1268

7:00 p.m.—Dinner-Dance Buffet Supper

Grand Ballroom of The Plaza

Fifth Avenue (58th to 59th Street)

New York City

Music by GEORGE ELLNER'S ORCHESTRA

PROGRAM

Dinner	Dancing	Buffet Supper
7:00 p.m.	9:30 to 2:00 a.m.	12: to 2:00 a.m.

Tickets are sold on the following plans:

Dinner and dance	\$5.00 per person
Dinner, dance, and buffet supper	\$6.50 per person
Dance and buffet supper	\$3.00 per person

Please purchase tickets early and indicate names of guests and desired seating arrangements. (Tables Seat Eight and Ten.)

FRIDAY

Inspection Trips

(See Details, pages 14-16)

Inspection Trips

The following list of inspection trips has been arranged by the committee for the convenience of members and guests during the convention. Detailed information on all trips can be obtained at the Inspection Trips Desk. The committee will also be glad to aid in arranging any special trip for members.

It is suggested that the members register early in the week for the various inspection trips which they expect to attend in order that the necessary detailed arrangements may be completed.

Another post-convention cruise to Bermuda has been arranged for those members desiring a short ocean cruise and vacation. The "Monarch of Bermuda" will sail from New York on Saturday, January 29. Members and guests who wish to join the group taking the cruise should make detailed arrangements with Leon V. Arnold, 36 Washington Square West, New York, N.Y. A desk will be maintained in the lobby for the convenience of the members in making final arrangements for this cruise.

Trips on Monday, January 24

No. 1. Photo-engraving Plant—Powers Reproduction Corp.

Inspection party will leave headquarters at 1:30 p.m. Register by 12:00 noon and obtain ticket (no charge).

No. 2. Sponsored Broadcast, Consolidated Edison Co. of New York, Inc. "New York on Parade," N.B.C. Studios

Inspection party will meet in National Broadcasting Company's Studios, RCA Building, 50th Street between 5th and 6th Avenues at 7:15 p.m. Note: The doors of the studio will be closed promptly at 7:25 p.m. Since only a limited number of tickets are available for this broadcast the members are urged to register early and obtain ticket (no charge).

Trips on Tuesday, January 25

No. 3. General Motors Corp.—Linden Branch, Linden, N. J.

Inspection party will leave headquarters by bus at 9:15 a.m. The General Motors Corp. will provide a luncheon to the members attending this inspection trip. Register by 4:00 p.m. Monday and obtain ticket (\$1.00).

Winter Convention

No. 4. Lincoln Tunnel—All Service Bus—Newark Airport

Inspection party will leave headquarters by bus at 9:15 a.m. Register by 4:00 p.m. Monday and obtain ticket (\$1.00).

No. 5. Sixth Avenue Subway Construction

Inspection party will leave headquarters in charge of guides at 2:00 p.m. Register by 12:00 noon and obtain ticket (no charge).

No. 6. Reading Streamlined Train—Jersey City

Inspection party will leave headquarters in charge of a guide at 4:15 p.m. Register by 12:00 noon and obtain ticket (no charge).

Trips on Wednesday, January 26

No. 7. Grid Controlled Rectifier—Third Avenue Railway System

The inspection party will meet at the Brook Avenue Substation of the Third Avenue Railway System, 165th Street and Brook Ave., Bronx, at 2:00 p.m. Register by 12:00 noon and obtain ticket (no charge).

No. 8. Waterside Generating Station—Topping Turbine—Metal Clad Bus

Inspection party will leave by bus from headquarters at 1:15 p.m. Register by 4:00 p.m. Tuesday and obtain ticket (no charge).

No. 9. Wards Island Sewage Treatment Plant—City of New York

Inspection party will leave headquarters by bus at 2:00 p.m. Register by 4:00 p.m. Tuesday and obtain ticket (\$1.00).

Trips on Thursday, January 27

No. 10. RCA Manufacturing Co., Inc.—Harrison

This trip is limited to members only. Inspection party will assemble at headquarters and leave promptly at 1:00 p.m. in charge of a guide. Register by 4:00 p.m. Wednesday and obtain ticket (no charge).

No. 11. New York Stock Exchange

Inspection party will meet at 20 Broad Street at 9:45 a.m. (Additional trips may be arranged, if the demand warrants it, at 11:45 a.m. and 1:45 p.m.). This trip is restricted to members only and citizens of the United States. Register by 4:00 p.m. Wednesday and obtain ticket (no charge).

American Institute of Electrical Engineers

No. 12. New York Fire College—City of New York

Inspection party will leave headquarters at 2:00 p.m. in charge of a guide. Register by 12:00 noon and obtain ticket (no charge).

No. 13. Okonite-Callender Cable Co.—Paterson

Inspection party will leave headquarters by bus at 9:30 a.m. Luncheon will be furnished the inspection party by the company. Register by 4:00 p.m. Thursday and obtain ticket (no charge).

Trips on Friday, January 28

No. 14. Motion Pictures over Coaxial Cable—Bell Telephone Laboratories, Inc.

Inspection party will meet at the building at 180 Varick Street at 9:30 a.m. Note: Additional trips will be arranged at one-half hour intervals following the first trip. Register by 4:00 p.m. Thursday and obtain ticket (no charge).

No. 15. RCA Television Studio—National Broadcasting Co.

Inspection party will meet at National Broadcasting Company, RCA Building, 50th Street between 5th and 6th Avenues, at 10:00 a.m. Note: Due to the limited number of the party which can be conducted on a trip, additional trips will be arranged at 15-minute intervals after the 10:00 a.m. trip. Register by 4:00 p.m. Thursday and obtain ticket (no charge).

No. 16. Westinghouse Electric & Mfg. Co. Meter Works—Newark

Inspection party will leave headquarters in charge of a guide at 1:00 p.m. Register by 4:00 p.m. Thursday and obtain ticket (no charge).

No. 17. S.S. "Monarch of Bermuda"

Inspection party will assemble at headquarters and leave at 2:00 p.m. by taxis in groups of 4 and 5, each group paying its own fare. Register by 10:00 a.m. and obtain ticket (no charge). Ladies are particularly invited.

Daily

Tickets will be available at the Inspection Trips Desk good for a regular tour of the broadcasting studios of the National Broadcasting Company (ticket 30 cents) and for a trip through the Hall of Motion, Museum of Science and Industry in the RCA Building (ticket 20 cents).

Winter Convention

LADIES PROGRAM

(Headquarters—Alcove—Tenth Floor)

Monday, 24th

9:00 a.m.-4:00 p.m.—Registration

7:30 p.m.—Consolidated Edison Broadcast. See men's program.

Tuesday, 25th

9:00 a.m.-12 noon—Registration

11:30 a.m.—Tour by taxi to see Jules Bache Home, or 2 p.m. 814 - 5th Ave. at 61st St.

3:00 p.m.—Jensen Handmade Silver Exhibit with explanatory talk—667 - 5th Ave.

4:00 p.m.—Reception and Tea, British Empire Exhibition Room—5th Ave. entrance. View of the city from the Rainbow Room later.

7:30 p.m.—Tour of Music Hall Back Stage and stage show (85 cents)—meet at Information Desk, Plaza Entrance of RCA Building, 30 Rockefeller Plaza

Wednesday, 26th

10:00 a.m.—General Session: Speaker Dr. H. G. Moulton, President of The Brookings Institution—Engineering Auditorium

12:00 noon—Reception — West Ballroom, Hotel Commodore

1:00 p.m.—Lunch

2:30 p.m.—Bridge

8:00 p.m.—Edison Medal Presentation to Gano Dunn, President of J. G. White Engineering Corp.—Engineering Auditorium

Thursday, 27th

10:45 a.m.—New York Stock Exchange — See men's program

7:00 p.m.—Dinner-Dance at the Hotel Plaza

Friday, 28th

11:00 a.m.—Television—See men's program

2:00 p.m.—S.S. "Monarch of Bermuda." See men's program.

Information at Ladies Headquarters on trips—Frick Museum, Planetarium, etc.

American Institute of Electrical Engineers

Officers of A.I.E.E. 1937-1938

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F. M. Farmer	F. H. Lane
N. E. Funk	K. B. McEachron
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W. E. Crawford	H. W. Rogers
E. E. Dreese	O. J. Rotty
Wray Dudley	F. O. Schnure
R. D. Evans	M. W. Smith
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1938 Winter Convention Committees

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J. H. Moore	D. W. Taylor
E. G. D. Paterson	E. F. Thrall
	F. VanOlinda

COMMITTEE MEETINGS

Monday, January 24

	Room
9:30 A.M.—Research	1001
10:00 A.M.—Protective Devices	1101
2:00 P.M.—Subcommittee on Wave Form	903
2:00 P.M.—Production and Application of Light 40 West 40th Street, Room	1102
2:00 P.M.—Power Generation	1001

Tuesday, January 25

9:30 A.M.—Coordination of Institute Activities.....	1001
10:00 A.M.—Automatic Stations	1101
12:00 Noon—Student Branch Counselors Luncheon..... Town Hall Club, 123 W. 43rd St.	
2:00 P.M.—National Nominating Committee.....	1001
2:00 P.M.—Subcommittee on Revision of A.I.E.E. Stand- ard No. 4 (Measurement of Test Voltage in Dielectric Tests)	1101

Wednesday, January 26

8:00 A.M.—Lightning Arrester Subcommittee.....	1001
2:00 P.M.—Board of Directors.....	1001
2:00 P.M.—Communication..... ASCE Board Room, 15th Floor	
2:00 P.M.—Membership	1101
2:00 P.M.—Sectional Committee on Metal Tank Mer- cury Arc Rectifiers C-34.....	903

Thursday, January 27

9:30 A.M.—Electric Welding	903
10:00 A.M.—Safety.....	1001
10:00 A.M.—Sections	1101
2:00 P.M.—Subcommittee No. 1, Sectional Committee on Electrical Definitions	903
2:00 P.M.—Basic Sciences	1001

Friday, January 28

9:30 A.M.—Technical Program	1001
10:00 A.M.—Subcommittee on Study of Test Codes	903