

**AIEE WINTER
TECHNICAL MEETING**
January 22-26, 1945

PROGRAM

ENGINEERING SOCIETIES BUILDING
33 WEST 39TH ST. • NEW YORK 18, N. Y.

GENERAL INFORMATION

Sessions and Conferences related to the war effort are as follows: electric welding, industrial control, industrial power applications, high-frequency dielectric heating, high-frequency cables, air transportation, aircraft electrical apparatus and utilization, influence of aircraft environment on electrical design, and wartime practices on distribution systems. In addition, at the joint IRE-AIEE session on Wednesday evening, Captain J. B. Dow, U.S.N., will give an address "The Navy Electronics Program and Some of Its Past, Present, and Future Problems." At this session the Edison Medal will be presented.

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

Information on all features may be obtained at the registration desk. Press headquarters will be in Room 1007. 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. Members who expect to receive mail during the meeting are asked to collect same promptly at mail and telegram desk.

Broadcast Tickets have been obtained for many of the principal broadcasts staged in New York. A total of about 350 tickets will be available at the entertainment desk covering most of the evenings during the week.

Technical Sessions and Discussions are governed by the "Conduct of Technical Sessions" at the discretion of the presiding officer. Usually 10 minutes will be allowed for the presentation of each paper and 5 minutes for each discussion. To receive consideration for publication discussions must be left with the chairman or sent to C. S. Rich, AIEE, 33 West 39th Street, New York 18, N. Y., before Feb. 9. The original, typewritten, double-spaced copy, complete with original illustrations and two carbon copies with photostats or blueprints, should be submitted.

Authors and discussers should make their presentations as effective as possible. Remember the audience. Speak distinctly so as to be heard in the rear of the room. Stress the salient features of the paper which are new or novel, and illustrate the advantages of your methods. When using slides, please turn toward the audience before speaking and raise your voice. Extemporaneous delivery is preferable to reading unless done slowly and emphasis is put in the proper places.

Columbia Engineers Dinner for Columbia electrical engineers will be held on Wednesday, January 24, at the Old Timers Restaurant, 7 East 40th Street. The dinner is scheduled for 6:15 p.m. Informal.

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Winter Technical Meeting

SCHEDULE OF EVENTS

| | |
|-------------------------------|---------|
| Committee Meetings | Page 16 |
| General Information | Page 1 |
| Officers and Committees | Page 2 |

Monday, January 22

| | Index Page |
|---|---------------|
| 9:00 a.m.—Registration | 1 |
| 9:30 a.m.—Power Generation | 4 |
| 9:30 a.m.—Conf. on Temp. Meas. of A-C Machines and Stds. | 4 |
| 9:30 a.m.—Basic Sciences | 5 |
| 2:00 p.m.—Conf. on Central Station Auxiliaries | 5 |
| 2:00 p.m.—Electrical Machinery | 6 |
| 2:00 p.m.—Conf. on Statistical Methods Applied to Stds. | 6 |
| 6:30 p.m.—Eta Kappa Nu - Tau Beta Pi Dinner | 6 |

Tuesday, January 23

| | |
|---|---|
| 9:30 a.m.—Circuit Breakers | 7 |
| 9:30 a.m.—Electric Welding | 7 |
| 9:30 a.m.—Machinery Insulation | 7 |
| 2:00 p.m.—Conf. on Temp. Meas. of D-C Machines | 8 |
| 2:00 p.m.—Meeting of Committee on Safety | 8 |
| 2:00 p.m.—Mercury-Arc Rectifiers and Protection | 8 |
| 2:00 p.m.—Protective Devices | 8 |
| 2:00 p.m.—Electrical Machinery | 9 |
| 6:30 p.m.—Smoker at the Hotel Commodore | 9 |

Wednesday, January 24

| | |
|---|----|
| 10:00 a.m.—General Session | 9 |
| 2:00 p.m.—Cables and Corrosion | 10 |
| 2:00 p.m.—Industrial Control | 10 |
| 2:00 p.m.—Instruments and Measurements | 10 |
| 2:00 p.m.—Conference on Relay Protection of Generators | 10 |
| 8:00 p.m.—Joint IRE-AIEE Session—Edison Medal Presentation .. | 11 |

Thursday, January 25

| | |
|---|--------|
| 9:30 a.m.—Lightning and Protective Relaying | 11 |
| 9:30 a.m.—Communication | 11 |
| 9:30 a.m.—Industrial Power Applications | 12 |
| 9:30 a.m.—Aircraft Electrical, Apparatus and Utilization | 12 |
| 2:00 p.m.—Board of Directors' Meeting | |
| 2:00 p.m.—Supervisory Control and Stability Improvement | 12, 13 |
| 2:00 p.m.—Land Transportation | 13 |
| 2:00 p.m.—Industrial Power Applications | 13 |
| 2:00 p.m.—The Influence of Aircraft Environment on Electrical Design | 13, 14 |

Friday, January 26

| | |
|---|----|
| 9:30 a.m.—Conf. on Wartime Distribution Practices | 14 |
| 9:30 a.m.—Conf. on High-Frequency Cables | 14 |
| 9:30 a.m.—Conf. on High-Frequency Dielectric Heating | 15 |
| 2:00 p.m.—Conf. of Ind. System and App. Voltage Ratings | 15 |
| 2:00 p.m.—Conference on Air Transportation | 15 |

Monday, January 22

9:00 a.m.—Registration

9:30 a.m.—Power Generation

(Auditorium)

A. J. KRUPY, Presiding

- 45-4. Evaluation of Electric Distribution Losses in Terms of Generating Station Capacity Investment. Mario Mortara, Consulting Engineer. 10 cents (by mail 15 cents).
- 45-9. Use of Dielectric Absorption Tests in Drying Out Large Generators. H. C. Marcroft, Pennsylvania Water and Power Company. 10 cents (by mail 15 cents).
- 45-34. Frequency Changers—Characteristics, Applications, and Economics. S. B. Crary, R. M. Easley, General Elec. Co. 20 cents (by mail 25 cents).
- 45-36. Proposed Preferred Standards for Large 3,600-RPM, 3-Phase, 60-Cycle Condensing Turbo-Generators. Joint Committee on Turbo-Generators. AIEE-ASME. 15 cents (by mail 20 cents).

9:30 a.m.—Conference on Temperature Measurements of A-C Machines and Standards

(Room 502)

C. P. POTTER, Presiding

- 45-37. Temperature Limits and Abstracts of Present Standards and Practices for Stationary Contact Surfaces. Subcommittee on Conduction in Stationary Contact Surfaces, AIEE. 10 cents (by mail 15 cents).
- 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. 10 cents (by mail 15 cents).
Presentation by title.
- 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. 20 cents (by mail 25 cents).
Presentation by title.

Advance Copies of Technical Papers may be purchased at the registration desk or at Institute headquarters at prices indicated. Only numbered papers are available. 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** and the **TRANSACTIONS**.

Winter Technical Meeting

9:30 a.m.—Basic Sciences

(Room 501)

J. G. BRAINERD, Presiding

- 45-38. Power Geometry of General Transmission Systems. William Altar, Westinghouse Elec. & Mfg. Co. 15 cents (by mail 20 cents).
- 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. 15 cents (by mail 20 cents).
- 45-1. Two-Phase Co-ordinates of a Four-Phase Network. E. W. Kimbark, Northwestern Univ. 10 cents (by mail 15 cents).
- 45-40. Transient Response of Controlled Rectifier Circuits. P. T. Chin, G. E. Walter, General Elec. Co. 20 cents (by mail 25 cents).
- CP.* A Method for Demonstrating the Voltage and Current Wave Forms of Controlled Rectifiers. *Different methods of grid control and the voltage and current wave forms at different parts of the rectifier circuit will be demonstrated.* P. T. Chin and E. E. Moyer, General Elec. Co.

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

(Auditorium)

(A. J. KRUPY, Presiding)

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
Hal Gibson, 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.

over

MONDAY—Continued

2:00 p.m.—Electrical Machinery

(Room 501)

F. S. BROWN, Presiding

- 45-41. Standards and Insulation Characteristics of Oil-Insulated Transformers. F. J. Vogel, Illinois Inst. of Tech. 10 cents (by mail 15 cents).
- 45-42. Measurements of Stray Load Loss in Induction Motors. D. H. Ware, General Elec. Co. 10 cents (by mail 15 cents).
- 45-12. Measurement of the Subtransient Impedences of Synchronous Machines. Gordon F. Tracy, Univ. of Wisconsin and William F. Tice, Barber Colman Co. 10 cents (by mail 15 cents).
- 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. 10 cents (by mail 15 cents).

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

(Room 502)

W. P. DOBSON, Presiding

This conference is sponsored by the AIEE Standards Subcommittee on Applications of Statistical Methods. The purpose is to give information on the principles of statistical analysis as applied to quality control; to describe several applications of these methods with a view to arousing interest and promoting study of further applications in the field of the Institute's activities.

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

6:30 p.m.—Eta Kappa Nu - Tau Beta Pi Dinner

(Miller's Restaurant, 144 Fulton Street
between Broadway and Nassau Street)

Professor V. Karapetoff will give a nonmathematical discussion on "Fundamental Concepts of Relativity." Ladies and guests welcome. Additional guests accommodated up to noon Monday but notify Mr. Weller: CHelsea 3-1000 Ex. 285. Cost \$2.50 including tip.

Winter Technical Meeting

Tuesday, January 23

9:30 a.m.—Circuit Breakers

(Auditorium)

H. E. STRANG, Presiding

- 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. 25 cents (by mail 30 cents).
- 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. 10 cents (by mail 15 cents).
- 45-45. A High-Capacity High-Voltage 3-Cycle Oil Circuit Breaker. H. L. Byrd, E. B. Rietz, General Elec. Co. 10 cents (by mail 15 cents).
- 45-46. The Next Step in Interrupting Capacity 5,000,000 Kva. A. W. Hill, W. M. Leeds, Westinghouse Elec. & Mfg. Co. 15 cents (by mail 20 cents).

9:30 a.m.—Electric Welding

(Room 502)

L. W. CLARK, Presiding

- 45-29. Analysis of Arc-Welding Reactors. C. M. Wheeler, General Elec. Co. 10 cents (by mail 15 cents).
- 45-48. The Power Distribution Problem in Arc Welding. H. W. Pierce, C. E. Smith, New York Shipbuilding Corp. 15 cents (by mail 20 cents).
- 45-28. Power Supply for A-C Arc Welding. A. U. Welch, R. F. Wyer, General Elec. Co. 15 cents (by mail 20 cents).
- CP.* Modern Developments in the Use of Arc Welding. W. J. Conley, The Lincoln Elec. Co.

9:30 a.m.—Machinery Insulation

(Room 501)

A. M. de BELLIS, Presiding

- 45-50. Rating of High-Temperature Induction Motors. P. L. Alger, H. A. Jones, General Elec. Co. 10 cents (by mail 15 cents).
- 45-49. Insulation Resistance and Dielectric Absorption Characteristics of Large A-C Stator Windings. J. S. Askey, J. S. Johnson, Westinghouse Elec. & Mfg. Co. 15 cents (by mail 20 cents).
- 45-30. Organo-Silicon Compounds for Insulating Electrical Machines. T. A. Kauppi, Dow Corning Corp.; G. L. Moses, Westinghouse Elec. & Mfg. Co. 15 cents (by mail 20 cents).
- 45-23. The Application of Silicone Resins to Insulation for Electrical Machinery. J. DeKiep, L. R. Hill, G. L. Moses, Westinghouse Elec. & Mfg. Co. 15 cents (by mail 20 cents).

over

**2:00 p.m.—Conference on Temperature
Measurement of D-C Machines**

(Room 503)

W. R. HOUGH, Presiding

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

(Room 501-A)

W. R. SMITH, Presiding

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

(Room 501-B and C)

W. C. WHITE and H. E. STRANG, Presiding

- 45-20. Arc Backs in Rectifier Circuits—Artificial Arc-Back Tests. R. D. Evans, A. J. Maslin, Westinghouse Elec. & Mfg. Co. 25 cents (by mail 30 cents).
- 45-51. Rectifier Fault Currents. C. C. Herskind, H. L. Kellogg, General Elec. Co. 15 cents (by mail 20 cents).
- 45-52. Anode Circuit-Breaker Design and Performance Criteria. E. W. Boehne, W. A. Atwood, General Elec. Co. 20 cents (by mail 25 cents).
- 45-53. Voltage and Current Relations for Controlled Rectification with Inductive and Generative Loads. K. P. Puchlowski, Westinghouse Elec. & Mfg. Co. 20 cents (by mail 25 cents).

2:00 p.m.—Protective Devices

(Auditorium)

H. W. COLLINS, Presiding

- 45-54. Improved Fault Protection for Rural Distribution Systems. A. Van Ryan Kyle Corp. 10 cents (by mail 15 cents).
- 45-8. Graphical Method of Calculating Fault Currents on Rural Distribution Systems. F. W. Linder, Rural Electrification Adm. 10 cents (by mail 15 cents).
- 45-55. Rectifier Relay for Transformer Protection. E. L. Michelson, Commonwealth Edison Co. 10 cents (by mail 15 cents).
- 45-56. New Solenoid Mechanism for Magne-Blast Breaker. B. W. Wyman, J. H. Keagy, General Elec. Co. 20 cents (by mail 25 cents).
- 45-57. Nine Years' Experience with Ultra High-Speed Reclosing of High-Voltage Transmission Lines. Philip Sporn, C. A. Muller, American Gas and Elec. Service Corp. 10 cents (by mail 15 cents).

Winter Technical Meeting

2:00 p.m.—Electrical Machinery

(Room 502)

L. A. KILGORE, Presiding

- 45-16. Inherent Errors in the Determination of Synchronous Machine Reactances by Test. C. Concordia, F. J. Maginniss, General Elec. Co. 20 cents (by mail 25 cents).
- 45-22. Damping and Synchronizing Torques of Power Selsyns. C. Concordia, Gabriel Kron, General Elec. Co. 20 cents (by mail 25 cents).
- 45-14. Transient Electrical Torques of Turbine Generators during Short Circuits and Synchronizing. H. S. Kirschbaum, Westinghouse Elec. & Mfg. Co. 10 cents (by mail 15 cents).
- 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. 10 cents (by mail 15 cents).

6:30 p.m.—Smoker at the Hotel Commodore

(Grand Ballroom)

5:30 p.m.—Cocktail hour

6:30 p.m.—Dinner

8:00 p.m.—Floor Show

9:15 p.m.—Get-together

Tickets \$6.00 per person. All seats reserved—tables for ten.

Wednesday, January 24

10:00 a.m.—General Session

(Auditorium)

President C. A. POWEL, Presiding

Presentation of Alfred Noble Prize to W. R. Wilson

Presentation of Honorary Member Certificate to Dr. Dugald C. Jackson

Address: "Research and Its Effect on Winning the War." J. Carlton Ward, Jr., President and Director, Fairchild Engine and Airplane Corporation

over

2:00 p.m.—Cables and Corrosion

(Auditorium)

R. J. WISEMAN, Presiding

- 45-58. The Dielectric Strength and Life of Impregnated Paper—IV. J. B. Whitehead, J. M. Kopper, The Johns Hopkins Univ. 20 cents (by mail 25 cents).
- 45-59. Electrolysis and Corrosion of Underground Power-System Cables. L. J. Gorman, Consolidated Edison Co. of N. Y., Inc. 20 cents (by mail 25 cents).
- 45-60. Galvanic Corrosiveness of Soil Waters. H. S. Phelps, F. Kahn, Philadelphia Elec. Co. 10 cents (by mail 15 cents).
- 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. 10 cents (by mail 15 cents).

2:00 p.m.—Industrial Control

(Room 501)

E. H. ALEXANDER, Presiding

- 45-27. Variable Unbalanced Voltage Control. W. R. Wickerham, Westinghouse Elec. & Mfg. Co. 10 cents (by mail 15 cents).
- 45-62. Principles of Grid Control for Thyratrons. P. H. ACO.† Chin, E. E. Moyer, General Elec. Co. 20 cents (by mail 25 cents).
- 45-64. An Interval Timer for Arc Duration. J. S. Quill, General Elec. Co. 10 cents (by mail 15 cents).

2:00 p.m.—Instruments and Measurements

(Room 502)

C. L. DAWES, Presiding

- 45-24. Orthomagnetic Bushing-Current Transformer for Metering. A. Boyajian, G. Camilli, General Elec. Co. 10 cents (by mail 15 cents).
- 45-19. A Modulated Frequency System of Telemetering. H. E. Renfro, A. P. Peterson, Control Corp. 10 cents (by mail 15 cents).
- 45-65. Dynamic Measurements on Electromagnetic Devices. E. L. Norton, Bell Tel. Labs., Inc. 20 cents (by mail 25 cents).
- 45-66. A Portable Instrument for Measuring Insulation Resistance at High Voltage. F. W. Atkinson, R. B. Taylor, The Takk Corp. 10 cents (by mail 15 cents).

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

(Room 503)

W. A. LEWIS, Presiding

Winter Technical Meeting

8:00 p.m.—Joint IRE-AIEE Session

(Auditorium)

President C. A. POWEL, Presiding

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

The History of the Edison Medal

Karl T. Compton

Chairman, Edison Medal Committee

Address: R. C. Muir

Presentation of Medal: President Powel

Response: Dr. Alexanderson

Introduction of Captain Dow: H. M. Turner,

Retiring President, IRE

Address: "The Navy Electronics Program and Some of Its Past, Present, and Future Problems."

Captain J. B. Dow, U.S.N.

It is well recognized that electronics is playing a tremendously vital role in the successful efforts of the United States Navy. Captain Dow has been associated with this most important work for many years. He is well qualified to describe the various elements which are a part of this program, and to reveal how practical problems have been overcome in connection with getting into the hands of the fighting forces an adequate supply of important fighting tools in which electronics plays a part.

Thursday, January 25

9:30 a.m.—Lightning and Protective Relaying

(Auditorium)

H. E. WULFING, Presiding

- 45-67. Impedances Seen by Relays during Power Swings with and without Faults. Edith Clarke, General Elec. Co. 25 cents (by mail 30 cents).
- 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. 10 cents (by mail 15 cents).
- 45-26. Lightning Investigation on Transmission Lines — VIII. W. W. Lewis, C. M. Foust, General Elec. Co. 25 cents (by mail 30 cents).

9:30 a.m.—Communication

(Room 503)

H. A. AFFEL, Presiding

- 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. 15 cents (by mail 20 cents).
- 45-69. The Resistance-Coupled Amplifier. L. G. Cowles, The Texts Co. 20 cents (by mail 25 cents).
- 45-70. The Tapered Transmission Line. J. W. Milnor, Consulting Engineer. 10 cents (by mail 15 cents).

over

THURSDAY—Continued

9:30 a.m.—Industrial Power Applications

(Room 502)

JOHN GROTZINGER, Presiding

- 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. 15 cents (by mail 20 cents).
- 45-71. Application of Electrical Equipment for Propeller Milling Machine. H. E. Morton, Morton Mfg. Co.; O. G. Rutenmiller, Crosley Corp. 10 cents (by mail 15 cents).
- 45-35. Design of Sealed Ignitron Rectifiers for Three-Wire Service. M. M. Morack, General Elec. Co. 10 cents (by mail 15 cents).
- 45-72. Application of Capacitors for Power-Factor Improvement of Induction Motors. W. C. Bloomquist, W. K. Boice, General Elec. Co. 15 cents (by mail 20 cents).

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

(Room 501)

D. R. SHOULTS, Presiding

- 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. 10 cents (by mail 15 cents).
- 45-81. The Amplidyne Generator Applied to Speed Controlled Electric Gun Turrets for Aircraft. L. A. Zahorsky, General Elec. Co. 15 cents (by mail 20 cents).
- 45-82. 400-Cycle Inverters for Military Aircraft. C. P. Hayes, L. L. Ray, General Elec. Co. 10 cents (by mail 15 cents).
- 45-6. Aircraft Illumination. W. W. Davies, United Air Lines, Inc. 10 cents (by mail 15 cents).

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

(Auditorium)

H. E. WULFING, Presiding

- 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. 10 cents (by mail 15 cents).
- 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. 10 cents (by mail 15 cents).

Winter Technical Meeting

45-78. Power-Line Carrier Channels. M. J. Brown, Westinghouse Elec. & Mfg. Co. 15 cents (by mail 20 cents).

45-13. Improving Stability by Rapid Closing of Bus-Tie Switches. E. W. Kimbark, Northwestern Univ. 10 cents (by mail 15 cents).

2:00 p.m.—Land Transportation

(Room 503)

H. C. GRIFFITH, Presiding

45-31. Compressed Air Circuit Breakers in A-C Railway Service. H. M. Wilcox, D. C. Harker, Westinghouse Elec. & Mfg. Co. 10 cents (by mail 15 cents).

45-17. Mercury-Arc Rectifiers for Railroads. S. S. Watkins, Gibbs and Hill, Inc. 10 cents (by mail 15 cents).

45-10. Electrification and Signalling of the Canadian National Railways Terminal at Montreal, Canada. R. G. Gage, Canadian National Railways. 10 cents (by mail 15 cents).

45-11. Grounding of Circuits on Self-Propelled Vehicles. D. D. Ewing, Purdue Univ. 10 cents (by mail 15 cents).

2:00 p.m.—Industrial Power Applications

(Room 502)

JOHN GROTZINGER, Presiding

45-25. The Design of Busbar Industrial Distribution Systems: An Epitomization of Available Data. T. J. Higgins, Illinois Inst. of Tech. 25 cents (by mail 30 cents).

45-21. Dodge Chicago Plant's Electric Power Distribution Scheme with Airplane Engine Testing Power Recovery. E. L. Bailey, Chrysler Corp. 10 cents (by mail 15 cents).

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. 20 cents (by mail 25 cents).

45-80. Induction Heating of Moving Strip. R. M. Baker, Westinghouse Elec. & Mfg. Co. 25 cents (by mail 30 cents).

2:00 p.m.—The Influence of Aircraft Environment on Electrical Design

(Room 501)

Colonel T. B. HOLLIDAY, Presiding

45-73. Electrolytic Corrosion. Methods of Evaluating Insulating Materials Used in Tropical Service. B. H. Thompson, K. N. Mathes, General Elec. Co. 15 cents (by mail 20 cents).

45-5. Simulated High-Altitude Testing of Aircraft Ignition Cables and Connectors. H. H. Race, A. M. Ross, Jr., General Elec. Co. 10 cents (by mail 15 cents).

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- 45-74. Preferred Practices for Electrical Control Devices for Aircraft. F. W. Hottenroth, Jr., General Elec. Co. 10 cents (by mail 15 cents).
- 45-75. Effect of Altitude on Temperature Rise of Aircraft Transformers. V. M. Montsinger, General Elec. Co. *Presentation by title.* 10 cents (by mail 15 cents).
- 45-76. Vibration Insulation and Structural Rubber. J. A. Connon, U. S. Rubber Co. *Presentation by title.* 15 cents (by mail 20 cents).

Friday, January 26

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

(Auditorium)

H. E. WULFING, Presiding

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

(Room 501)

Lt. Commander JOHN H. NEHER, Presiding

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.

Winter Technical Meeting

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

(Room 502)

J. J. ORR, Presiding

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

(Room 502)

JOHN GROTZINGER, Presiding

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

(Room 503)

D. R. SHOULTS, Presiding

2:00 p.m.—Conference on High-Frequency Cables —continued

(Room 501)

*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.

*Please Collect Mail Promptly at
Mail and Telegram Desk.*

American Institute of Electrical Engineers

COMMITTEE MEETINGS

Monday, January 22

| | Room |
|--|---------------------|
| 9:30 a.m.—Working Group on Distribution Protector Tubes | 1001 |
| 12:15 p.m.—Power Generation Conf. Speakers | Room 2, Engrs. Club |
| 2:00 p.m.—Basic Sciences | 1001 |
| 2:00 p.m.—Subcomm. on Circuit Breakers, Switches, and Fuses | 15th Floor |
| 2:00 p.m.—Subcomm. on Lightning Protective Devices | 15th Floor |
| 2:00 p.m.—Lamme Medal | 1101 |
| 2:00 p.m.—Subcommittee on Fault Current Limiting Devices | 1105 |
| 2:00 p.m.—Rectifier Subcommittee of Electronics Committee | 903 |
| 4:00 p.m.—Subcommittee on Relays | 1101 |
| 7:30 p.m.—Subcommittee on Applications of Statistical Methods | Alcove, 10th Floor |
| 7:30 p.m.—Committee on Electrical Machinery | 1101 |
| 7:30 p.m.—Working Group on Transformer Protection | 903 |

Tuesday, January 23

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| 9:00 a.m.—Working Group of Rectifier Subcomm. | Alcove, 10th Fl. |
| 10:00 a.m.—National Nominating | 1001 |
| 10:30 a.m.—Working Group on Short Circuit Calculations in Low Voltage Systems | 1105 |
| 12:15 p.m.—Power Generation | Room 4, Engrs. Club |
| 2:00 p.m.—Electric Welding | 1001 |
| 2:00 p.m.—M.I.T. Visiting Committee | Alcove, 10th Floor |
| 2:00 p.m.—Student Branches | ASCE Board Room, 15th Floor |
| 2:00 p.m.—Production and Application of Light | 903 |
| 2:00 p.m.—Transformer Subcomm. | President's Room, 15th Floor |
| 2:00 p.m.—Safety | 501-A |
| 4:00 p.m.—Protective Devices | 1101 |
| 4:00 p.m.—Metallic Rectifier Subcommittee | 1105 |

Wednesday, January 24

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| 9:30 a.m.—Std. for A-C Automatic Circuit Reclosers | 903 |
| Noon —Power Transmission and Distribution | Engrs. Club |
| Noon —Domestic and Commercial Applications | Engrs. Club |
| 2:00 p.m.—Rectifier Subcomm. of Electronics Committee | 1001 |
| 2:00 p.m.—Sections | ASCE Board Room, 15th Floor |
| 2:00 p.m.—Lightning and Insulator Working Group | 15th Floor |
| 2:00 p.m.—Air Transportation | 1101 |
| 4:00 p.m.—Joint Subcommittee on Power System Application of Carrier Current | Alcove, 10th Floor |
| 4:00 p.m.—Electrochemistry and Electrometallurgy | 903 |
| 4:15 p.m.—Research | 1105 |

Thursday, January 25

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| 9:00 a.m.—Finance Committee | 1001 |
| 9:30 a.m.—Instrument Transformer Subcomm. | 1105 |
| 10:00 a.m.—Insulation Resistance Subcomm. | 15th Floor |
| 10:00 a.m.—Planning and Coordination | 903 |
| 10:30 a.m.—Land Transportation | 1001 |
| 2:00 p.m.—Board of Directors | 1001 |
| 2:00 p.m.—Working Group on Neutral Grounding Devices | Alcove, 10th Floor |
| 2:00 p.m.—Subcommittee on Stationary Contact Surfaces | 1101 |
| 2:30 p.m.—Membership Committee | 903 |
| 7:30 p.m.—Automatic Stations | 1001 |

Friday, January 26

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| 9:00 a.m.—Subcommittee on Aircraft Elec. Rotating Machinery | 903 |
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