



# Winter Convention

January 21-25, 1946

Engineering Societies Building  
33 West 39th Street, New York 18, N. Y.

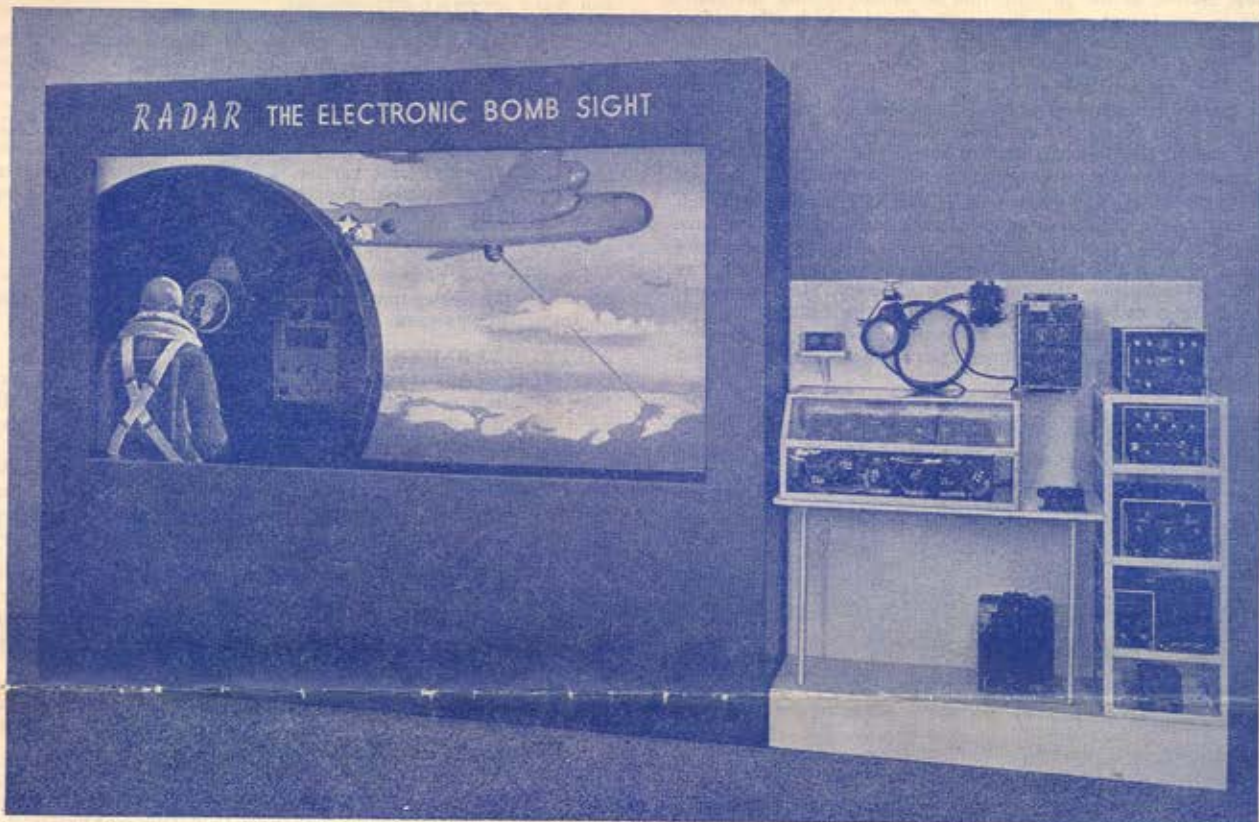


Exhibit of Airborne Radar Used in Bombing Japan, one of the displays to be provided by Bell Telephone Laboratories. Radar sessions Tuesday. Air Transportation sessions Friday

## 28 Technical Sessions and Conferences

### General Session

Smoker — Inspection Trips — Dinner-Dance

Joint Meeting with I. R. E.

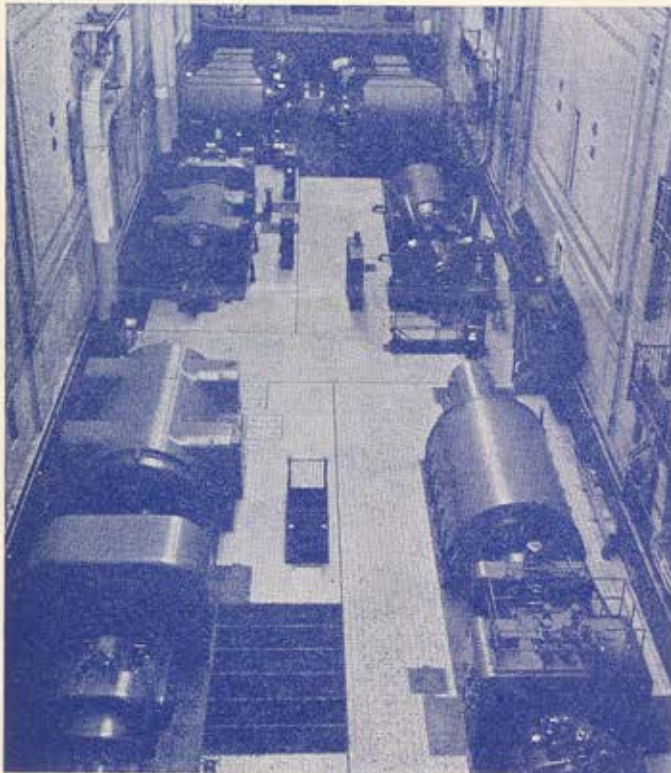
# WINTER CONVENTION ANNOUNCEMENT

**WINTER CONVENTION FEATURES:** A program replete with both technical and social activities has been arranged. All of the pre-war features have been restored, including the dinner-dance, smoker, and inspection trips. A prominent electrophysicist of broad vision has been chosen to address the general session on the great possibilities of future developments. With a forward outlook the technical program has been built around the general session and many of the sessions and conferences will explore the new frontiers of electrical engineering in their respective specialties. Arrangements are being made for a symposium on nuclear energy and well-known speakers will consider the physics, applications, and economics of this latest source of energy. This subject also will be presented at the joint session with the I.R.E. by the military head of the atomic bomb project. Convention headquarters will be in the Engineering Societies' Building, 33 West Thirty-ninth Street. Register early by returning the enclosed advance registration card. Registration will be enforced and a nonmember fee of \$2.00 will be required.

Two of the highest engineering honors, the Edison Medal and the Hoover Medal will be presented during the convention. Details of the awards will be announced later.

**GENERAL SESSION:** The Institute is fortunate to have Professor J. R. Dunning, a prominent electrophysicist of broad vision and extensive research experience in the field of nuclear physics, to address the meeting. Active in the investigation of atomic fission for many years prior to his recent connection with the atomic bomb project Dr. Dunning is in an exceptional position to place before the electrical engineering profession the great possibilities of the future. His address will be inspirational, serving as a keynote for the forward outlook of the entire technical program, from which may come new and improved ideas in specialized fields of activity. Professor Dunning is Director of the Division of War Research, Columbia University, and Technical Advisor to the Kellogg Corporation.

**TECHNICAL SESSIONS AND CONFERENCES** range through the whole realm of technical committee activities. The sessions have been arranged to avoid conflict insofar as possible. Applied principles of electronics occur not only in the communications papers but may be found in various papers throughout the program. Similarly, measurement technique may be found not only in the instruments and measurements sessions but threads through many papers in other sessions. A number of the measurements papers bear a close relation to air transportation and vice versa.



Topping Turbogenerators in the Waterside Station, which may be visited during the convention. Power Generation sessions Friday

## ENTERTAINMENT

### All the Old-Time Features Are Back

**SMOKER:** The Smoker, an event which fortunately we have been able to stage regularly throughout the war years, will be scheduled again this year on Tuesday evening, January 22, 1946 at the Hotel Commodore. Arrangements are being made so that you can get together with your friends for cocktails preceding dinner and show. Tickets this year are \$6.50 each and tables can be reserved for six, eight and ten by remittance in advance. It is absolutely necessary that you make your reservations now.

**DINNER-DANCE:** Your Convention Committee has decided that the popular interest always evidenced in our Dinner-Dance of past years again warrants the revival of that affair as one of the features of the 1946 Winter Convention. The Plaza Hotel Grand Ballroom has been reserved for 7 p.m. on the evening of Thursday, January 24, 1946. Tickets for dinner and dance will be \$8.00 per person. Tables can be reserved for eight and ten. For those who find it impossible to attend the dinner a very limited number of tickets for the dance only will be available at \$3.00 per person. Please send in your reservation and remittance at earliest possible date so that the committee can make necessary arrangements.

**INSPECTION TRIPS:** An Inspection Trips Committee is engaged in setting up an interesting group of inspections. While definite commitments cannot be made at the present time as to places or installations to be visited, the committee hopes to be able to schedule a trip to the Bell Laboratories at Summit, N. J., an inspection of LaGuardia Airport, with an air trip over New York and vicinity; a complete inspection of an aircraft carrier, a large power station and trips to other points of interest. Details will be available on the opening registration day at Committee headquarters.

**SPECIAL TRIPS FOR LADIES:** A Ladies' Committee is now being organized to provide features of special interest to the ladies attending the convention. No details can be listed at this time, but an interesting program for the ladies is assured.

**NONMEMBER REGISTRATION TO BE ENFORCED:** This year arrangements are being made to enforce the rule that nonmembers attending the convention must register. Admission to all technical sessions will be strictly limited to those wearing the registration badges obtainable at the registration desk by nonmembers of the Institute on payment of the \$2.00 nonmember registration fee. To avoid embarrassment and misunderstandings, members are urged to call this fact to the attention of their associates who are not members of the AIEE, but who may be planning to attend some of the sessions.

**THEATRE AND BROADCAST TICKETS:** As a service to out-of-town members a limited number of theatre tickets to popular shows are being purchased for Wednesday and Thursday evenings, January 23 and 24, 1946. Members from outside of the New York territory who wish to attend any of the shows listed below should send in the reservations with remittances at once. Please indicate first, second and third choices, if possible.

Oklahoma . . . . .	Wednesday or Thursday evenings—	\$4.80
Carousel . . . . .	Wednesday or Thursday evenings—	6.00
Bloomer Girl . . . . .	Wednesday or Thursday evenings—	5.40
Song of Norway . . . . .	Wednesday or Thursday evenings—	6.00
Follow the Girls . . . . .	Wednesday or Thursday evenings—	4.80
On the Town . . . . .	Wednesday or Thursday evenings—	4.80
Up in Central Park . . . . .	Wednesday or Thursday evenings—	6.00
I Remember Mama . . . . .	Wednesday or Thursday evenings—	4.20
Harvey . . . . .	Wednesday or Thursday evenings—	4.20
Life With Father . . . . .	Wednesday or Thursday evenings—	3.60

There will also be available tickets for a number of broadcast presentations. These tickets will be obtainable on application at the registration desk, but no definite listing of the broadcasts can be made at this time.

**HOTEL ACCOMMODATIONS:** The hotel situation in the metropolitan area is acute and quite likely will remain so for some time. Members, therefore, are urged to make their plans early and arrange for accommodations directly with the hotel preferred. The Institute has no connections with any of the hotels and cannot undertake to make reservations.

H. H. HENLINE, *Secretary*

## SCHEDULE OF EVENTS

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<p><b>9:30 A.M.</b> Protective Devices Communication Conference on New Industrial Uses of Electronics Resulting from Wartime Developments</p>	<p><b>9:30 A.M.</b> Radar Protective Devices Conference on Industrial Voltage Requirements</p>	<p><b>10:00 A.M.</b> General Session Edison Medal Presentation <i>Address:</i> Professor J. R. Dunning</p>	<p><b>9:30 A.M.</b> Power Transmission Electric Machinery Instruments and Measurements</p>	<p><b>9:30 A.M.</b> Hydroelectric Systems Air Transportation Symposium on Lighting Symposium on Nuclear Energy</p>
<p><b>2:00 P.M.</b> Symposium on Sound Recording Power System Relays Electric Welding</p>	<p><b>2:00 P.M.</b> Conference on Communication Relays Radar Conference on Power Relays Industrial Power Applications</p>	<p><b>2:00 P.M.</b> Conference on Institute Activities Conference on Standardization Activities of Committee on Air Transportation Conference on Mach. Tool and Process Drives</p>	<p><b>2:00 P.M.</b> Electric Machinery Instruments and Measurements Conference on Statistical Methods Applied to Standards</p>	<p><b>2:00 P.M.</b> Excitation Systems Air Transportation Conference on Education</p>
<p><b>Evening</b> Radio Broadcasts, Theaters, etc.</p>	<p><b>6:30 P.M.</b> Smoker (Hotel Commodore)</p>	<p><b>8:00 P.M.</b> Joint Meeting with I.R.E. Hoover Medal Presentation <i>Address:</i> Major Gen. Leslie R. Groves</p>	<p><b>7:00 P.M.</b> Dinner-Dance (Hotel Plaza)</p>	<p><b>6:00-8:00 P.M.</b> IRE Party (Hotel Astor)</p>

## TECHNICAL PROGRAM

### Monday, January 21

#### 9:30 a.m.—Protective Devices I

- 46-19. Field Tests of Interrupting Capacity of 138-Kv Oil Circuit Breakers. W. B. Buchanan, G. D. Floyd, Hydro-Electric Power Comm. of Ont. 20 cents by mail.
- 46-20. A New Line of High-Voltage Outdoor Tank-Type Oil Circuit Breakers. W. F. Skeats, E. B. Rietz, General Elec. Co. 25 cents by mail.
- 46-21. Dielectric Recovery by an A-C Arc in an Air Blast. T. E. Browne, Jr., Westinghouse Elec. Corp. 30 cents by mail.
- 46-22. Long Sixty-Cycle Arcs in Air. A. P. Strom, Westinghouse Elec. Corp. 20 cents by mail.

#### 9:30 a.m.—Communication

- 46-7. Electronic Regeneration of Teleprinter Signals. H. F. Wilder, Western Union Telegraph Co. 15 cents by mail.
- 46-23. A Tunable Rejection Filter. R. C. Taylor, Western Union Telegraph Co. 20 cents by mail.
- 46-10. The Solution of Transmission-Line Problems in the Case of Attenuating Transmission Line. George Glinski, Northern Elec. Co. 15 cents by mail.

46-24. Inertia Throat Microphones. L. G. Pacent, Pacent Engg. Corp.; E. H. Greibach, Sonotone Corp. 15 cents by mail.

46-25. Laboratory Method for Objective Testing of Bone Receivers and Throat Microphones. E. H. Greibach, Sonotone Corp. 15 cents by mail.

46-26. A New Crystal Channel Filter for Broad Band Carrier Systems. E. S. Willis, Bell Telephone Labs., Inc. 15 cents by mail.

46-27. Applications of Thin Permalloy Tape in Wide Band Telephone and Pulse Transformers. A. G. Ganz, Bell Telephone Labs., Inc. 25 cents by mail.

#### 9:30 a.m.—Conference on New Industrial Uses of Electronics Resulting from Wartime Developments

- \*CP. Hydrogen Thyratrons and Their Applications. H. H. Heins, Sylvania Elec. Products, Inc.
- \*CP. Recent Developments of Magnetrons in the Microwave Region. W. C. Brown, Raytheon Mfg. Co.
- \*CP. Industrial Heating at Very High Frequencies. I. E. Mourmstseff, Westinghouse Elec. Corp.
- \*CP. Progress and Trends in High-Frequency Heating. H. C. Gillespie, Radio Corp. of America.

# WINTER CONVENTION

## Tuesday, January 22

\*CP. Use of Pulsers of the Radar Type for High-Potential Testing. H. W. Lord, General Elec. Co.

### 2:00 p.m.—Symposium on Sound Recording and Reproducing

\*CP. Wire Recording. D. W. Pugsley, General Elec. Co.

46-29. A New Wire Recorder Head Design. T. H. Long, C. G. Conn, Ltd. 15 cents by mail.

46-30. A B-H Curve Tracer for Magnetic-Recording Wire. T. H. Long, G. D. McMullen, C. G. Conn, Ltd. 15 cents by mail.

46-31. Signal and Noise Levels in Magnetic Tape Recording. D. E. Wooldridge, Bell Telephone Labs., Inc. 30 cents by mail.

46-32. Phonograph Reproducer Design. W. S. Bachman, General Elec. Co. 15 cents by mail.

46-33. Recently Developed Tools for the Study of Disk Recording Performance. H. E. Roys, R.C.A. 20 cents by mail.

46-34. Sound Recording in Business. L. D. Norton, Dictaphone Corp. 20 cents by mail.

\*CP. Technical Uses of Film Recording. E. M. Honan and C. R. Keith, Western Electric Co.

### 2:00 p.m.—Power System Relays

46-35. Protection of Pilot Wires from Induced Potentials. R. B. Killen, G. G. Law, The Dayton Pr. & Lt. Co. 15 cents by mail.

46-36. Linear Couplers—Field Tests and Experience at York and Middletown, Pa. E. L. Harder, E. H. Klemmer, Westinghouse Elec. Corp.; R. E. Neidig, Metropolitan Edison Co. 20 cents by mail.

46-38. Application of the Ohm and Mho Principles to Protective Relays. A. R. vanC. Warrington, General Elec. Co. 25 cents by mail.

46-39. The MHO Distance Relay. R. M. Hutchinson, General Elec. Co. 20 cents by mail.

### 2:00 p.m.—Electric Welding

46-12. Investigation of Arc Starting Characteristics of D-C Welders with Reference to Electrode Freezing. J. M. Tyrner, Air Reduction Sales Co. 15 cents by mail.

46-18. Capacitor Stabilization of Arc Welding Transformers. J. H. Blankenbuehler, R. V. Lester, Westinghouse Elec. Corp. 15 cents by mail.

46-41. Design and Measurements of Condenser Discharge Welding Transformers. T. W. Dietz, The Taylor-Winfield Corp.; G. M. Stein, Westinghouse Elec. Corp. 20 cents by mail.

46-9. Measurement and Effect of Contact Resistance in Spot Welding. R. A. Wyant, Rensselaer Polytechnic Institute. 15 cents by mail.

### 9:30 a.m.—Radar

†46-46. Radar System Consideration. D. A. Quarles, Bell Telephone Labs., Inc. 25 cents by mail.

†46-47. Radar for Peacetime Use. L. H. Lynn, O. H. Winn, General Elec. Co. 15 cents by mail.

†46-48. Airborne Radar. R. C. Jensen and R. A. Arnett, General Elec. Co. 15 cents by mail.

### 9:30 a.m.—Protective Devices II

46-11. A New Submersible Network Protector of Higher Rating. G. G. Grissinger, F. D. Johnson, Westinghouse Elec. Corp. 15 cents by mail.

46-42. The Development, Design, and Performance of Magnetic-Type Power Circuit Breakers. L. J. Linde, A. B. Chance Co.; B. W. Wyman, General Elec. Co. 20 cents by mail.

46-43. Metal-Clad, Unit-Type Switchgear for 33-Kv Service. C. H. Kreger, Public Service Co. of Northern Illinois. 25 cents by mail.

46-45. New Series Capacitor Protective Device. R. E. Marbury, J. B. Owens, Westinghouse Elec. Corp. 15 cents by mail.

46-55. Size Reduction and Rating Extension of Magnetic Air Breakers up to 500,000 Kva, 15 Kv. R. C. Dickinson, Russell Frink, Westinghouse Elec. Corp. 15 cents by mail.

### 9:30 a.m.—Conference on Industrial Voltage Requirements

\*CP. Preliminary Report on Industrial Voltage Requirements. Messrs. Beeman, Grotzinger, and French.

\*CP. Grounding Industrial Power Systems. L. G. Levoy, General Elec. Co.

\*CP. 2300 Volts Vs. High Voltages for Power Generation and Distribution in Industrial Plants. R. H. Kaufmann, General Elec. Co.

45-156. Dielectric Strength and Protection of Modern Dry-Type Air-Cooled Transformers. P. L. Bellaschi, Westinghouse Elec. Corp. 15 cents by mail.

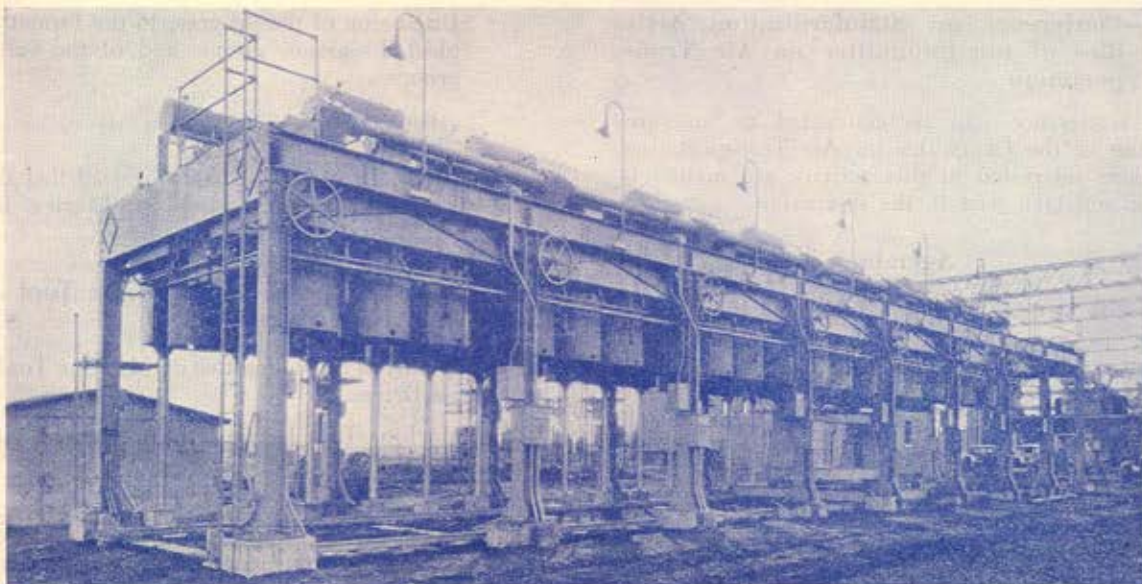
\*CP. Transformer Ratios and Their Bearing on Industrial Voltage Requirements. W. H. Dickinson, Standard Oil Development Co.; John Parsons, Anaconda Wire and Cable Co.

\*CP. Industrial Voltage Requirements from the Utility Viewpoint. R. C. R. Schulze, American Gas & Elec. Service Corp.

### 2:00 p.m.—Conference on Quick and Slow Acting Relays

Will include talks by various people active in the field of relays for communications applications.

# TECHNICAL PROGRAM



Typical Metalclad Switchgear for 33-Kv Service, to be described in one of the Protective Devices sessions

## 2:00 p.m.—Radar

- †46-49. Shoran Precision Radar. S. W. Seeley, R.C.A.  
25 cents by mail.
- †46-50. SCR 584/784 Antiaircraft Radar Equipment. M. R.  
\*\*ACO. Briggs, Westinghouse Elec. Corp. 15 cents by mail.
- †46-40. Techniques and Facilities for Radar Testing. E. I.  
Green, H. J. Fisher, J. G. Ferguson, Bell Telephone  
Labs., Inc. 30 cents by mail.

†These papers are subject to special clearance requirements; hence copies may not be available and prices are subject to change.

## 2:00 p.m.—Conference on Power Relays

## 2:00 p.m.—Industrial Power Applications

- \*CP. A Modern Industrial Network Installation. K. A.  
Fahse, International Harvester Co. 15 cents by mail.
- 46-52. Combined Light and Power Systems for Industrial  
Plants. D. L. Beeman, General Elec. Co.  
15 cents by mail.
- 46-53. Induction Heating of Long Cylindrical Charges.  
H. F. Storm, Allis-Chalmers Mfg. Co.  
30 cents by mail.
- 46-54. Application of the Betatron to Practical Radiog-  
raphy. J. P. Girard, Allis-Chalmers Mfg. Co.; G. D.  
Adams, University of Illinois. 20 cents by mail.

## 6:30 p.m.—Smoker—Hotel Commodore

Tickets, \$6.50 each. Tables can be reserved for 6,  
8, and 10 by remittance in advance. Important—  
make reservations now.

## Wednesday, January 23

### 10:00 a.m.—General Session

#### Edison Medal Presentation

Address: "Development of Atomic Energy." Dr.  
J. R. Dunning, Director, Division of War Research,  
Columbia University; Technical Advisor, The Kel-  
lex Corp.

### 2:00 p.m.—Conference on Institute Activities

The Institute is confronted by problems of growing urgency both in its relations to the engineering profession at large and to more highly specialized organizations and interests within its own general field. Early this administrative year, the Board of Directors referred these problems to the Committee on Planning and Co-ordination, who have appointed two special subcommittees to explore the professional and the technical activities of the Institute in relation to those of other engineering and scientific societies and more particularly in relation to the desires and aspirations of the members of the Institute.

The relationship to other organizations is the easier part of the study. The desires and aspirations of the rank and file of the membership are more difficult of determination. This conference is intended as a first step toward finding out what a sample of the membership believes the Institute ought to be doing or ought to do in a different way.

Members active in Institute affairs should take this opportunity to assist the subcommittees by giving thought to the problems in advance of the conference, by attending the meeting and stating their considered opinions and specific suggestions. It is hoped that every District and every Section will be represented by at least one member but the meeting is open to all members and their views on these possible new frontiers of the Institute will be welcomed.

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# WINTER CONVENTION

## 2:00 p.m.—Conference on Standardization Activities of the Committee on Air Transportation

This conference will be conducted as an open meeting of the Committee on Air Transportation. Members interested in this activity are invited to attend and take part in the discussion.

### Agenda

Approval of minutes of meeting held January 24, 1945.

General discussion of standardization activities—J. R. North.

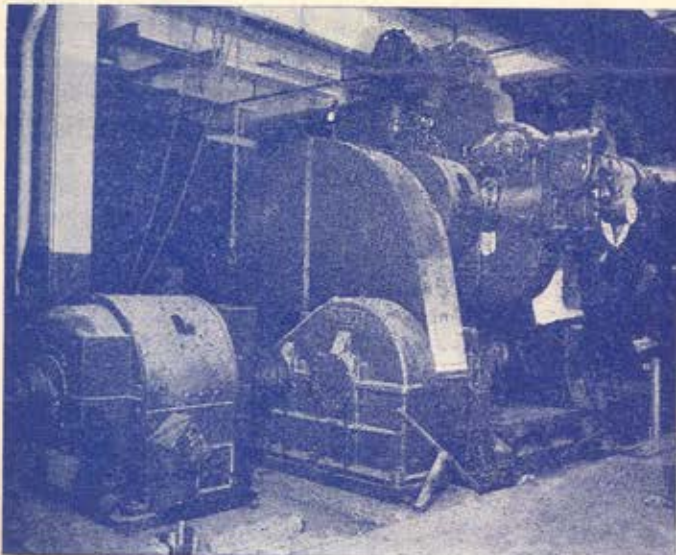
Reports of Subcommittees and discussion:

- a. Aircraft Electric Systems. R. H. Kaufmann, Chairman
- b. Aircraft Electric Control and Protective Devices. R. A. Millermaster, Chairman
- c. Aircraft Wire and Cable. W. S. Hay, Chairman
- d. Aircraft Electric Rotating Machinery. M. L. Schmidt, Chairman
- e. Joint Subcommittee (Air Transportation and Electric Machinery) on Carbon Brushes. V. P. Hessler, Chairman

Discussion of one-year trial period of AIEE Report No. 700 on Standard D-C Voltages for Aircraft. Consideration of a Subcommittee for a final Standard.

Discussion of possible additional subcommittees, particularly a subcommittee concerned with airline operation and its electrical problems.

Discussion of places for technical papers and for general committee work. Consideration of future meetings.



On the Frontier of Tire Production a New Co-ordinated Electric Drive for a Rubber Calender Train will be described

Discussion of the progress in the formation of technical discussion groups and of the value of such groups.

New business:

- (a) H. F. Rempt has suggested that the committee initiate a study of electrical fires in aircraft.

## 2:00 p.m.—Conference on Machine Tool and Process Drives

\*CP. Report of Subcommittee on Machine Tool and Process Drives.

\*CP. Machine Tool Drives. H. T. Johnson, General Motors Corp.

46-56. Co-ordinated Electric Drive for a Rubber Calender Train. K. W. John, U. S. Rubber Co.; G. W. Knapp, W. A. Mosteller, General Elec. Co. 20 cents by mail.

46-57. Industrial Application of Rototrol Regulators. W. R. Harris, Westinghouse Elec. Corp. 20 cents by mail.

## 8:00 p.m.—Joint Meeting with I.R.E.

Hoover Medal Presentation to Major General William H. Harrison.

Address: "Some Electrical Engineering and General Aspects of the Atomic Bomb Project." Major General Leslie R. Groves.

## Thursday, January 24

### 9:30 a.m.—Power Transmission

46-16. Lightning Performance of 220-Kv Transmission Lines—II. Lightning and Insulator Working Group. 15 cents by mail.

46-8. Formulas for Conductor Size According to Cost of Resistance Loss. H. B. Dwight, Massachusetts Institute of Technology. 15 cents by mail.

46-44. Arcing Ground Tests on a Normally Ungrounded 13-Kv, Three-Phase Bus. J. E. Allen, S. K. Waldorf, Pennsylvania Water & Pr. Co. 25 cents by mail.

46-37. Formulas for the Inductance of Coaxial Busses Comprised of Square Tubular Conductors. H. P. Messinger, Allis-Chalmers Mfg. Co.; T. J. Higgins, III. Inst. of Technology. 30 cents by mail.

### 9:30 a.m.—Electric Machinery I

46-58. Shut Down Vs. Hot-Spot Temperatures in Polyphase Induction Motors. C. P. Potter, A. E. Frohardt, Wagner Elec. Corp. 15 cents by mail.

46-5. Transients in A-C Motors and Generators. G. S. Smith, Univ. of Washington. 15 cents by mail.

46-59. The Polyphase Commutator Regulator for Speed Control. A. G. Conrad, Yale Univ.; F. E. Brooks, Jr., Univ. of Texas. 30 cents by mail.

# TECHNICAL PROGRAM

- 46-6. Temperature Rise of Water-Cooled Power Transformers. J. R. Meador, General Elec. Co. 15 cents by mail.

## 9:30 a.m.—Instruments and Measurements I

- 46-2. The Measurement of Large Varying Currents. A. C. Johnson, Edward G. Budd Mfg. Co. 15 cents by mail.
- 46-62. Electronically Balanced Recorder for Flight Testing and Spectroscopy. A. J. Williams, Jr., W. R. Clark, R. E. Tarpley, Leeds & Northrup Co. 15 cents by mail.
- 46-17. Electrical Analogy Methods Applied to Servomechanism Problems. G. D. McCann, S. W. Herwald, H. S. Kirschbaum, Westinghouse Elec. Corp. 15 cents by mail.
- 46-60. Stress Measurement by Electrical Means. R. E. Kern, S. B. Williams, Curtiss-Wright Corp. 30 cents by mail.

## 2:00 p.m.—Electric Machinery II

- 46-63. Differential Leakage of a Fractional-Slot Winding. M. M. Liwshitz, Polytechnic Institute of Brooklyn. 30 cents by mail.
- 46-64. Die Cast Rotor Testing by Test Stator Method. P. H. Trickey, Diehl Mfg. Co. 15 cents by mail.
- 46-65. Performance Calculations on Polyphase Reluctance Motors. P. H. Trickey, Diehl Mfg. Co. 15 cents by mail.
- 46-66. The Short-Circuit Characteristics of Direct-Current Generators. G. E. Frost, General Electric Co. 30 cents by mail.

## 2:00 p.m.—Instruments and Measurements II

- 46-69. Thermal Demand Meter Testing Techniques. E. E. Lynch, M. E. Douglass, General Elec. Co. 20 cents by mail.
- 46-68. Peak Voltages Induced by Accelerated Flux Reversal in Reactor Cores Operating above Saturation Density. Theodore Specht, E. C. Wentz, Westinghouse Elec. Corp. 30 cents by mail.
- 46-67. An Automatic Oscillograph with a Memory. A. M. Zarem, California Institute of Technology. 15 cents by mail.

## 2:00 p.m.—Conference on Statistical Methods Applied to Standards

The purpose of the conference is to secure additional discussion on two papers, which have been published in *ELECTRICAL ENGINEERING* since the last Winter meeting; to give further information regarding the work of the Standards Subcommittee on Statistical Methods, and to receive suggestions for its future activities.

- \*CP. Quality Reports for Management Purposes. Martin A. Brumbaugh, Univ. of Buffalo.
- \*CP. Quality Control through Product Testing. P. L. Alger, General Elec. Co.



Lighting Frontiers have expanded to include important lamps producing Infrared Radiation, which will be discussed in the Conference on Lighting Friday morning

- 45-142. Statistical Methods in the Development of Apparatus Life Quality. E. B. Ferrell, Bell Telephone Labs., Inc. 20 cents by mail.

\*CP. Quality Control of Leads for Glass Miniature Radio Tubes. H. S. Basche, A. I. Peterson, Radio Corp. of America.

- 45-132. Statistics as an Aid to Engineering Judgment in the Manufacture of Lightning Arrester Blocks. C. Goffman, Westinghouse Electric Corp. 15 cents by mail.

## 7:00 p.m.—Dinner-Dance—Hotel Plaza

Tickets for dinner and dance, \$8.00 per person. Limited number of tickets for dance only, \$3.00 per person. Tables can be reserved for 8 and 10. Please send in reservations and remittances early.

## Friday, January 25

### 9:30 a.m.—Hydroelectric Systems

- \*CP. A Review of Features of Interest to the Electrical Engineer in the Design of Hydro-Electric Power Plants. A. H. Frampton, Hydro-Electric Pr. Comm. of Ont.
- 46-71. Supervisory Control of 30,000-Kva Hydro Plant. C. W. Bohner, General Elec. Co.; A. P. Maness, Tennessee Valley Authority. 15 cents by mail.
- 46-70. Technique of Electrical and Hydraulic Testing of Hydro-Electric Units. G. D. Floyd, J. J. Traill, Hydro-Electric Pr. Comm. of Ont. 20 cents by mail.

# WINTER CONVENTION—NEW YORK—JANUARY 21-25, 1946

## 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 18, N. Y.; if purchased at A.I.E.E. headquarters or at the meeting 5c less per copy. Prices subject to change. 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**.

- \*CP. Maintenance of Hydro-Electric Generators. L. B. Stirling, Shawinigan Water & Pr. Co.
- \*CP. Successful Conversion of Hydroelectric Plants to Semiautomatic Operation. A. F. Ayres, California Elec. Pr. Co.

### 9:30 a.m.—Air Transportation I

- 46-14. Electrical Measurements on Aircraft Engine Ignition Circuits. W. E. Berkey, Westinghouse Elec. Corp. 15 cents by mail.
- 46-1. All-Electric Gun Charging. W. C. Rohn, Allied Control Valve Co. 15 cents by mail.
- 46-4. A Carbon Pile Speed Governor. C. T. Button, The Master Elec. Co. 15 cents by mail.

### 9:30 a.m.—Symposium on Lighting

Address: "Advances in the Production and Application of Germicidal Radiation." Dr. L. J. Buttolph, General Elec. Co.

Address: "Industrial Applications of Infrared Radiation." Edwin H. Robinson, The Fostoria Pressed Steel Corp.

Address: "New Frontiers in Airport and Airway Lighting." W. A. Pennow, Westinghouse Elec. Corp., Lighting Div.

Address: "New Glassware in the Services of Lighting." C. W. Clarkson, Corning Glass Works.

The foregoing addresses will be supplemented with demonstrations.

### 9:30 a.m.—Symposium on Nuclear Energy

Address: "Physics of Nuclear Energy." (Speaker to be announced.)

Address: "Economic Aspects of the Application of Nuclear Energy." Philip W. Swain, Editor, Atomic Power, McGraw-Hill Publishing Co.

Address: "Peacetime Applications of Nuclear Energy." C. G. Suits, Vice-President and Director of Research, General Elec. Co.

### 2:00 p.m.—Excitation Systems

- 46-78. Excitation Systems for Synchronous Machines. S. B. \*\*ACO. Crary, J. B. McClure, General Elec. Co. 15 cents by mail.
- 46-76. Excitation Systems for Turbine Generators. M. D. \*\*ACO. Ross, Westinghouse Elec. Corp. 15 cents by mail.
- 46-77. Motor-Driven Exciters for Turbine Alternators. R. B. Bodine, S. B. Crary, A. W. Rankin, General Elec. Co., 25 cents by mail.
- 46-74. Application and Performance of Electronic Exciters for Large A-C Generators. H. A. P. Langstaff, West Penn Pr. Co.; H. R. Vaughan, R. F. Lawrence, Westinghouse Elec. Corp. 20 cents by mail.
- 46-75. Electronic Generator Voltage Regulator. J. E. Reilly, C. E. Valentine, Westinghouse Elec. Corp. 15 cents by mail.
- 46-73. The Design of an Electronic Exciter for Large Generators. W. R. Farley, C. R. Marcum, Westinghouse Elec. Corp. 15 cents by mail.

### 2:00 p.m.—Air Transportation II

- 46-3. Basic Design Principles for A-C Electrical Power Systems in Large Military Aircraft. C. K. Chappuis, U. S. Army Air Force; L. M. Olmsted, Air Technical Service Command. 15 cents by mail.
- 46-13. Pressure-Arc-Interruption Circuit Breakers for 400-Cycle Aircraft Electric Power System. B. O. Austin, Westinghouse Electric Corp. 15 cents by mail.
- 46-79. Governor for Variable Ratio Transmission Used in Developmental 400-Cycle Electrical System for Large Aircraft. P. F. Desch, D. E. Garr, J. G. Hutton, General Elec. Co. 15 cents by mail.
- 46-15. Effect of Altitude on Ventilation and Rating of Aircraft Electric Machines. C. G. Veinott, Westinghouse Elec. Corp. 20 cents by mail.

### 2:00 p.m.—Conference on Education

### 6:00 p.m.—IRE Party (Hotel Astor).

\*CP.: Conference Paper; no advance copies are available; not intended for publication in **TRANSACTIONS**.

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

### Winter Convention Committee

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