American Institute of Electrical Engineers

SUMMER TECHNICAL MEETING

Program

ST. LOUIS, MO.
JUNE 26-30
1944

Meeting Headquarters
HOTEL JEFFERSON
GENERAL INFORMATION

The Program is the largest in the history of the Institute. It has been expanded to aid the war effort and include new fields of technical activities—industrial control, induction heating, many electronics applications, domestic and commercial applications, and four aircraft sessions. During the general session important anniversaries will be commemorated.

Room Locations are given in the program. The Gold Room, Crystal Room, and Ivory Room are on the mezzanine floor. Rooms 1-9, inclusive, are on the second floor.

Please register promptly on arrival at the meeting. A registration fee of $2.00 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. Efforts will be made to deliver telegrams and messages promptly. Any mail received for members will be held at the Registration Desk until called for. Letters undelivered at the close of the meeting will be forwarded to the latest mailing address. Please make a regular practice of observing the bulletin boards.

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 July 15. The original, typewritten, double-spaced copy, complete with original illustrations and two carbon copies with photostates 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.

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.
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Summer Technical Meeting

SCHEDULE OF EVENTS

Monday, June 26
9:30 a.m.—Registration
10:00 a.m.—Annual Meeting
2:00 p.m.—Conference of Officers, Delegates, and Members
2:00 p.m.—District (No. 7) Student Conference (Room 2)

Tuesday, June 27
9:30 a.m.—Committee on Student Branches (Room 2)
9:30 a.m.—Power Generation
9:30 a.m.—Aircraft Equipment
9:30 a.m.—Basic Sciences
9:30 a.m.—Quality Control by Statistical Methods
12:15 p.m.—Luncheon Meeting and Address
2:00 p.m.—Conferences of Officers, Delegates, and Members
2:00 p.m.—Power Transmission
2:00 p.m.—Aircraft Ignition and Auxiliaries
2:00 p.m.—Electric Welding
5:00 p.m.—Meeting of President, President-Elect, Vice-Presidents and Vice-Presidents-Elect (Room 3)
6:30 p.m.—Sections Committee Dinner (Room 4)

Wednesday, June 28
10:00 a.m.—General Session
12:00 m.—Southern District (No. 4) Luncheon (Room 2)
2:00 p.m.—Morse Telegraph Centennial
2:00 p.m.—Power Cables
2:00 p.m.—Aircraft Lighting and Instruments
2:00 p.m.—Industrial Control
2:00 p.m.—Educational Problems in Engineering Colleges and Their Effects in Industry
3:30 p.m.—Clinic on College and High School Student Counseling
4:30 p.m.—Research Committee Meeting (Room 4)

Thursday, June 29
9:30 p.m.—District (No. 7) Executive Committee Meeting (Room 3)
9:30 a.m.—Symposium on Electronic Frequency Converters
9:30 a.m.—Aircraft Instruments
9:30 a.m.—Heating Houses Electrically
9:30 a.m.—Temperature Standards
12:30 p.m.—Board of Directors' Luncheon and Meeting (Room 4)
2:00 p.m.—Temperature Standards—continued
2:00 p.m.—Switchgear
2:00 p.m.—Electronics and Measurements
2:00 p.m.—Experiences with Electric House Heating
4:00 p.m.—Open Meeting of Committee on Domestic and Commercial Applications

Friday, June 30
9:30 a.m.—Electrochemistry and Electrometallurgy
9:30 a.m.—Transformers
9:30 a.m.—Industrial Power Applications
2:00 p.m.—Relays
2:00 p.m.—Land Transportation
2:00 p.m.—Motors and Related Subjects
PROGRAM
Monday, June 26

9:30 a.m.—Registration
Mezzanine

10:00 a.m.—Annual Meeting
Gold Room
President NEVIN E. FUNK, Presiding

Address of Welcome: Dr. William McClellan, Past
President, AIEE
Board of Directors’ Report (in abstract), H. H.
Henline, National Secretary
National Treasurer’s Report, W. I. Slichter
Committee of Tellers’ Report on Election of Officers
Introduction of, and Presentation of President’s
Badge to Charles A. Powel; Response by Mr. Powel
Report on Institute Prizes for Papers, F. A. Cowan,
Chairman, Committee on Award of Institute Prizes
Presentations by President Funk
Presentation of Lamme Medal to Arthur H. Kehoe
Presentation of Faraday Medal of Institution of
Electrical Engineers to Dr. Irving Langmuir
Any Other Business that may be presented
President’s address, Nevin E. Funk

2:00 p.m.—Conference of Officers, Delegates, and
Members—Clinics on Section Operation
and Management

There will be three separate clinics with parallel
meetings. At each clinic, the meeting will be de-
veloped by questions and discussion from the floor,
which will be answered and supplemented by an
Advisory Panel Group. There will be an informal
panel discussion on the following subjects:

1. Meetings and programs
2. Fellowship
3. Student Activities
4. (a) Technical Groups
   (b) Subsections
5. General Discussion

Larger Sections Clinic
Room 1
R. M. PFALZGRAFF, Presiding
W. F. HENN, Secretary

Advisory Panel Group
W. R. Clark       R. V. Shepherd
R. C. Gorham      R. G. Warner
Summer Technical Meeting

Smaller Sections (Concentrated Membership) Clinic
Room 3
G. W. BOWER, Presiding
C. S. SCHIFREEN, Secretary
Advisory Panel Group
Walter Criley          Everett S. Lee
Frederick Krug         E. T. Mahood

Smaller Sections (Scattered Membership) Clinic
Room 4
A. C. MUIR, Presiding
L. E. HOWARD, Secretary
Advisory Panel Group
M. S. Coover           G. R. Peirce
V. P. Hessler          E. W. Schilling

Tuesday, June 27

9:30 a.m.—Power Generation
Ivy Room
A. C. MONTEITH, Presiding

44-98. The Summation of Load Curves, R. F. Hamilton, War Production Board. 20 cents (by mail 25 cents).
44-85. Prevention of Rotor Winding Deformation on Turbo-Generators. J. G. Noest, Consolidated Edison Co. of N. Y., Inc. 20 cents (by mail 25 cents).
44-107. Conditions Controlling the Economic Selection of Prime Movers. B. G. A. Skrotzki, Consolidated Edison Co. of N. Y., Inc. 25 cents (by mail 30 cents).
*CP. Progress Report on Turbo-Generator Standardization. AIEE Group of AIEE-ASME Joint Committee on Turbo-Generators

9:30 a.m.—Aircraft Equipment
Crystal Room
Lt. Colonel T. B. HOLLIDAY, Presiding

44-90. Aircraft Fuses Must Protect. J. C. Lebens, Jr., Bussmann Mfg. Co. 10 cents (by mail 15 cents).

—continued
Tuesday—continued

9:30 a.m.—Basic Sciences

Room 3

J. D. TEBO, Presiding


44-129. Fundamentals of Hearing Aid Design. W. P. Penn, Vacolite Co. 15 cents (by mail 20 cents).

9:30 a.m.—Quality Control by Statistical Methods

Room 1

A. S. LANGSDORF, Presiding


*CP. Educational Courses on Quality Control. Paul R. Rider, Washington Univ.

*CP. Application of Statistical Principles to Acceptance Inspection of Ordnance Materiel. Captain A. R. Burgess


12:15 p.m.—Luncheon Meeting — Invitations to St. Louis Electrical Board of Trade

Gold Room

2:00 p.m.—Conference of Officers, Delegates, and Members

Gold Room

R. M. PFALZGRAFF, Vice-Chairman, Sections Committee, Presiding

Opening Remarks by Chairman

The Relation of Section and National Activities
Dr. Nevin E. Funk, President, AIEE
Remarks by President-Elect, AIEE
District Activities. H. H. Henline, National Secretary, AIEE

The Enhancement of the Professional Status of the Engineer—"WILL YOU HELP?" Everett S. Lee, Chairman, ECPD

Sections Committee Activities. G. W. Bower, Chairman, Sections Committee

Intermission

Section Finance. T. F. Barton, Chairman, Finance Committee
Discussion by Delegates

Section Membership Activity. J. H. Pilkington, Chairman, Membership Committee
Discussion by Delegates

Section Papers and Prize Awards. F. A. Cowan, Chairman, Committee on Award of Institute Prizes
Discussion by Delegates

General Discussion by Delegates

Intermission

The Rendezvous Arduous. A Portrayal of the Executive Committee in Session, Utopia Section, AIEE. C. S. Schifreen, Chairman

F. J. Berger, Vice-Chairman (Paper & Meetings Committee)
A. C. Muir, Secretary-Treasurer
W. R. Clark, Past-Chairman

Executive Committee and Chairmen
W. F. Henn (Entertainment) G. W. Bower (Membership)
L. E. Howard (Publicity) M. D. Hooven (Sub-Section)

2:00 p.m.—Power Transmission

Ivory Room

H. E. WULFING, Presiding


—continued
American Institute of Electrical Engineers


2:00 p.m.—Aircraft Ignition and Auxiliaries

Crystal Room
Lt Colonel T. B. HOLLIDAY, Presiding

44-112. Aircraft Storage Battery Design. J. L. Rupp, National Battery Co. 10 cents (by mail 15 cents).

44-121. Battery Booster Coils for Airplane Engine Ignition Systems. A. V. Alvino, Bendix Aviation Corp. 10 cents (by mail 15 cents).

44-123. Dimensional Study of Light-Weight Motors for Aircraft. W. J. Morrill, Electric Motors and Specialties Co. 10 cents (by mail 15 cents).

44-124. Auxiliary Power Plant Requirements. L. E. O’Neil, Andover Motors Corp. 10 cents (by mail 15 cents).

2:00 p.m.—Electric Welding

Room 1
J. H. LAMPE, Presiding


Summer Technical Meeting

Wednesday, June 28

10:00 a.m.—General Session

Gold Room

President NEVIN E. FUNK, Presiding

Commemoration of Important Anniversaries
IEC 40th Anniversary
AIEE 60th Anniversary
Morse Telegraph Centennial

Address: "The Engineer's Present and Future Responsibilities." Dr. William McClellan, Past President, AIEE

2:00 p.m.—Morse Telegraph Centennial

Gold Room

H. A. APFEL, Presiding

44-127. American Telegraphy after 100 Years. F. E. d'Humy, P. J. Howe, Western Union Telegraph Co. 25 cents (by mail 30 cents).

44-126. Developments in the Field of Cable and Radio Telegraph Communications. Haraden Pratt, Mackay Radio and Telegraph Co.; J. K. Roosevelt, All America Cables and Radio, Inc. 10 cents (by mail 15 cents).

44-128. Telegraphy in the Bell System, J. A. Duncan, American Tel. and Tel. Co.; R. D. Parker, Bell Tel. Labs., Inc.; R. E. Pierce, American Tel. and Tel. Co. 25 cents (by mail 30 cents).

2:00 p.m.—Power Cables

Ivory Room

R. J. WISEMAN, Presiding


44-134. Operation of Low-Pressure Gas-Filled Cable. C. T. Hatcher, Consolidated Edison Co. of N. Y., Inc. 10 cents (by mail 15 cents).

—continued
2:00 p.m.—Aircraft Lighting and Instruments
Crystal Room
F. O. WISMAN, Presiding


44-91. Lighting Required for Commercial Airline Aircraft. W. A. Petrasek, American Airlines, Inc. 10 cents (by mail 15 cents).


44-149. Magnesyn Remote Indication. R. S. Childs, Bendix Aviation Corp. 10 cents (by mail 15 cents).

2:00 p.m.—Industrial Control
Room 9
F. E. HARRELL and E. H. ALEXANDER, Presiding

44-142. Modern Cargo Winch Control for Use on Victory Ships. F. H. Holt, General Elec. Co. 15 cents (by mail 20 cents)


44-139. The Degree of Short-Circuit Protection Afforded Small Low-Voltage A-C and D-C Starters by Means of Fuses and Circuit Breakers. B. W. Jones, General Elec. Co. 10 cents (by mail 15 cents).

2:00 p.m.—Educational Problems in Engineering Colleges and Their Effects in Industry
Room 7
ROBIN BEACH, Presiding

*CP. Postwar Courses and Curricula in Electrical Engineering. R. G. Kloeffler, Kansas State College.

*CP. Interpretation of Present Hiatus in Engineering Education on Industrial Postwar Demands for Engineers. J. L. Hamilton, Assistant Vice-President, Century Electric Co.
Summer Technical Meeting

3:30 p.m.—Clinic on College and High School Student Counseling
Room 7
S. L. HENDERSON, Presiding

*CP. Co-operation of Sections. G. W. Bower, Chairman, Sections Committee

*CP. Values of Counseling to High School Students. T. L. Jones, Chairman, Educational Committee, St. Louis Section

*CP. High School Students Counseling in Metropolitan New York Area. S. P. Shackleton, Chairman, Student Guidance Committee, N. Y. Section

*CP. Ways and Means of Sections Co-operating with College AIEE Branches. R. C. Gorham, Univ. of Pittsburgh

Thursday, June 29

9:30 a.m.—Symposium on Electronic Frequency Converters
Gold Room
JOHN GROTZINGER, Presiding


9:30 a.m.—Aircraft Instruments
Crystal Room
F. O. WISMAN, Presiding


44-151. Electrically Operated Gyroscopic Instruments. H. Konet, Bendix Aviation Corp. 10 cents (by-mail 15 cents).

—continued
Thursday—continued


9:30 a.m.—Heating Houses Electrically

Ivory Room

W. F. OGDEN, Presiding

44-154 Load Calculation Procedure for Electric Panel Space Heating. B. F. Raber, F. W. Hutchinson, Univ. of Calif. 25 cents (by mail 30 cents).

44-155. Electrothermal Space Heating and Air Conditioning. G. H. Krueger, Bonneville Power Adm. 10 cents (by mail 15 cents).


9:30 a.m.—Conference on Temperature Standards

F. E. HARRELL and C. P. POTTER, Presiding
Room 1

The purpose of the conference sessions is to review temperature standards including hot spot allowances for rotating machines in the fractional and integral horsepower sizes. These sessions represent a continuation of the activity started at the winter technical meeting in New York. There will be a series of conference papers presented giving actual test results of temperature tests on various types and sizes of motors.

Those expected to present conference papers are as follows:

L. E. Hildebrand, General Elec. Co.
T. C. Lloyd, Robbins and Meyers, Inc.
C. P. Potter, Wagner Elec. Corp.

2:00 p.m.—Conference on Temperature Standards
—continued

Room 1

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Summer Technical Meeting

2:00 p.m.—Switchgear

Crystal Room

J. B. MacNeill, Presiding

44-157. Protection of Large D-C Machines by Means of High-Speed Circuit Breakers. J. Elmer Housley, Aluminum Co. of America; Otto Jensen, I-T-E Circuit Breaker Co. 10 cents (by mail 15 cents).


2:00 p.m.—Electronics and Measurements

Gold Room

C. L. Dawes, Presiding


*CP. The Design and Testing of Radio Frequency Coaxial Cables Parts I and II. N. D. Kenney and P. H. Ware, Simplex Wire & Cable Co.

2:00 p.m.—Conference on Experiences with Electric House Heating

Ivory Room

W. F. Ogden, Presiding


*CP. Reverse Refrigeration Applied to a New Haven Office Building. E. H. Walton; C. A. Williams, United Illuminating Co.

—continued
4:00 p.m.—Open Meeting of Committee on Domestic and Commercial Applications

Ivory Room

W. F. OGDEN, Chairman


Friday, June 30

9:30 a.m.—Electrochemistry and Electrometallurgy

Gold Room

W. C. KALB, Presiding


44-100. Treatment and Casting of Metals by Electromagnetic Forces. W. W. Hoke, Garden City, N. Y. 15 cents (by mail 20 cents).

44-166. Induction Heating—Selection of Frequency. N. R. Stansel, General Elec. Co. 15 cents (by mail 20 cents).


44-99. Voltage Transients in Arc-Furnace Circuits. Subcommittee on Transient Voltages in Arc Furnace Circuits. 15 cents (by mail 20 cents).
9:30 a.m.—Transformers  
Crystal Room  
F. E. Harrell and M. S. Oldacre, Presiding


44-170. High-Voltage, Compressed-Gas Power Transformers. H. M. Hobart, Consulting Engineer. 10 cents (by mail 15 cents).


9:30 a.m.—Industrial Power Applications  
Room 1  
John Grotzinger, Presiding


*CP. Electric Power Distribution for Industrial Plants. Report of Committee on Industrial Power Applications


2:00 p.m.—Relays  
Gold Room  
J. B. MacNeill, Presiding


—continued
Friday—continued


2:00 p.m.—Land Transportation

Ivory Room
A. G. OEHLER, Presiding


2:00 p.m.—Motors and Related Subjects

Room 1
J. F. CALVERT, Presiding


44-177. The Nature of Vibration in Electrical Machinery. T. D. Graybeal, Univ. of Calif. 15 cents (by mail 20 cents).

*CP.: Conference presentation; no advance copies of papers available; not intended for publication in TRANSACTIONS.
†ACO.: Advance copies only available; not intended for publication in TRANSACTIONS.