

# GREAT LAKES DISTRICT MEETING FEATURING INDUSTRIAL APPLICATIONS



Indianapolis, Indiana  
October 9-11, 1946

**HEADQUARTERS:  
Claypool Hotel**



## **INDIANAPOLIS — THE CITY WHERE SPEED WAS BORN!**

Indianapolis, endowed with industries, beautiful homes and parks captures the imagination of the visitor with its Indianapolis Motor Speedway.

The famous race course attracts drivers and spectators from America and Europe. Sightseers feel the roaring presence of Milton, Rickenbacker, Cummings, Roberts, Shaw and other racing celebrities. The primary purpose always has been to perfect materials, tools and design practice of the automotive industry.

The romance of the Speedway makes it something of unusual interest.



# A I E E GREAT LAKES DISTRICT MEETING PROGRAM

## 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.

Please order by number only and enclose remittance.

## Wednesday, October 9

### 8:30 a.m.—Registration

(Mezzanine of Claypool Hotel)

### 9:45 a.m.—Opening Session

(Assembly Room)

S. C. Leibing, Presiding

Welcome: The Hon. Robert H. Tyndall  
Mayor of Indianapolis  
Announcements.

### 10:00 a.m.—Conference on Electrical Machinery

(Assembly Room)

M. S. Oldacre, Presiding

- 46-202. Asynchronous and Single Phase Operation of Synchronous Machines. A. W. Rankin, General Elec. Co. 30 cents by mail.
- DP.\*\* Fractional Horsepower Motors for Operation on Thyratrons. W. R. Goss and F. T. Carlson, General Elec. Co.
- DP.\*\* Properties of Magnet Wire. H. A. Smith, General Elec. Co.



Calibrating Shunts at the Esterline-Angus Company

- CP.\* New NEMA Fractional Horsepower Motor Standards. Their Effect on Refrigeration and Pump Application. C. P. Potter, Wagner Electric Corporation.

### 2:00 p.m.—Conference on Electronics

(World War Memorial Auditorium)

O. W. Livingston, Presiding

- DP.\*\* Electronics in Measurements. R. J. Kryter, Esterline-Angus Co.
- 46-203. Frequency Performance of Thyratrons. H. H. Wittenberg, RCA Mfg. Co. 20 cents by mail.
- DP.\*\* Microwave Magnetrons. Dr. F. F. Reike, Purdue Univ.
- CP.\* Electron and Ion Beam Instruments. G. W. Dunlap, General Elec. Co.

### 2:00 p.m.—Conference on Power Transmission and Distribution

(Assembly Room)

F. V. Smith, Presiding

- DP.\*\* Simplicity in Transformer Protection. E. T. B. Gross, Illinois Inst. of Tech.
- DP.\*\* Rural Electrification in Iowa. C. Maxwell Stanley, Stanley Eng. Co.
- DP.\*\* Experience with Single-Pole Relaying and Reclosing on a Modern 132-kv System. J. J. Trainor and C. E. Parks, Public Service Co. of Indiana.
- DP.\*\* Calculation of Power System Losses by Formula Using Constants Determined by the Network Analyzer. J. B. Ward, Purdue Univ.
- CP.\* Trends in Rural-Line Sectionalizing. R. F. Quinn, General Elec. Co.

## Thursday, October 10

### 9:30 a.m.—Conference on Industrial Power Applications

(Assembly Room)

L. A. Umansky, Presiding

- CP.\* Multiple Generator for Paper Machines. G. E. Plaisted, General Elec. Co.
- CP.\* Lightning Protection for Industrial Plants. A. M. Opsahl, Westinghouse Elec. Corp.
- CP.\* Automatic Contouring Control. J. M. Morgan, General Elec. Co.
- CP.\* Demonstration of Industrial Distribution Systems. H. G. Barnett, Westinghouse Elec. Corp.

### 9:30 a.m.—Conference on Communications

(World War Memorial Auditorium)

J. J. Pilliod, Presiding

- DP.\*\* Manufacturing Problems of Airborne Transmitter Equipment. John A. Green, Collins Radio Co.



# PROGRAM—Indianapolis, Ind.,—October 9-11, 1946



Testing Meters at the Esterline-Angus Company

- DP.\*\* Phenomenon of Microwaves (Demonstration).  
H. R. Gruelle, Indiana Bell Tel. Co.
- 46-204. Analysis of Four Terminal Networks Containing  
ACO.† Vacuum Tubes. W. R. Abbott, Iowa State College.  
15 cents by mail.
- DP.\*\* Mobile Radio Telephone Service. J. G. Harden,  
Indiana Bell Tel. Co.
- 46-205. A Multi-Channel Microwave Radio Relay System.  
H. S. Black, J. W. Beyer, T. J. Grieser, and F. A.  
Polknhorn, Bell Tel. Labs., Inc. 25 cents by mail.

## 2:00 p.m.—Conference on Institute Activities and Study of the Organization of the Engineer- ing Profession

(World War Memorial Auditorium)

T. G. LeClair, Presiding

1. Address: "How Should the Engineer Look at Tomorrow?"—J. Elmer Housley, President, AIEE
2. The Institute's Committee on Planning and Co-ordination, through its subcommittee on professional activities, has held discussions on the organization of the profession at a number of national and District meetings during the year. This session has been arranged to afford members of the Great Lakes District an opportunity to hear the subcommittee's chairman, T. G. LeClair, report on the study and to participate in a discussion of the subject. It is hoped that members who plan to attend will review information published in recent issues of Electrical Engineering, particularly the report on pages 169-173 of the April, 1946 issue, and take part in discussion from the floor.
3. Retiring Vice-President M. S. Coover, a member of the subcommittee, will close the discussion.

## 6:30 p.m.—Banquet

(Riley Room)

T. G. LeClair, Presiding

Address: "Nature and Implications of Atomic Energy." Dr. Frank H. Spedding.

Dr. Spedding is a member of the Manhattan District Declassification Committee. This is the national committee that has been set up to recommend what scientific information obtained during the war in connection with atomic research can be released at this time in order to aid in the progress of scientific development. Dr. Spedding was flown to and from the Pacific in order to witness the Bikini tests.

## Friday, October 11

### 9:30 a.m.—Conference on Industrial Control

(Assembly Room)

R. W. Jones, Presiding

- CP.\* Trends in Co-ordinated Control. G. A. Moffett,  
General Elec. Co.
- DP.\*\* Control of Slip Ring Motors by Means of Un-  
balanced Primary Voltages. N. L. Schmitz, Cutler-  
Hammer, Inc.
- DP.\*\* Problems in Design of A-C Magnets and Sole-  
noids. T. L. Rader, Illinois Inst. of Tech.

### 9:30 a.m.—Conference on Basic Sciences

(World War Memorial Auditorium)

K. W. Miller, Presiding

- CP.\* The Electronic Numerical Integrator and Com-  
puter. T. K. Sharpless, Univ. of Penna.
- CP.\* Radio Active Isotopes and Their Application.  
G. Freidlander, General Elec. Co.
- DP.\*\* Latest Developments in High Energy Physics.  
Karl Lark-Horovitz, Purdue Univ.
- DP.\*\* Solar Electron Radiation and its Effect on Power  
Transmission and Communications. Dr. J. T.  
Wilson, Allis-Chalmers Mfg. Co.

### 12:30 p.m.—Luncheon and Meeting of Great Lakes District Executive Committee

(Columbia Club)

### 1:30 p.m.—Inspection Trips

ACO.†: Advance copies only available; not intended for publication in TRANSACTIONS.

CP.\*: Conference paper, no advance copies are available; not intended for publication in TRANSACTIONS.

DP.\*\*: District paper, no advance copies are available; not intended for publication in TRANSACTIONS.





Lenore Substation of the Public Service Company of Indiana

## MEETING FEATURES

The Great Lakes District Meeting is jointly sponsored by the Fort Wayne and Central Indiana Sections. This District covers a large industrial area, consequently a considerable portion of the program deals with industrial problems. Special attention is called to the general meeting Thursday afternoon conducted by the Planning and Coordination Committee. This meeting will be a continuation of similar meetings held at the Winter, Summer, Pacific Coast, and several District Meetings. Everyone is urged to attend this Conference.

**ADVANCE REGISTRATION:** Please fill out and mail the advance registration card promptly. This will save time at the registration desk which will be located on the Mezzanine Floor of the Claypool Hotel Wednesday morning, October 9th. A Registration fee of \$2.00 will be charged nonmembers except enrolled students and immediate families of members.

**HOTEL ACCOMMODATIONS:** The Hotel and Registration Committee are handling reservations for the Claypool Hotel, meeting headquarters. The enclosed hotel reservation card, addressed to S. C. Leibing, Chairman of the Hotel and Registration Committee, should be used to make reservations. The Claypool Hotel has reserved 200 rooms. The rates are: Single Bed—\$2.75, \$3.00, and \$3.50; Double Bed—\$5.50; Twin Beds—\$6.00, \$7.15, \$7.70. Those desiring room reservations should promptly fill out the card indicating the rate of room desired and the number of occupants in one party, and mail as directed. Due to present-day conditions, those desiring rooms are urged to apply *immediately*. Confirmation will be sent by postcard, if desired.

**ENTERTAINMENT:** The banquet will be held at 6:30 p.m. Thursday, October 10th, in the Riley Room of the Claypool Hotel.

**LADIES' ENTERTAINMENT:** An appropriate entertainment program for the ladies will be provided.

**EXHIBITS:** To be held concurrently with the meeting a few appropriate exhibits will be established on the Mezzanine Floor of the Claypool Hotel. For information on exhibit space, refer to J. L. Wright, Jr., 4241 Melbourne Road, Indianapolis.

## INSPECTION TRIPS

**MARMON HERRINGTON COMPANY** located in Indianapolis and long established in the automotive industry, are builders of special mobile transportation equipment and lately have started the manufacture of all electric drive trolley coaches of modern design.

**THE ESTERLINE-ANGUS COMPANY, INC.**, located at Speedway City, has long been established and recognized throughout the industry in the development and manufacture of quality recording instruments with universal applications to many problems.

**ELI LILLY AND COMPANY** manufacturers of medicinal products has its home office in Indianapolis. In its plant may be seen the application of science to the production of medicine. Perhaps no industrial plant requires a greater diversity of equipment or embraces in its personnel a wider range of technical knowledge and skill.

**PUBLIC SERVICE COMPANY OF INDIANA, INC.**, has at their Lenore Substation at Indianapolis an interesting central power dispatching station for their entire system with associated carrier-current telemetering, carrier-frequency control and relaying.

**INDIANAPOLIS POWER & LIGHT COMPANY**, Harding Street station, is the main source of Indianapolis power supply. Its present rated capacity is 111,000 kw., provided by two units installed in 1931 and a third in 1941-42. A fourth unit similar to the third, with 37,500-kw. turbogenerator and a steam generator capable of delivering 400,000 lbs. per hour at 875-lb. pressure and 900°F. temperature, is under installation. Exhibited at this plant is the first Curtiss turbogenerator to go into commercial operation, at Newport, R. I., in 1903.

## COMMITTEES

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|--|---|
| F. H. Fleischer,<br><i>General Co-Chairman</i>                         | J. L. Wright, Jr. and<br>S. A. Zimmermann, <i>Co-chairmen of Publicity.</i> |
| S. C. Leibing,<br><i>General Co-Chairman</i>                           | C. E. Chatfield, <i>Chairman, Inspection Trips</i>                          |
| C. M. Summers, <i>Chairman Meetings and Papers</i>                     | E. R. Linke, <i>Chairman, Finance</i>                                       |
| S. C. Leibing, <i>Chairman, Entertainment, Hotels and Registration</i> | S. J. Winge, <i>Chairman, Student Activities</i>                            |

Issued by

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

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

PRINTED IN U.S.A.