

American Institute of Electrical Engineers

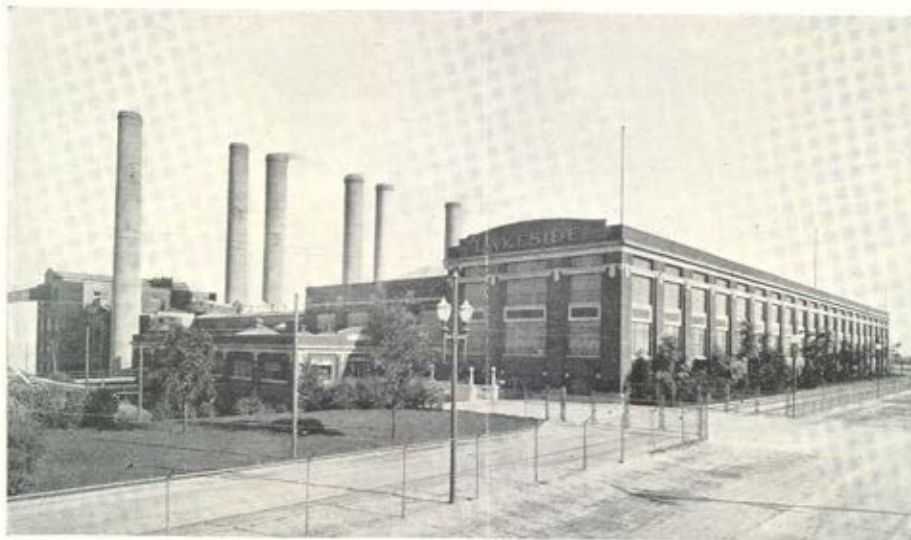
1884



1932

**GREAT LAKES**  
**DISTRICT MEETING**  
MILWAUKEE WISCONSIN

March 14-16, 1932  
at the Pfister Hotel



LAKESIDE POWER PLANT

# A.I.E.E.—Great Lakes District Meeting

March 14-16, 1932

## COMMITTEES

### District Meeting

Chairman, T. N. LACY, *Vice-President*, Great Lakes District

Vice-Chairman, F. A. KARTAK

Secretary, A. G. DEWARS, *Secretary*, Great Lakes District

Student Counselor, C. C. KNIPMEYER

N. H. Blume, Madison, Wis.

J. F. H. Douglas, Milwaukee, Wis.

F. R. Innes, Chicago, Ill.

Fraser Jeffrey, Milwaukee, Wis.

C. H. Krueger, Milwaukee, Wis.

F. H. Lane, Chicago, Ill.

L. C. Larson, Madison, Wis.

E. U. Lasson, Milwaukee, Wis.

C. E. Skroder, Urbana, Ill.

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Edward Bennett

L. R. Mapes

B. H. Clingerman

S. H. Mortensen

G. E. Lewis

G. G. Post

H. E. Wulfling

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J. D. Ball, *Chairman*

F. A. Coffin

R. G. Lockett

C. T. Evans

O. W. A. Oetting

S. C. Fraser

C. F. Skinner

J. A. Havlick

Sam Snead

R. M. VanVleet

### REGISTRATION AND HOTELS

J. U. Heuser, *Chairman*

H. A. Bartling

W. H. Fernholz

F. T. Coup

I. L. Illing

J. L. Defandorf

C. G. Matthews

### STUDENT PROGRAM

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E. W. Kane

V. M. Murray

### FINANCE

Fraser Jeffrey, *Chairman*

K. A. Auty

P. B. Harwood

R. L. Dodd

H. L. VanValkenburg

### PUBLICITY

R. R. Knoerr, *Chairman*

J. H. Sobey

### LADIES

Mrs. J. D. Ball, *Chairman*

Mrs. S. C. Fraser

Mrs. V. M. Murray

Mrs. Fraser Jeffrey

Mrs. E. W. Seeger

Mrs. E. W. Kane

Mrs. A. Simon

Mrs. F. A. Kartak

Mrs. C. F. Skinner

Mrs. S. H. Mortensen

Mrs. R. B. Williamson

### INSPECTION TRIPS

W. F. Lent, *Chairman*

C. W. Kuhn

L. F. Reinhard

J. A. Potts

R. C. Siegel

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# Great Lakes District Meeting

Milwaukee, Wis., March 14-16, 1932

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THE Great Lakes District, No. 5 of the A.I.E.E. will hold a three-day meeting at Milwaukee, Wis., March 14-16. Headquarters will be at the Pfister Hotel. The local committee has arranged an attractive program which consists of technical sessions, inspection trips, a banquet, and special entertainment for the ladies.

## Technical Sessions

Sixteen papers covering a wide range of subjects will be presented and discussed in three technical sessions which will be held, one on each day during the meeting. Some of these papers embrace design, theory and development in various fields of endeavor in the electrical art such as communication, electrical machinery, power generation, and power transmission and distribution. For those chiefly interested in theory there are several papers on the program which should have a broad appeal.

## Entertainment

The banquet, a real German dinner, will be held Tuesday evening at the Pfister Hotel. Special music and entertainment will be provided between courses.

The dinner will be followed by dancing for which unusual music has been arranged.

## Ladies' Entertainment

Special entertainment has been arranged for the visiting ladies including a bridge party, a musical and tea, and visits to local art galleries. An all city auto trip is being arranged which will enable the visitors to see the many points of interest for which the city is known.

## Registration

All who plan to attend the meeting should register in advance by mail. A card is enclosed for this purpose. No registration fee will be charged.



*Milwaukee Public Museum and Library*

## NOTICE

All technical sessions and the opening of the meeting will be held in the Fern Room of the Pfister Hotel. There will be a breakfast in the Main Dining Room at 8:00 a.m. daily for the authors and presiding officer of the technical session to be held that day.

## Monday

## 9:00 a.m.—Registration

(Seventh Floor Lobby)

## 9:30 a.m.—Opening of Meeting

*Opening Address:* T. N. Lacy, *Vice-President*, Great Lakes District, A.I.E.E.

*Welcoming Remarks:* Harry Sloan, *President*, Engineers' Society of Milwaukee

## Technical Session No. 1

*Presiding:* C. F. Harding

## The Proximity Effect and Its Application to the Concentration of Heating Currents

EDWARD BENNETT  
University of Wisconsin

## A General Method of Gaseous Tube Control

CARROLL STANSBURY  
Cutler-Hammer, Inc.

## \*Electrical Instruments in the Gas Industry

E. X. SCHMIDT  
Cutler-Hammer, Inc.

## Toll Switching Plan for Wisconsin

W. C. LALLIER  
Wisconsin Telephone Co.

## Police Teletypewriter Communication

R. E. PIERCE  
American Telephone and Telegraph Co.

## 10:00 a.m.—Student Activities Committee Executive Session

(Red Room)

*Presiding:* Prof. C. C. Knipmeyer, Rose Polytechnic Institute

\* These papers are under consideration for presentation at the Great Lakes District meeting, but up to the date of going to press have not been officially placed upon the program.

## 2.00 p.m.—Student Technical Session

*Presiding:* Prof. C. C. Knipmeyer

(Selected papers will be presented by students of the Great Lakes District No. 5)

## 2.00 p.m.—Inspection Trips



## Tuesday

## 9:30 a.m.—Technical Session No. 2

*Presiding:* R. F. Schuchardt

## Weather Resistant Insulation for Line Wires

C. F. HARDING, L. L. CARTER and J. W. OLSEN  
Purdue University

## Development of the Waukegan Station of the Public Service Company of Northern Illinois

J. L. HECHT  
Public Service Company of Northern Illinois

## Electrical Design Features of Waukegan Station

E. C. WILLIAMS  
Public Service Company of Northern Illinois

## 115,000-Kw. Turbo-Alternator

R. B. WILLIAMSON  
Allis-Chalmers Mfg. Co.

## \*The Mercury Arc Rectifier Applied to A-C. Railway Electrification

O. K. MARTI  
Allis-Chalmers Mfg. Co.

## Mercury Arc Rectifier Versus Rotary Converter Automatic Railway Substations

O. M. WARD  
The Milwaukee Electric Railway & Light Co.

## 1:30 p.m.—Inspection Trips

1. A. O. Smith Corporation
2. Lakeside Power Station

## 7:00 p.m.—Banquet and Entertainment

## Wednesday

## 9:30 a.m.—Technical Session No. 3

*Presiding:* J. H. Foote

## A 60-Cycle Primary Transmission System

C. D. BROWN and E. W. HATZ  
The Milwaukee Electric Railway & Light Co.

## Insulator Spark-Over

W. L. LLOYD  
General Electric Co.

## An Improved Type of Limiting Gap for Protecting Station Apparatus

A. O. AUSTIN  
Ohio Insulator Co.

## Variation in Diameter and Spacing of Suspension Insulators

J. J. TOROK and C. G. ARCHIBALD  
Westinghouse Electric & Mfg. Co.

## \*Normal Frequency Flashover Values of Insulators as Affected by Humidity and Size

H. A. FREY and K. A. HAWLEY  
Locke Insulator Corp.

## 2:00 p.m.—Sightseeing Tour of City



## Preprints of Papers

Advance copies of papers for discussion will be sent to members as soon as available, upon written request to A.I.E.E. headquarters, 33 West 39th Street, New York, N. Y. Please indicate by title and name of author the paper or papers requested.

## Rules on Presenting and Discussing Papers

At the technical sessions papers will be presented in abstract, ten minutes being allowed for each paper unless otherwise arranged, or the presiding officer meets with the authors preceding the session to arrange the order of presentation and allotment of time for papers and discussion.

Any member is free to discuss any paper when the meeting is thrown open for general discussion. Usually five minutes is allowed to each discussor. When a member signifies desire to discuss papers on other subjects or groups he shall be permitted a five-minute period for each subject or group.

It is preferable that a member who wishes to discuss a paper give his name beforehand to the presiding officer of the session at which the paper is to be presented. Copies of discussion prepared in advance should be left with the presiding officer.

Each discussor is to step to the front of the room and announce, so that all may hear, his name and professional affiliations.

Notice—Discussions at the technical sessions are not reported. Each discussor should prepare and submit his remarks in writing. Discussion received by the Editorial Department within two weeks after presentation of a paper will be considered for publication.

Written discussion should be mailed to A.I.E.E., Editorial Department, 33 West 39th Street, New York, N. Y., on or before March 30, 1932.

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# INSPECTION TRIPS

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Because of its diversified industries Milwaukee is a place of interest for all engineers. It has a good share of plants manufacturing electrical equipment, an outstanding steam electric power generating plant, and the latest in telephone dial and toll systems.

The Inspection Trip Committee has made arrangements for organized inspection trips to the Lakeside Power Station and the A. O. Smith Corporation on Tuesday. At the request of guests they are prepared to arrange for miscellaneous trips on Monday to such points as — Allis-Chalmers Manufacturing Co., Falk Company, Cutler-Hammer, Inc., The Milwaukee Electric Railway & Light Co. (28th Street Substation, 90,000 KVA Remote Control; 37th Street Automatic Substation; Low Voltage A.C. Network System), Wisconsin Telephone Co. (Dial Offices; Toll Office), Westinghouse Lamp Co. and Milwaukee Sewerage Disposal Plant.

Registration facilities for such trips will be available at the registration desk on Monday.

## Lakeside Power Station

During the ten years of its growth from a small 40,000-Kw. station to its present size of 310,800 Kw. which was reached in 1930, the Lakeside Plant has made power plant history. It has pioneered in many significant and important developments. Outstanding among pioneering achievements are: (1) The exclusive burning of coal in pulverized form; (2) the introduction of superheaters into the furnace where the radiant heat from the burning coal transmits heat to the steam intensely and uniformly, and (3) the successful use of 1200 pound pressure steam.

The Lakeside Station is located on the shore of Lake Michigan about one mile south of the Milwaukee limits. The site is at an average level of about fifty feet above the lake. To economize on the costs for pumping circulating water, it was necessary to excavate to a maximum depth of seventy feet below the ground.

The water supply system for condensing purposes is unique. At present capacity it might be called upon to pump 760 million gallons per day, an amount equal to about five times as much as is required by the entire city of Milwaukee on a hot summer day.

The coal preparation section of this plant, alone, offers sufficient of interest for an inspection trip.

## A. O. Smith Corporation

The A. O. Smith Corporation is well known for its development of automatic manufacture of automobile frames and electrically welded steel pipe for oil lines.

Recently this organization again received national attention with its unique research building. Construction is essentially of steel and glass designed for the utmost in utility and flexibility. The building is U shaped, 170 feet wide, and 205 feet long. It is seven stories high and will accommodate 1,000 men.

The vertical structural members are all on outside walls spaced 45 feet on centers. They are built entirely of steel, are three feet square and hollow. The horizontal members are of open structural steel three feet deep and 45 feet in length. They are laid in pairs to form a beam three feet by three feet.

The floors are steel plates from which the metal lath and plaster ceilings are hung with an eight inch space for pipes.

The outside walls are approximately 90 per cent glass. The panes are nine feet by thirteen feet, and are fixed in place. No window in the building can be opened. Ventilation is entirely mechanical and the building is equipped with a complete air conditioning system designed to keep uniform temperature and humidity within through summer and winter.

## Milwaukee Sewerage Disposal Plant

The municipal sewerage disposal plant of Milwaukee is outstanding in its field for effectiveness and economy. Many experiments have been conducted to make this plant the most efficient and economical of its kind. The output of fertilizer manufactured as a by-product contributed materially to its saving of operation. It has attracted international attention and has had numerous foreign visitors.

## Milwaukee Public Museum

The Milwaukee Public Museum is a pioneer in the construction of groups showing the primitive peoples of all parts of the globe in their natural environment. The production of the animal life, vegetation, and geological surroundings on a greatly reduced scale in these groups is remarkable. Similarly there are many historical and prehistorical anthropological groups. The Museum also has an outstanding collection of Indian art and implements and a fine collection of weapons and arms.

## Hotel Reservations

Members should make their reservations by writing directly to the hotel preferred. Rates for the headquarters hotel, THE NEW PFISTER, as well as several other hotels are given in the accompanying table.

HOTELS		ROOMS		SUITES
		WITHOUT BATH	WITH BATH	
New Pfister, 200 rooms, (Headquarters) Jefferson St. and E. Wisconsin Ave.....	Single	\$2.50 up	\$3.50 up	\$15.00 up
	Double	\$4.00 up	\$5.00 up	
Martin, 200 rooms, 201 East Wisconsin Ave.....	Single	\$1.50-\$2.50	\$2.50-\$ 3.00	\$ 4.00 up
	Double	\$2.50-\$3.25	\$3.50-\$ 6.00	
Medford, 310 rooms, Third and Michigan Sts.....	Single	\$1.75-\$2.25	\$2.50-\$ 3.00	
	Double	\$2.75-\$3.00	\$3.50-\$ 5.50	
Schroeder, 850 rooms, Fifth St. and Wisconsin Ave.....	Single		\$3.00-\$ 7.00	\$10.00 up
	Double		\$5.00-\$10.00	
Wisconsin, 460 rooms, 182 Third St.....	Single	\$1.50-\$2.00	\$2.50-\$ 5.00	\$12.00 to \$20.00
	Double	\$3.00-\$4.00	\$5.00-\$10.00	

*Research Building  
of the  
A. O. Smith  
Corporation*



Read subsequent issues of  
**ELECTRICAL ENGINEERING**  
for a complete account  
of this Meeting

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