

1884



1920

PROGRAM

of the

THIRTY-SIXTH

ANNUAL

CONVENTION

of the

AMERICAN

INSTITUTE *of*

ELECTRICAL

ENGINEERS

June 29—July 2, '20

"The Greenbrier"

WHITE SULPHUR SPRINGS

WEST VIRGINIA

THIRTY-SIXTH ANNUAL CONVENTION

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JUNE 29—JULY 2, 1920



THE Convention will be opened with the delivery of the Annual Presidential Address, by President Calvert Townley, followed by the introduction of President-elect Arthur W. Berresford. The remainder of this session will be devoted to the reading of the Annual Reports of the Technical Committees. These reports cover the activities of the various committees for the past year and the advance in the state of the art in the field covered by the committees.

On Wednesday morning nine technical papers will be presented. Five papers will be under the auspices of the Electrical Machinery Committee, Mr. B. A. Behrend, Chairman. The remaining four will be on miscellaneous subjects.

Wednesday evening will be devoted to the Annual Conference of Sections Delegates and Officers under the auspices of the Sections Committee. All members interested are welcome to attend.

Thursday morning's session under the Protective Devices Committee, Mr. D. W. Roper,

“The Greenbrier” WHITE SULPHUR
SPRINGS, W. VA.

Thirty-sixth Annual Convention

Chairman, will be devoted to the presentation of four papers.

On Thursday evening a technical session will be held for which nineteen papers are scheduled. One set of eight papers will be devoted to electric welding. The remainder of the session will be occupied by the Report of the Joint Committee on Determination of Power Factor in Polyphase Circuits, together with eleven papers on the subject.

The last technical session of the Convention, held Friday morning, will consider the subject of excitation and six technical papers will be presented under the auspices of the Power Stations Committee, Mr. Philip Torchio, Chairman.

ENTERTAINMENT

White Sulphur Springs offers every facility for engaging in all kinds of indoor and outdoor recreation.

The Entertainment Committee has arranged a comprehensive list of contests and attractive prizes will be offered. The events include the Golf Tournament, Tennis Tournament and annual Baseball Game. The ladies will be particularly interested in the scheduled teas, card parties, dances and drives. The details as to time, etc., of the various events will be found on the "Schedule of Events," printed elsewhere in this program.

In addition to the items scheduled, the Committee will make announcements at the Convention of other features, such as possibly swimming tournament, fishing tournament, auto drives and tea parties and special events.

Members are particularly urged to register early for the events in which they are interested and help make the program a notable success.

American Institute Electrical Engineers

Technical Program

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Reprints of all papers will be distributed at the Registration Bureau and in the meeting rooms during the Convention.

Tuesday, June 29

10:00 A. M.

1. *President's Address*, by CALVERT TOWNLEY.
2. *Introduction of President-elect* ARTHUR W. BERRESFORD.
3. *Report of Technical Committees.*

Wednesday, June 30

9:30 A. M.

Electrical Machinery Papers

4. *Classification of Large Steam Turbo Generator Failures*, by PHILIP TORCHIO, New York Edison Co.
5. *Ventilation and Temperature Problems in Large Turbo Generators*, by B. G. LAMME, Westinghouse Electric & Mfg. Co.
6. *Temperatures in Large A-C. Generators*, by W. J. FOSTER, General Electric Co.
7. *Some Practical Experience with Embedded Temperature Detectors in Large Generators*, by F. D. NEWBURY and C. J. FECHHEIMER, both of Westinghouse Electric & Mfg. Co.
8. *Eddy Current Losses in Armature Conductors*, by R. E. GILMAN, Westinghouse Electric & Mfg. Co.

Miscellaneous Papers

9. *The Corona Voltmeter and the Electric Strength of Air*, by J. B. WHITEHEAD, Johns Hopkins University, and T. ISSHIKI, Shibaura Engineering Works.
10. *Reactive Power and Magnetic Energy*, by JOSEPH SLEPIAN, Westinghouse Electric & Mfg. Co.
11. *Theory of Speed and Power Factor Control of Large Induction Motors by Neutralized Polyphase Alternating-Current Commutator Machines*, by JOHN I. HULL, General Electric Co.
12. *High Tension Insulator Porcelain*, by W. D. A. PEASLEE, Jeffery-Dewitt Insulator Co.

Thirty-sixth Annual Convention

8:30 P. M.
Conference of Section Delegates

Thursday, July 1

10:00 A. M.

Protective Devices Papers

13. *The Use of Reactors on Large Central Station Systems*, by R. F. SCHUCHARDT, Commonwealth Edison Co.
14. *Stability of High Power Generating Stations*, by C. P. STEINMETZ, General Electric Co.
15. *Voltage Stresses in Reactors in Service*, by F. H. KIERSTEAD and ROYAL MEEKER, both of General Electric Co.
16. *Calculation of Magnetic Force on Disconnecting Switches*, by H. B. DWIGHT, Canadian Westinghouse Co.

8:00 P. M.

Electric Welding Papers

17. *Design of Constant-Current Generators for Arc Welding*, by K. L. HANSEN, Mechanical Appliance Co.
18. *Automatic Arc Welding Apparatus*, by S. R. BERGMAN and H. L. UNLAND, both of General Electric Co.
19. *Arc Welding Machines of the Wilson Welder and Metals Company*, by ALEX. CHURCHWARD, Wilson Welder & Metals Co.
20. *Characteristics and Performance of Arc Welding Machinery*, by A. M. CANDY, Westinghouse Electric & Mfg. Co.
21. *Arc Welding Machinery of the U. S. Light and Heat Corporation*, by W. A. TURBAYNE, U. S. Light & Heat Corporation.
22. *Recent Developments in Electro-Perussive Welding*, by D. F. MINER, Westinghouse Electric & Mfg. Co.
23. *Electric Arc Welding Apparatus*, by ROBERT E. KINKEAD, Lincoln Electric Co.
24. *A-C. Transformers for Arc Welding*, by C. J. HOLSLAG, Electric Arc Cutting & Welding Co.

Power Factor Papers

25. *Report of Joint Committee.*
26. *Polyphase Power Factor*, by F. C. HOLTZ, Sangamo Electric Co.

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27. *Power Factor Improvement Dependent upon Adequate Metering*, by WILLIAM L. BROWN, Electric Machinery Co.
28. *Power Factor in Polyphase Systems*, by F. B. SILSBEE, Bureau of Standards, Washington, D. C.
29. *Power Factor and Unbalance on a Polyphase System*, by C. J. FECHHEIMER, Westinghouse Electric & Mfg. Co.
30. *Polyphase Power Factor*, by H. L. WALLAU, Cleveland Electric Illuminating Co.
31. *Polyphase Power Factor*, by P. M. LINCOLN, Lincoln Electric Co.
32. *Polyphase Power Representation by Means of Symmetrical Coordinates*, by C. L. FORTESCUE, Westinghouse Electric & Mfg. Co.
33. *Measurement of Power Factor on Unbalanced Polyphase Circuits*, by R. D. EVANS, Westinghouse Electric & Mfg. Co.
34. *Polyphase Power Factors and Unbalanced Loads*, by PHILIP TORCHIO, New York Edison Co.
35. *Power Factor in Polyphase Circuits*, by W. H. PRATT, General Electric Co.

Friday, July 2

10:00 A. M.

Excitation Papers

36. *Considerations Which Determine the Selection and General Design of an Exciter System*, by J. T. BARRON, Public Service Electric Co., of N. J., and A. E. BAUHAN, Penn. Water & Power Co.
37. *Factors in Excitation Systems of Large Central Station Steam Plants*, by J. W. PARKER and A. A. MEYER, both of Detroit Edison Co.
38. *Exciters and Systems of Excitation*, by H. R. SUMMERHAYES, General Electric Co.
39. *The Application of D-C. Generators to Exciter Service*, by C. A. BODDIE and F. L. MOON, Westinghouse Electric & Mfg. Co.
40. *Exciter Practise in the Northwest*, by J. D. ROSS, Board of Public Works, Seattle, Wash.
41. *Generator Excitation Practise in the Hydroelectric Plants of the Southern California Edison Company*, by H. H. COX and H. MICHENER, both of So. California Edison Co.

SCHEDULE OF EVENTS

36th Annual Convention of American Institute of Electrical Engineers "The Greenbrier," White Sulphur Springs, W. Va., June 29-July 2, 1920

	MORNING	AFTERNOON	EVENING
TUESDAY June 29	10.00 A. M. President's Address Introduction of President-elect Reports of Technical Committees	2.30 P. M. Golf Tournament — Qualifying rounds (Greens fee, \$2.00 per day—\$1.00 for locker for 4 days) Tennis Tournament— { Singles Qualifying rounds { Doubles Mixed	9.00 P. M. Informal Reception and Dance (Greenbrier Ballroom)
WEDNESDAY June 30	9.30 A. M. Electrical Machinery and Miscellaneous Papers (9 papers)	2.30 P. M. Golf Tournament—Continued Tennis Tournament—Continued 4.30 P. M. Board of Directors' Meeting 5.00 P. M. Tea, Spring Room, Greenbrier	8.30 P. M. Conference of Section Delegates (Open to all interested) 8.30 P. M. Piano Recital by Professor Vladimir Karapetoff, of Cornell University (Greenbrier Ballroom) 8.30 P. M. Dancing
THURSDAY July 1	10.00 A. M. Protective Devices Papers (4 papers)	2.30 P. M. Tennis Tournament } Finals Golf Tournament } 3.00 P. M. Baseball Game 4.30 P. M. Tea at Kates Mountain Club (For ladies. Transportation provided)	8.00 P. M. Electric Welding and Power Factor Papers (19 papers) 8.30 P. M. Ladies' Bridge and Hearts Tournament
FRIDAY July 2	10.00 A. M. Excitation Papers (6 papers)	2.30 P. M. Golf Tournament { If not Tennis Tournament { previously completed 4.00 P. M. Presentation of Prizes 4.30 P. M. Tea at Casino	

In addition to the amusement features scheduled above, the Entertainment Committee will make announcements at the Convention of other events.

Many very attractive auto drives can be arranged for at reasonable rates. "The Union Loop" drive passes through 60 miles of beautiful mountain scenery with an hour's stop at "Organ Cave." \$15.00 per party of six; Packard cars.

There are drives for small parties to luncheon places for chicken and waffle dinners: Elmhurst Farm, The Pines, Log Cabin, High Top, and Kates Mountain Club.

Thirty-sixth Annual Convention

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and Chairmen of all Sections.

American Institute Electrical Engineers

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C. FRANCIS HARDING, Vice-Chairman	
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and the Chairmen of all Sections as follows:

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1919-1920

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**Rules Governing Presentation and
Discussion of Papers**

At technical sessions papers may be read by title only, or by abstract, as determined by the Meetings and Papers Committee.

Members desiring to discuss a paper should notify the Meetings and Papers Committee, or the Chairman of the meeting, in advance of the meeting. Such members will be allowed not to exceed ten minutes each for discussion before any other members are given an opportunity to discuss the paper.

Written discussion submitted in advance by an absent member may be read by some member who is present, and five minutes may be allowed for its presentation.

In the open discussion following the presentation of the discussion by letter and by members who have given advance notification, each member will be allowed five minutes unless additional time is available after all others who desire to speak have been heard.

AMERICAN INSTITUTE
OF
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NEW YORK, N. Y.