



Winter Technical Meeting

January 22-26, 1945

Headquarters

ENGINEERING SOCIETIES BUILDING

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



The B-29 Superfortress — The Influence of Aircraft Environment on Electrical Design will be the subject of one of the Aircraft Sessions.

SESSIONS AND CONFERENCES RELATED TO THE WAR EFFORT

Electric Welding

Industrial Control

Aircraft Electricity

High-Frequency Cables

Industrial Power Applications

High-Frequency Dielectric Heating

Aircraft Electrical Apparatus and Utilization

Influence of Aircraft Environment on Electrical Design

Wartime Practices on Distribution Systems and
Their Effect on System Operation and Future Designs

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

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. 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**.

Monday, January 22

9:30 a.m.—Power Generation

- 45-4. Evaluation of Electric Distribution Losses in Terms of Generating Station Capacity Investment. Mario Mortara, Consulting Engineer. 15 cents by mail.
- 45-9. Use of Dielectric Absorption Tests in Drying Out Large Generators. H. C. Marcroft, Pennsylvania Water and Power Company. 15 cents by mail.
- 45-34. Frequency Changers—Characteristics, Applications, and Economics. S. B. Crary, R. M. Easley, General Elec. Co. 25 cents by mail.
- 45-36. Proposed Preferred Standards for Large 3,600-RPM, 3-Phase, 60-Cycle Condensing Turbo-Generators. Joint Committee on Turbo-Generators. AIEE-ASME. 20 cents by mail.

9:30 a.m.—Temperature Measurements and Standards

- 45-33. Investigation of Hot-Spot Temperatures in Integral Horsepower Motors. L. E. Hildebrand, B. M. Cain, F. D. Phillips, General Elec. Co.; W. R. Hough, J. G. Rosswog, Reliance Elec. and Engg. Co.; C. P. Potter, Wagner Elec. Corp. 15 cents by mail.
- 45-32. Investigation of Hot-Spot Temperatures in Fractional Horsepower Motors. L. H. Hirsch, Century Elec. Co.; R. F. Munier, Emerson Elec. Mfg. Co.; M. L. Schmidt, L. W. Wightman, General Elec. Co.; J. S. Himebrook, Master Elec. Co.; T. C. Lloyd, O. G. Coffman, Robbins and Myers, Inc.; C. P. Potter, Wagner Elec. Corp. 25 cents by mail.
- 45-37. Temperature Limits and Abstracts of Present Standards and Practices for Stationary Contact Surfaces. Subcommittee on Conduction in Stationary Contact Surfaces, AIEE. 15 cents by mail.

9:30 a.m.—Basic Sciences

- 45-38. Power Geometry of General Transmission Systems. William Altar, Westinghouse Elec. & Mfg. Co. 20 cents by mail.

45-39. Formulas for Calculating Temperature Distribution in Transformer Cores and Other Electrical Apparatus of Rectangular Cross Section. Thomas J. Higgins, Illinois Inst. of Tech. 20 cents by mail.

45-1. Two-Phase Co-ordinates of a Four-Phase Network. E. W. Kimbark, Northwestern Univ. 15 cents by mail.

45-40. Transient Response of Controlled Rectifier Circuits. P. T. Chin, G. E. Walter, General Elec. Co. 25 cents by mail.

2:00 p.m.—Conference on Central Station Auxiliaries

The purpose of this conference is to obtain an informal cross-section of existing practise and also to get an expression of ideas in regard to the important subject of station auxiliaries and related problems. The following engineers are expected to participate:

- J. B. McClure, General Electric Company
W. R. Brownlee, Commonwealth and Southern Corporation
J. A. Elzi, Commonwealth and Southern Corporation
H. N. Muller, Westinghouse Electric and Manufacturing Company
J. H. Harlow, Philadelphia Electric Company
V. E. McCallum, Commonwealth Edison Company
C. W. Taylor, Sargent and Lundy
R. P. Crippen, Ebasco International Corp.

Many others representing the users, designers, and the manufacturers of equipment have expressed a desire to discuss the subject.

Topics anticipated for conference presentations are as follows: power requirements, selection of voltages, type and speed of motors, reliability of power supply systems, control, switching and protection of auxiliaries, etc.

2:00 p.m.—Electrical Machinery

- 45-41. Standards and Insulation Characteristics of Oil-Insulated Transformers. F. J. Vogel, Illinois Inst. of Tech. 15 cents by mail.
- 45-42. Measurements of Stray Load Loss in Induction Motors. D. H. Ware, General Elec. Co. 15 cents by mail.
- 45-12. Measurement of the Subtransient Impedences of Synchronous Machines. Gordon F. Tracy, Univ. of Wisconsin and William F. Tice, Barber Colman Co. 15 cents by mail.
- 45-2. Damping Effect of D-C Marine Propulsion Motors on Vibrations Produced in Drive Shafts by Large Propellers. Bernard Litman, Westinghouse Elec. & Mfg. Co. 15 cents by mail.

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

- CP.* Fundamental Statistical Tools for Controlling Quality. J. Manuele, Casper Goffman, Westinghouse Elec. & Mfg. Co.
- CP.* Statistical Methods Applied to Insulator Development and Manufacture. J. J. Taylor, Ohio Brass Co.
- CP.* Demerit Schedules of Underwriters' Laboratories. M. M. Brandon, Underwriters' Laboratories.

WINTER TECHNICAL MEETING

CP.* Application of Quality Control to Resistance Welding. R. S. Inglis, R. P. McCants, L. S. Hobson, General Elec. Co.

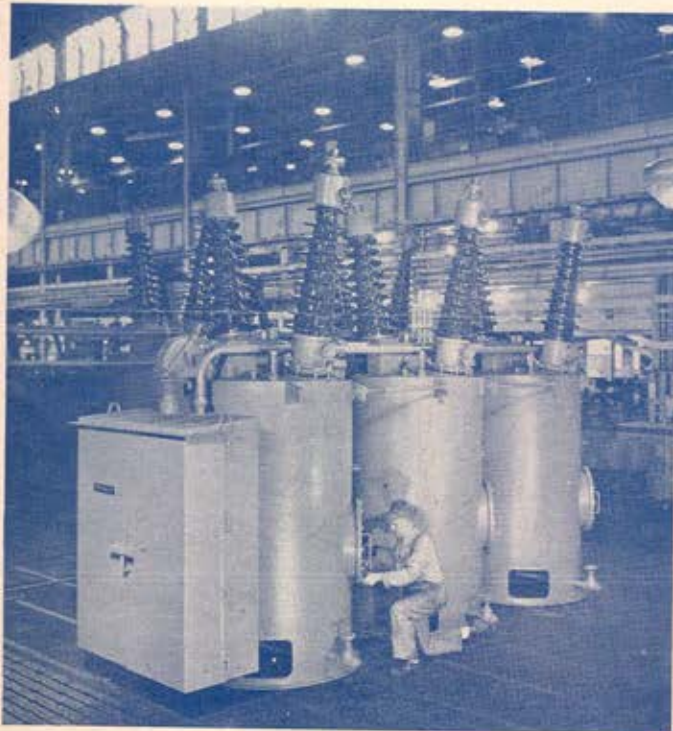
Tuesday, January 23

9:30 a.m.—Circuit Breakers

- 45-43. Field Tests and Performance of Heavy-Duty High-Speed 138-Kv Circuit Breakers—Oil and Air-Blast. Philip Sporn, H. P. St. Clair, American Gas and Elec. Service Corp. 30 cents by mail.
- 45-44. A 3-cycle, 3500-MVA Air-Blast Circuit Breaker for 138-000-Volt Service. H. L. Byrd, B. S. Beall, III, General Elec. Co. 15 cents by mail.
- 45-45. A High-Capacity High-Voltage 3-Cycle Oil Circuit Breaker. H. L. Byrd, E. B. Rietz, General Elec. Co. 15 cents by mail.
- 45-46. The Next Step in Interrupting Capacity 5,000,000 Kva. A. W. Hill, W. M. Leeds, Westinghouse Elec. & Mfg. Co. 20 cents by mail.

9:30 a.m.—Electric Welding

- CP.* Modern Developments in the Use of Arc Welding. W. J. Conley, The Lincoln Elec. Co.
- 45-29. Analysis of Arc-Welding Reactors. C. M. Wheeler, General Elec. Co. 15 cents by mail.



115-Kv Oil Circuit Breaker Rated 1,500,000 Kva with 5-Cycle Interrupting Time.
The Circuit Breaker Session is Tuesday morning, January 23.

- 45-48. The Power Distribution Problem in Arc Welding. H. W. Pierce, C. E. Smith, New York Shipbuilding Corp. 20 cents by mail.
- 45-28. Power Supply for A-C Arc Welding. A. U. Welch, R. F. Wyer, General Elec. Co. 20 cents by mail.

9:30 a.m.—Machinery Insulation

- 45-49. Insulation Resistance and Dielectric Absorption Characteristics of Large A-C Stator Windings. J. S. Askey, J. S. Johnson, Westinghouse Elec. & Mfg. Co. 20 cents by mail.
- 45-30. Organo-Silicon Compounds for Insulating Electrical Machines. T. A. Kauppi, Dow Corning Corp.; G. L. Moses, Westinghouse Elec. & Mfg. Co. 20 cents by mail.
- 45-23. The Application of Silicone Resins to Insulation for Electrical Machinery. J. deKiep, L. R. Hill, G. L. Moses, Westinghouse Elec. & Mfg. Co. 20 cents by mail.
- 45-50. Rating of High-Temperature Induction Motors. P. L. Alger, H. A. Jones, General Elec. Co. 15 cents by mail.

2:00 p.m.—Meeting of Committee on Safety

The committee on safety will hold jointly a committee meeting and a technical conference. Invitation to attend is extended to all members and guests interested in the work of this committee.

2:00 p.m.—Mercury-Arc Rectifiers and Protection

- 45-20. Arc Backs in Rectifier Circuits—Artificial Arc-Back Tests. R. D. Evans, A. J. Maslin, Westinghouse Elec. & Mfg. Co. 30 cents by mail.
- 45-51. Rectifier Fault Currents. C. C. Herskind, H. I. Kellogg, General Elec. Co. 20 cents by mail.
- 45-52. Anode Circuit-Breaker Design and Performance Criteria. E. W. Boehne, W. A. Atwood, General Elec. Co. 25 cents by mail.
- 45-53. Voltage and Current Relations for Controlled Rectification with Inductive and Generative Loads. K. P. Puchlowski, Westinghouse Elec. & Mfg. Co. 25 cents by mail.

2:00 p.m.—Protective Devices

- 45-54. Improved Fault Protection for Rural Distribution Systems. A. Van Ryan, Kyle Corp. 15 cents by mail.
- 45-8. Graphical Method of Calculating Fault Currents on Rural Distribution Systems. F. W. Linder, Rural Electrification Adm. 15 cents by mail.
- 45-55. Rectifier Relay for Transformer Protection. E. L. Michelson, Commonwealth Edison Co. 15 cents by mail.
- 45-56. New Solenoid Mechanism for Magne-Blast Breaker. B. W. Wyman, J. H. Keagy, General Elec. Co. 25 cents by mail.

- 45-57. Nine Years' Experience with Ultra High-Speed Re-closing of High-Voltage Transmission Lines. Philip Sporn, C. A. Muller, American Gas and Elec. Service Corp. 15 cents by mail.

2:00 p.m.—Electrical Machinery

- 45-16. Inherent Errors in the Determination of Synchronous Machine Reactances by Test. C. Concordia, F. J. Maginniss, General Elec. Co. 25 cents by mail.
- 45-22. Damping and Synchronizing Torques of Power Selsyns. C. Concordia, Gabriel Kron, General Elec. Co. 25 cents by mail.
- 45-14. Transient Electrical Torques of Turbine Generators during Short Circuits and Synchronizing. H. S. Kirschbaum, Westinghouse Elec. & Mfg. Co. 15 cents by mail.
- 45-15. Determination of Transient Shaft Torques in Turbine Generators by Means of the Electrical-Mechanical Analogy. G. D. McCann, C. E. Warren, H. E. Criner, Westinghouse Elec. & Mfg. Co. 15 cents by mail.

6:30 p.m.—Smoker at Hotel Commodore

Wednesday, January 24

10:00 a.m.—General Session

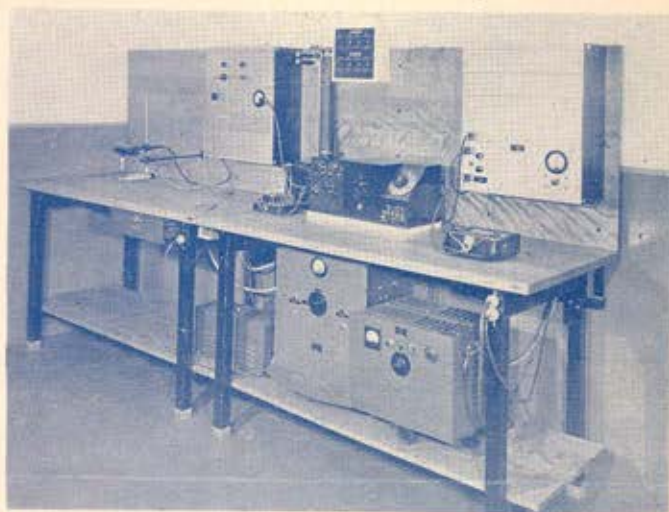
Feature talk on a timely topic that will be of interest to many members. To be announced later.

2:00 p.m.—Cables and Corrosion

- 45-58. The Dielectric Strength and Life of Impregnated Paper—IV. J. B. Whitehead, J. M. Kopper, The Johns Hopkins Univ. 25 cents by mail.
- 45-59. Electrolysis and Corrosion of Underground Power-System Cables. L. J. Gorman, Consolidated Edison Co. of N. Y., Inc. 25 cents by mail.
- 45-60. Galvanic Corrosion of Soil Waters. H. S. Phelps, F. Kahn, Philadelphia Elec. Co. 15 cents by mail.
- 45-61. Study of A-C Sheath Currents and Their Effect of Lead Cable Sheath Corrosion. C. M. Sherer, Pennsylvania Water & Power Co.; K. J. Granbois, Safe Harbor Water Power Corp. 15 cents by mail.

2:00 p.m.—Industrial Control

- 45-27. Variable Unbalanced Voltage Control. W. R. Wickerham, Westinghouse Elec. & Mfg. Co. 15 cents by mail.
- 45-62. Principles of Grid Control for Thyratrons. P. H. ACO.† Chin, E. E. Moyer, General Elec. Co. 25 cents by mail.
- 45-64. An Interval Timer for Arc Duration. J. S. Quill, General Elec. Co. 15 cents by mail.



Instruments Used in Making Dynamic Measurements on Electromagnetic Devices.

2:00 p.m.—Instruments and Measurements

- 45-24. Orthomagnetic Bushing-Current Transformer for Metering. A. Boyajian, G. Camilli, General Elec. Co. 15 cents by mail.
- 45-19. A Modulated Frequency System of Telemetry. H. E. Renfro, A. P. Peterson, Control Corp. 15 cents by mail.
- 45-65. Dynamic Measurements on Electromagnetic Devices. E. L. Norton, Bell Tel. Labs., Inc. 25 cents by mail.
- 45-66. A Portable Instrument for Measuring Insulation Resistance at High Voltage. F. W. Atkinson, R. B. Taylor, The Takk Corp. 15 cents by mail.

2:00 p.m.—Conference on Relay Protection of Generators

8:00 p.m.—Joint IRE-AIEE Session

Edison Medal presentation to Dr. E. F. W. Alexanderson

Address: "The Navy Electronics Program and Some of Its Past, Present, and Future Problems." Captain J. B. Dow, U.S.N.

Thursday, January 25

9:30 a.m.—Lightning

- 45-67. Impedances Seen by Relays during Power Swings with and without Faults. Edith Clarke, General Elec. Co. 30 cents by mail.
- 45-18. Lightning Investigation of 132-Kv System of American Gas and Electric Company. I. W. Gross, G. D. Lippert, American Gas and Elec. Serv. Corp. 15 cents by mail.
- 45-26. Lightning Investigation on Transmission Lines—VIII. W. W. Lewis, C. M. Foust, General Elec. Co. 30 cents by mail.

WINTER TECHNICAL MEETING

9:30 a.m.—Communication

- 45-68. A Comparison of the A-M, F-M, and Single Side-Band Systems for Power-Line Carrier Transmission. R. C. Cheek, Westinghouse Elec. & Mfg. Co. 20 cents by mail.
- 45-69. The Resistance-Coupled Amplifier. L. G. Cowles, The Texas Co. 25 cents by mail.
- 45-70. The Tapered Transmission Line. J. W. Milnor, Consulting Engineer. 15 cents by mail.

9:30 a.m.—Industrial Power Applications

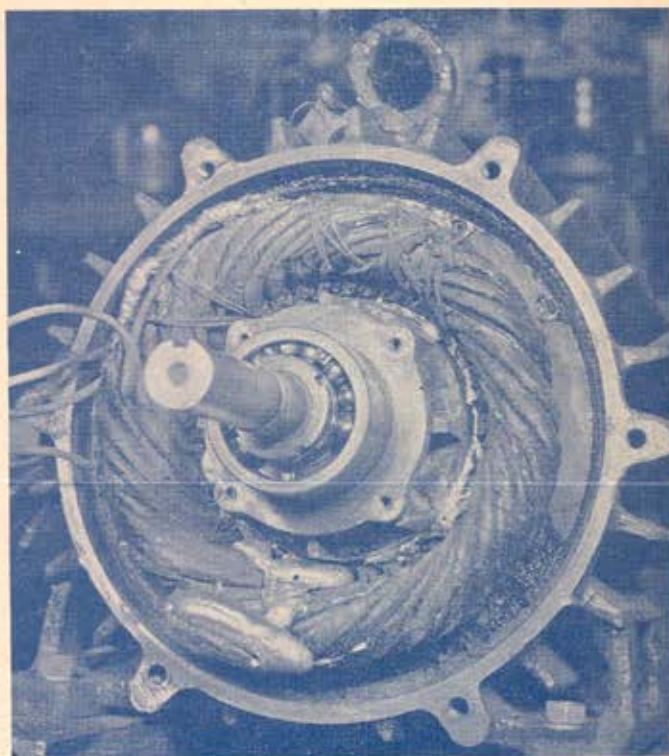
- 45-47. Tracer Controlled Position Regulator for Propeller Milling Machine. C. R. Hanna, W. O. Osbon, Westinghouse Elec. & Mfg. Co.; R. A. Hartley, Adel Precision Products Corp. 20 cents by mail.
- 45-71. Application of Electrical Equipment for Propeller Milling Machine. H. E. Morton, Morton Mfg. Co.; O. G. Rutemiller, Crosley Corp. 15 cents by mail.
- 45-35. Design of Sealed Ignitron Rectifiers for Three-Wire Service. M. M. Morack, General Elec. Co. 15 cents by mail.
- 45-72. Application of Capacitors for Power-Factor Improvement of Induction Motors. W. C. Bloomquist, W. K. Boice, General Elec. Co. 20 cents by mail.

9:30 a.m.—Aircraft Electrical Apparatus and Utilization

- 45-3. Speed-Control System for an Aircraft Cabin Supercharger Drive. F. W. Godsey, J. D. Miner, Jr., O. C. Walley, Westinghouse Elec. & Mfg. Co. 15 cents by mail.
- 45-81. The Amplidyne Generator Applied to Speed Controlled Electric Gun Turrets for Aircraft. L. A. Zahorsky, General Elec. Co. 20 cents by mail.
- 45-82. 400-Cycle Inverters for Military Aircraft. C. P. Hayes, L. L. Ray, General Elec. Co. 15 cents by mail.
- 45-6. Aircraft Illumination. W. W. Davies, United Air Lines, Inc. 15 cents by mail.

2:00 p.m.—Supervisory Control and Stability Improvement

- 45-77. The Combination of Supervisory Control with Other Functions on Power-Line Carrier Channels. H. C. Cheek, W. A. Derr, Westinghouse Elec. & Mfg. Co. 15 cents by mail.
- 45-7. Supervisory Control for New Chicago Subway. W. A. Derr, Westinghouse Elec. & Mfg. Co.; C. J. Buck, Chicago Rapid Transit Co.; J. A. Stoos, Dept. of Subways and Superhighways, City of Chicago. 15 cents by mail.



First Silicone-Treated Motor after bearing failure which operated 3376 hours at 250°C hot-spot temperature. Test to be described in the Machinery Insulation Session.

- 45-78. Power-Line Carrier Channels. M. J. Brown, Westinghouse Elec. & Mfg. Co. 20 cents by mail.
- 45-13. Improving Stability by Rapid Closing of Bus-Tie Switches. E. W. Kimbark, Northwestern Univ. 15 cents by mail.

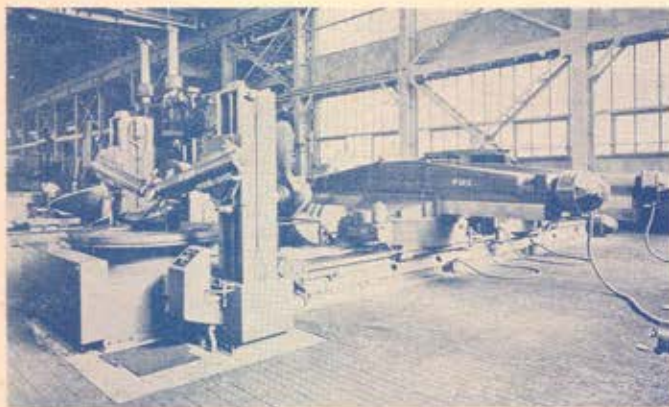
2:00 p.m.—Land Transportation

- 45-31. Compressed Air Circuit Breakers in A-C Railway Service. H. M. Wilcox, D. C. Harker, Westinghouse Elec. & Mfg. Co. 15 cents by mail.
- 45-17. Mercury-Arc Rectifiers for Railroads. S. S. Watkins, Gibbs and Hill, Inc. 15 cents by mail.
- 45-10. Electrification and Signalling of the Canadian National Railways Terminal at Montreal, Canada. R. G. Gage, Canadian National Railways. 15 cents by mail.
- 45-11. Grounding of Circuits on Self-Propelled Vehicles. D. D. Ewing, Purdue Univ. 15 cents by mail.

2:00 p.m.—Industrial Power Applications

- 45-25. The Design of Busbar Industrial Distribution Systems: An Epitomization of Available Data. T. J. Higgins, Illinois Inst. of Tech. 30 cents by mail.
- 45-21. Dodge Chicago Plant's Electric Power Distribution Scheme with Airplane Engine Testing Power Recovery. E. L. Bailey, Chrysler Corp. 15 cents by mail.

WINTER TECHNICAL MEETING, JANUARY 22-26, 1945



The Propeller Milling Machine with Tracer Controlled Position Regulator—one of the Electrical Engineer's co-operative contributions with the Mechanical Engineer which has helped to improve and accelerate the ship program.

- 45-79. Modern Electric Power Distribution Ideas As Applied in a Large War Plant. R. H. Kaufmann, General Elec. Co.; N. A. Kieb, Pratt and Whitney Aircraft Corp. 25 cents by mail.
- 45-80. Induction Heating of Moving Strip. R. M. Baker, Westinghouse Elec. & Mfg. Co. 30 cents by mail.
- 2:00 p.m.—The Influence of Aircraft Environment on Electrical Design**
- 45-73. Electrolytic Corrosion. Methods of Evaluating Insulating Materials Used in Tropical Service. B. H. Thompson, K. N. Mathes, General Elec. Co. 20 cents by mail.
- 45-5. Simulated High-Altitude Testing of Aircraft Ignition Cables and Connectors. H. H. Race, A. M. Ross, Jr., General Elec. Co. 15 cents by mail.
- 45-74. Preferred Practices for Electrical Control Devices for Aircraft. F. W. Hottenroth, Jr., General Elec. Co. 15 cents by mail.
- 45-75. Effect of Altitude on Temperature Rise of Aircraft Transformers. V. M. Montsinger, General Elec. Co. Presentation by title. 15 cents by mail.
- 45-76. Vibration Insulation and Structural Rubber. J. A. Connon, U. S. Rubber Co. Presentation by title. 20 cents by mail.

Friday, January 26

9:30 a.m.—Conference on Wartime Practises on Distribution Systems and Their Effect on System Operation and Future Designs

This conference is being sponsored by the committee on power transmission and distribution to ascertain the effect of wartime restrictions on power distribution system operating and design practices.

The Committee anticipates a free discussion, representative of present-day thinking, which might assist in more clearly establishing the probable effects of this thinking upon future distribution system, substation and circuit designs, and operating experience. Subjects tentatively selected for discussion, upon which data is being prepared for presentation are:

- CP.* Analysis of Availability of Equipment As Affected by Pre-arranged Maintenance Requirements and Capacity Limitations Resulting from Equipment Failure.
- CP.* Analysis of Customer Service Interruptions As a Means of Determining Acceptability of Designs for Methods of Supply.
- CP.* Limiting Effect of Auxiliary Equipment, Such As Connectors and Clamps, upon the Ratings of Overhead Conductors.
- CP.* Tendencies toward Changes in Design and Operating Practices As a Result of Recent Experiences.
- This conference will be informal and any related subjects can be developed during the discussion.

9:30 a.m.—Conference on High-Frequency Cables

This conference is sponsored by the committee on communication with the co-operation of the Army-Navy "RF" cable co-ordinating committee. The subject will be the design and manufacture of radio-frequency solid-dielectric cables. Topics to be discussed will include requirements and design criteria for cable structure, properties and manufacture of polyethylene, extrusion and manufacture of flexible cables, and methods of testing cables through the whole spectrum up to several thousand megacycles. The conference will be conducted under the general guidance of Lieutenant Commander John H. Neher, USNR, with several qualified topic leaders. It is expected that many members will wish to contribute to the discussion, and it is hoped also that a co-ordinated conference report may be made available later.

9:30 a.m.—Conference on High-Frequency Dielectric Heating

The conference on High-Frequency Dielectric Heating which will be held as part of the winter technical meeting of the Institute, under the auspices of the Subcommittee on Induction and Dielectric Heating, will be for the purpose of bringing together manufacturers and users of High-Frequency equipment for dielectric heating, to discuss mutual problems, and to hear several conference papers on interesting applications of dielectric heating.

Major attention will be placed on the progress made during the past year in application of High-Frequency heating and it is believed that there will be much of interest for members of the Institute who are using this relatively new tool or who contemplate its use.

2:00 p.m.—Conference on Industrial System and Apparatus Voltage Ratings

This conference will discuss system and apparatus voltage ratings from the standpoint of industrial user. Participating:

- Howard P. Seelye, Detroit Edison Company
T. C. Duncan, Consolidated Edison Company of New York, Inc.
Don Beeman, General Electric Company
F. W. Cramer, Carnegie-Illinois Steel Company
K. K. Falk, Bendix Aviation Corporation
R. T. Woodruff, Aluminum Ore Company
John M. Webb, Eli Lilly Company

The committee on industrial power applications believe this symposium will do much to clarify the problem as it affects industrial users of electrical apparatus and at the same time present an opportunity for the presentation of the viewpoints of the utilities and the manufacturers.

2:00 p.m.—Conference on Air Transportation

2:00 p.m.—Conference on Domestic and Commercial Applications

- *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.

See Separate Sheet For Page 7

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

WINTER TECHNICAL MEETING, JANUARY 22-26, 1945

Page 7 of Announcement

OTHER MEETING FEATURES

Joint IRE-AIEE Session

Continuing the custom of recent years a joint IRE-AIEE session will be held in the Engineering Auditorium on Wednesday evening, January 24. A feature address "The Navy Electronics Program and Some of Its Past, Present, and Future Problems" will be given by Captain J. B. Dow, United States Navy. Captain Dow's address will be of interest to a great many members of both organizations.

Edison Medal Presentation

Another feature of the joint session this year will be the presentation of the AIEE Edison Medal to Doctor E. F. W. Alexanderson "for his outstanding inventions and developments in the radio, transportation, marine, and power fields." Doctor Alexanderson is consulting engineer with the General Electric Company, Schenectady, N. Y., and a Member for Life.

Smoker

The smoker will be held Tuesday evening, January 23, at the Hotel Commodore. This location affords an opportunity for recreation and to get together with friends amidst pleasant surroundings. Insofar as possible all of the features of this affair will be provided as in previous years. Tickets, including the dinner and show, will be six dollars per person, including tax. Tables for ten can be reserved by advance payment. Checks should be made out to "Special Account, National Secretary, AIEE."

Theater Tickets

Every effort is being made to have choice tickets available for the best shows. These are being reserved for the evenings of Wednesday, January 24, and Thursday, January 25. Preference will be given to requests from out-of-town members. Members desiring tickets for specific performances on these or other dates may write to Institute headquarters enclosing checks made out to "Special Account, National Secretary, AIEE." The theater-ticket committee will do its utmost to take care of such requests.

A limited number of seats are now available for the following shows:

| | |
|---------------------|--------|
| Song of Norway | \$6.00 |
| Voice of the Turtle | 4.20 |
| Oklahoma | 4.80 |
| Bloomer Girl | 5.40 |

Registration and Hotels

Please fill in and return promptly the enclosed Advance Registration Card. Upon arrival at the meeting do not fill out another card—just ask for your badge. A registration fee of \$2.00 will be charged all nonmembers except Enrolled Students and the immediate families of members.

The hotel situation in the New York area is acute. Reservations should be made *at once* by writing directly to the hotel preferred.

H. H. HENLINE, *National Secretary*

COMMITTEES

Winter Technical Meeting

J. F. Fairman, *Chairman*

| | | |
|-------------|----------------|---------------|
| F. A. Cowan | M. D. Hooven | C. C. Whipple |
| W. S. Hill | A. E. Knowlton | R. J. Wiseman |
| | C. S. Purnell | |

Smoker

W. R. Van Steenburgh, *Chairman*

| | | |
|--------------|-------------------|---------------|
| C. F. Bolles | J. B. Harris | W. H. Rodgers |
| A. J. Cooper | C. T. Hatcher | H. B. Snow |
| T. C. Duncan | E. B. King | D. W. Taylor |
| H. E. Farrer | William Jordan | E. F. Thrall |
| | E. G. D. Paterson | |

Theatre and Broadcast Tickets

C. S. Purnell, *Chairman*

| | | |
|----------------|-------------|-------------------|
| G. H. Campbell | H. H. Heins | J. P. Neubauer |
| G. J. Dyktor | | T. J. Talley, 3rd |

Joint Meeting of HKN and TBPi

Professor V. Karapetoff will give a nonmathematical discussion of "Fundamentals of Relativity" at a joint meeting of Eta Kappa Nu and Tau Beta Pi on Monday evening, January 22. Ladies and guests will be welcome.

Issued by

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