American Institute of Electrical Engineers

WINTER CONVENTION

January 23-27, 1933

HEADQUARTERS—Engineering Societies Building, 33 West 39th St., New York, N.Y.

Announcement

THIS YEAR'S WINTER CONVENTION, which will be held with headquarters in the Engineering Societies Building, New York, January 23-27, will have all the splendid features of past winter convention programs. Fourteen technical sessions, a smoker, medal presentation, lecture, dinner-dance, and a variety of inspection trips assure a busy and profitable week with ample opportunity for enjoyment.

The Edison Medal awarded to Bancroft Gherardi "for his contributions to the art of telephone engineering and the development of electrical communication" will be presented to him in the Engineering Auditorium on the evening of Wednesday, January 25, at 8:15 o'clock.

The Smoker will be held in the Engineering Societies Building on Tuesday evening, January 24. Schrafft will serve a buffet-dinner at 6:00 p.m. and later a variety of entertainment will be offered in the auditorium. Tickets $2.75 per person.

The Dinner-Dance, which always affords much pleasure to those in attendance, will be held this year in the Ballroom of the Hotel Roosevelt at 7:30 o'clock on the evening of Thursday, January 26. Reservations may be made in advance for tables seating eight or ten people. Tickets $5.00 per person.

For the Ladies in attendance, in addition to some of the features already mentioned, a luncheon and bridge has been arranged at Engineering Woman's Club on Tuesday, January 24, by the ladies' committee, Mrs. E. B. Meyer, chairman. During the convention information will be available at the ladies' headquarters as to theaters, shopping districts, etc.

The Board of Directors will meet at Institute headquarters, Room 1001, Wednesday, January 25, 2:00 p.m.

Reduced Railroad Rates of half fare on the return trip over the same route will be available to members and guests, provided 100 certificates are validated at the registration desk. Present the enclosed slip to your local ticket agent. Consult him regarding the territory and dates applicable, and obtain your certificate authorized by the railroad passenger associations.

Register in Advance by filling in and mailing the enclosed **ADVANCE REGISTRATION CARD.** Your badge will be ready on arrival and you will avoid congestion at the registration desk.

H. H. HENLINE,
National Secretary

Winter Convention Technical Program, January 23-27, 1933

Monday

10:00 a.m.—Registration

2:00 p.m.—General Session

Opening of Convention:
H. P. CHARLESWORTH, *President*

Presentation:
Alfred Noble Prize to FRANK M. STARR

The Technical Sessions:
W. H. HARRISON, *Chairman*, Technical Program Committee

2:30 p.m.—(A) Automatic Stations

Pipe Line Pumping and Automatic Control
JOHN FIES, Texas Power and Light Co.

The Principle of Condenser Discharge Applied to Central Station Control Problems
P. H. GULLIKSEN, Westinghouse Electric & Mfg. Co.

Principles of the Direct-Selection System of Supervisory Control
M. E. REAGAN, Westinghouse Electric & Mfg. Co.

Improved Power Supply Betters Street Railway Service
J. A. NOERTKER, The Cincinnati Street Railway Co.

2:30 p.m.—(B) Electric Welding

*New Studies of the Arc Discharge
J. LELAND MYER, Engineering Foundation Fellow from Lehigh University

High-Frequency Arc Welding Generator
G. A. JOHNSTONE, Great Lakes Electric Mfg. Co., Chicago, Ill.

Transients in Arc Welding Generators
A. R. MILLER, Lehigh University

High Velocity Vapor Stream in the Vacuum Arc
R. C. MASON, Westinghouse Electric & Mfg. Co.

*Performance and Design of Electric Welders with Controlled Transients
F. CREEDY, Lehigh University

10:00 a.m.—(D) Rotating Electrical Machinery

Low-Frequency Self-Exciting Commutator Generator
J. I. HULL, General Electric Co.

Some Factors Affecting Temperature Rise in Armatures of Electrical Machines
C. J. FECHHEIMER, Consulting Engineer

Parallel Operation of A-C Generators—Action of Governors and Damper Windings
M. STONE, Westinghouse Electric & Mfg. Co.

Synchronous Motor Pulling-Into-Step Phenomena
H. E. EDGERTON, G. S. BROWN, K. J. GERMESHAUSEN and R. W. HAMILTON, Massachusetts Institute of Technology

Two-Reaction Theory of Synchronous Machines—Part II
R. H. PARK, Calco Chemical Co.

2:00 p.m.—(E) Transportation

Application of Air Conditioning to Railroad Passenger Cars
W. C. GOODWIN and CHARLES KERR, Jr., Westinghouse Electric & Mfg. Co.

Calculation of Single Phase Series Motor Control Characteristics
H. G. MOORE and C. J. AXTELL, General Electric Co.

Operating Data on the Cleveland Union Terminal Electrification
F. H. CRATON, General Electric Co. and H. W. PINKERTON, Cleveland Union Terminals Co.

Power Supply for Main Line Railway Contact Systems
P. A. McGEE, Reading Railroad Co., and E. L. HARDER, Westinghouse Electric & Mfg. Co.

Simplified Speed Control for Single Phase Locomotives
W. A. GIGER, Allis-Chalmers Mfg. Co.

2:00 p.m.—Sound Measurement

(Informal meeting for a limited number of engineers especially interested)

Address—Sound Measurement
HARVEY FLETCHER, Bell Telephone Laboratories, Inc.

After discussion there will be a meeting of the Sectional Committee on Acoustical Measurements and Terminology

Tuesday

10:00 a.m.—(C) Communication

Communication Requirements of Railroads
J. L. NIESSE, New York Central Railroad Co., and R. C. THAYER, Great Northern Railway Co.

Communication System on the Pennsylvania Railroad
I. C. PORSHEE, Pennsylvania Railroad

Railroad Signaling and Train Control
R. B. AMSDEN and W. M. VANDERSLUIS, Illinois Central Railroad

Modern Signaling on the Reading Railroad
E. W. REICH and G. I. WRIGHT, Reading Co.

Centralized Traffic Control and Train Control of the Baltimore and Ohio Railroad
J. H. DAVIS and G. H. DRYDEN, Baltimore and Ohio Railroad Co.

Wednesday

9:30 a.m.—(F) Education

Address—The Professional Development of the Engineer
R. I. REES, American Telephone & Telegraph Co.

9:30 a.m.—(G) Insulation Coordination

Progress Report on Impulse Testing of Commercial Transformers
F. J. VOGEL, Westinghouse Electric & Mfg. Co. and V. M. MONTSINGER, General Electric Co.

Factors Influencing the Insulation Coordination of Transformers
F. J. VOGEL, Westinghouse Electric & Mfg. Co.

Coordination of Insulation
V. M. MONTSINGER, W. L. LLOYD, Jr., and J. E. CLEM, General Electric Co.

Protection of Rotating Alternating-Current Machines against Travelling-Wave Voltages
W. J. RUDGE, Jr., R. W. WIESEMAN and W. W. LEWIS

A Recent Development in High-Current Mercury-Arc Rectifiers
E. H. REID and C. C. HERSKIND, General Electric Co.

Synchronous-Mechanical Rectifier-Inverter
S. S. SEYFERT, Lehigh University

Thursday

10:00 a.m.—(H) Lightning

Recommendations for Impulse Voltage Testing—Lightning and Insulator Subcommittee
PHILIP SPORN, *Chairman*

Lightning Investigation on Transmission Lines—III
W. W. LEWIS and C. M. FOUST, General Electric Co.

Lightning Experience on 132-Kv Lines of the American Gas and Electric Company System
PHILIP SPORN, American Gas and Electric Co.

Impulse and Dynamic Flashover Studies of 26-Kv Wood Pole Transmission Construction
A. S. BROOKES and R. N. SOUTHGATE, Public Service Electric & Gas Co., and E. R. WHITEHEAD, Westinghouse Electric & Mfg. Co.

Operating Experience with Wood Utilized as Lightning Insulation
H. L. MELVIN, Electric Bond and Share Co.

10:00 a.m.—(I) Electrochemistry and Electrometallurgy

Address—Increasing Application of Electricity to Chemical Processes
COLIN G. FINK, Columbia University

Light Sensitive Process Control
J. V. ALFRIEND, Jr., Westinghouse Electric & Mfg. Co.

Address—Resistance of Storage Battery Separators and the Restivity and Viscosity of Battery Electrolytes
GEORGE W. VINAL, Bureau of Standards

Address—High Conductivity Oxygen-Free Copper
P. H. BRACE, Westinghouse Electric & Mfg. Co. and SYDNEY ROLLE, U.S. Metals Refining Co.

2:00 p.m.—(J) Instruments and Measurements

A Standard of Low Power Factor
W. B. KOUWENHOVEN and L. J. BERBERICH, The Johns Hopkins University

A Bridge for Precision Power Factor Measurements on Small Oil Samples
J. C. BALSBAUGH and P. H. MOON, Massachusetts Institute of Technology

Skin Effect in Rectangular Conductors
H. C. FORBES and L. J. GORMAN, The New York Edison Co.

*Impulse Voltage Testing
C. F. HARDING and C. S. SPRAGUE, Purdue University

*The Measurement of High Surge Voltages
P. L. BELLASCHI, Westinghouse Electric and Mfg. Co.

Laboratory Measurement of Impulse Voltages
J. C. DOWELL and C. M. FOUST, General Electric Co.

2:00 p.m.—(K) Industrial Applications

Circuit Breaker Protection for Industrial Circuits
H. J. LINGAL and O. S. JENNINGS, Westinghouse Electric & Mfg. Co.

Variable Voltage Equipment for Oil Well Drilling
A. H. ALBRECHT, Standard Oil Co. of Calif.

Recent Developments in Electronic Devices for Industrial Control
F. H. GULLIKSEN, Westinghouse Electric & Mfg. Co.

Friday

10:00 a.m.—(L) Protective Devices

The Use of Communication Facilities in Transmission Line Relaying
J. H. NEHER, Philadelphia Electric Co.

Protection of Electrical Apparatus—Recommended Practise, Relay Subcommittee
O. C. TRAVER, *Chairman*

A Sequence Relay for Network Protectors
H. S. ORCUTT, United Electric Light and Power Co., and M. A. BOSTWICK, Westinghouse Electric & Mfg. Co.

Phase Sequence Relaying
H. R. SEARING, The New York Edison Company and The United Electric Light & Power Co. and R. E. POWERS, Westinghouse Electric & Mfg. Co.

10:00 a.m.—(M) Selected Subjects

Higher Steam Pressures and Temperatures—A Challenge to Engineers
M. D. ENGLE and I. E. MOULTROP, The Edison Electric Illuminating Co. of Boston

*Actions taken by the Symbols, Units, and Nomenclature Committee of the International Union of Pure and Applied Physics in Reference to C.G.S. Magnetic Units
A. E. KENNELLY, Harvard University

Empirical Equations for the Magnetization Curve
J. P. BARTON, Milwaukee, Wis.

†Tensor Analysis of Rotating Machinery
GABRIEL KRON, United Research Corp.

2:00 p.m.—(N) Research and Applied Electronics

The Dielectric Losses in Impregnated Paper
J. B. WHITEHEAD, The Johns Hopkins University

Applications of Harmonic Commutation for Thyratron Converters
C. H. WILLIS, Princeton University

A New Method for Initiating the Cathode of an Arc
J. SLEPIAN and L. R. LUDWIG, Westinghouse Electric & Mfg. Co.

Capacitance and Loss Variations with Frequency and Temperature in Composite Insulation
H. H. RACE, General Electric Co.

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*These papers are under consideration for presentation at the winter convention, but up to date of going to press have not been officially placed upon the program.

†This paper will not be published in advance form by the Institute but copies may be made available by the respective authors.

Inspection Trips

The Committee will need advance information as to the number to be accommodated. Please fill in the *Registration Card for Inspection Trips* and mail it with the *Advance Registration Card* also filled in.

Special Trips—Wednesday, January 25

No. 1—Scenic Trip up Hudson River

This trip will start from the Engineering Societies Building, cross the new George Washington Bridge, travel north up the Hudson River on the top of the Palisades to the famous Bear Mountain Inn, where a stop will be made for luncheon and an inspection of the facilities of this most interesting summer and winter playground. Continuing on up the river through the grounds of West Point the trip will embrace a portion of the celebrated Storm King Highway.

The return trip will be via the Bear Mountain Bridge, the famous Scenic Approach Highway and the Bronx River Parkway Extension.

The trip will be made by De Luxe Busses and the fare will not exceed $2.25, exclusive of luncheon.

No. 2—To Newark Airport—the Busiest in the World—and a Flight Over Newark Bay and Lower New York

Arrangements have been made with Transcontinental and Western Air, Inc., to visit the eastern terminus of a great transcontinental air transport system, at Newark Airport. There will be an inspection of the airport facilities and a demonstration of ground to plane Radio-Telephone System developed for T. & W. A. by the Western Electric Company.

Opportunity will be afforded for taking a flight over Newark Bay and lower New York in the twelve passenger planes in regularly established service between New York and Newark, and Pittsburgh, Chicago, Kansas City, Los Angeles, San Francisco, etc. After the flights one of the planes will leave on a regular scheduled trip for Los Angeles, arriving the following day.

The route to the airport will be via the new $21,000,000 four and one-half mile overhead highway which, starting at the New Jersey terminus of the Holland Tunnel, extends across the Jersey meadow land and affords a fine view of the area and its development. Returning, the route will be by way of recently completed trunk highway and the new George Washington Bridge, to the Engineering Societies Building.

The trip will be made by De Luxe Busses, and the round-trip fare including flight will not exceed $3.00.

No. 3—New Jersey Industrial Area

Leaving the Engineering Societies Building the route will be via the Holland Tunnel and the new $21,000,000 overhead express highway recently opened to traffic, and which for four and one-half miles affords a splendid view of the area and its industrial plants, railroad systems and electrifications, electric generating stations and high-voltage transmission lines.

After visiting several industrial plants to see interesting production operations and other stops, which will be described in the convention literature, the return will be via the George Washington Bridge to headquarters.

Other Points of Interest

Inspection privilege has been accorded to other places of interest as set forth below. Individuals or groups desiring for special reasons to visit some point not scheduled, are requested to communicate their wishes to the Inspection Desk in order that the necessary arrangements may be made, if possible.

Communicating and Signalling Facilities of Railroads
- Pennsylvania Railroad at Pennsylvania Station
- New York Central Railroad at Grand Central Station

Operating Rooms of Commercial Telegraph Companies
- International Telephone and Telegraph Company
- R. C. A. Communications, Inc.
- Western Union Telegraph Company

Rectifier Substation of Long Island Railroad
- Showing latest type of grid-controlled rectifiers for heavy traction service

The Delaware, Lackawanna and Western Railroad Electrification

Roseland Switching Station of Public Service Electric & Gas Company

160,000-Kw Tandem Compound Units of the Brooklyn Edison Company, and Research Laboratory

East River Generating Station of New York Edison Company

Hell Gate Station, United Electric Light & Power,—Load Ratio Control Equipment. Units in operation for control of both voltage and phase angle

A-C Calculating Board of Pennsylvania R.R. located at Pennsylvania Station

New Eighth Avenue Subway Substation

Vertical Distribution in new 70-story building, Radio City, and general inspection of project

Electrical Testing Laboratories

Electrical Research Products, Inc.

Electrical Institute of The Electrical Association of New York, Inc.

New York Museum of Science and Industry, where may be seen the new permanent exhibits relating to Power and Electrical Science and Technology. These exhibits should prove of great interest to our members and their guests

COMMITTEES

The 1933 winter convention committee is constituted as follows:

~~E. B. Meyer~~, *Chairman* — C. R. Jones

J. W. Barker	F. M. Farmer	C. R. Jones	C. E. Stephens
T. F. Barton	W. H. Harrison	L. W. W. Morrow	H. R. Woodrow

Chairmen of the subcommittees are:

C. R. Jones, convention executive committee

~~C. R. Beardsley~~, dinner-dance — W. R. Smith, inspection trips

R. A. McClenahen, smoker — ~~Mrs. E. B. Meyer~~, ladies' entertainment

George Sutherland 6-15

H. C. Cotter

Mrs. H. R. Woodrow

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