

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

SOUTH WEST DISTRICT MEETING

AND STUDENT BRANCH CONVENTION



APRIL 17-19, 1939



San Jacinto Memorial Shaft at San Jacinto Battleground
to be Visited on One of the Inspection Trips

HOUSTON, TEXAS

Headquarters: RICE HOTEL

Meeting Features

Houston offers unusual opportunities to visitors interested in engineering and industry. It is a rapidly growing city typical of the newer industrial southwest, but it still retains its intimate connection with the traditional wide-open spaces and friendliness of this region. On both sides of the ship channel are many industries and vast oil refineries. Houston is virtually surrounded by oil and gas wells which may be seen in any degree of completion from many of the highways entering the city. One thousand oil companies have offices in Houston.

Inspection Trips

Three major inspection trips are scheduled. Arrangements may be made at the registration desk for trips to any industry or other place of interest not scheduled. Guides and maps will be furnished at the registration desk to assist drivers in reaching the various places. Trips 1 and 3 will last 4½ hours and end at the site of the Dutch Supper. Trip 2 will require about 2½ hours.

1. Deepwater Power—Champion Paper Trip. These two plants are on the ship channel about 11 miles from meeting headquarters. The Houston Lighting and Power Company plant is of 147,000 kw. capacity and has a 1400 lb. pressure turbine. The Champion Paper and Fibre Company manufactures paper from slash pine. Bus fare will be 50 cents.

2. Telephone Company—Underground Network—Office Building Air Conditioning Systems Trip. This trip includes inspection of local and toll offices of Southwestern Bell Telephone Company, the underground networks of Houston Lighting and Power Company, and air conditioning apparatus in large office buildings. This trip is in the business district of the city and no transportation is required.

3. Turning Basin—San Jacinto Battleground—Radio Station Trip. A launch will be available at the Turning Basin for a short trip on the ship channel. At San Jacinto Battleground is a magnificent new monument. Near San Jacinto are radio stations KPRC and KTRH simultaneously using a 375 foot vertical self supporting radiator. The Battleground is about 18 miles from convention headquarters. Bus fare will be 50 cents for those not using their own cars.

Entertainment and Sports

Arrangements will be made by the committee for those wishing to play golf or tennis. Houston's golf courses, both municipal and private, are the finest in the country and this applies as well to tennis courts.

The entertainment committee has provided an unusual treat in the stag supper Monday night. A real Dutch supper with all the trimmings will be provided for 75 cents. A joint luncheon with the Houston Engineers' Club will be held in the Rice Hotel Tuesday noon.

The dinner dance will be held in the main ballroom of the Rice Hotel Tuesday evening, 7 o'clock. Dinner, music, and an elaborate floor show, followed by the dance with music by an excellent orchestra has been arranged. Tickets will be available at the registration desk—\$1.75 per person. This will be the main feature of the entertainment program and it is hoped that all will attend and enjoy it.

Ladies' Entertainment

Particular consideration has been given to insure good entertainment for the visiting ladies. Ladies of the Houston Section will act as hostesses and transportation will be provided to the various functions.

Monday from 1:30 to 8:30 p.m. will be devoted to sight-seeing trips with an informal supper at Carolina Pines—tickets \$.85 each. A bridge-luncheon will be held on Tuesday from 10:00 a.m. to 2:30 p.m. at the Braeburn Country Club—tickets \$.50 each. The dinner dance previously noted will be at 7:00 p.m., Tuesday, at the Rice Hotel.

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ADVANCE COPIES OF PAPERS

For the convenience of those who wish to obtain photo-offset copies of authors' manuscripts in advance of the meeting an order form is enclosed. If ordered by mail, price 10c per copy; if purchased at Institute headquarters or at the meeting, price 5c per copy. Coupon books in \$1.00 and \$5.00 denominations are available for those who wish to avoid remittance by check or otherwise. Papers not mentioned by number on order blank will not be available in advance-copy form. Some of the papers ultimately will be published in *ELECTRICAL ENGINEERING* or the *TRANSACTIONS*.

Monday, April 17

8:00-10:00 a.m.—Registration (Mezzanine Floor)

10:00 a.m.—General Meeting

Announcements, F. C. Bolton, Vice-President, South West District, A.I.E.E.

Address of Welcome, H. O. Clarke, Jr., Vice-President, Houston Lighting and Power Co.

10:30 a.m.—Technical Session

C. F. Terrell, Presiding

39-84. Electricity in an Oil Field Equipment Manufacturing Plant, Seth Evans, Hughes Tool Company

39-77. The Mountain Creek Plant, H. K. Doyle, Dallas Power and Light Company

39-82. Resonant-Type Constant Current Regulators, R. R. Miner, Kansas Gas and Electric Company

1:30 p.m.—Inspection Trips

Trips 1 and 3 leaves Rice Hotel, Texas Avenue entrance

Trips 2 leaves Rice Hotel Mezzanine

6:30-8:30 p.m.—Stag Supper, Gulf Brewing Company, 5301 Polk Avenue

Tuesday, April 18

9:00-10:30 a.m.—Technical Session

H. P. Lawther and J. W. Ramsay, Presiding

39-80. Line Problems in the Development of the 12-Channel Open-Wire Carrier System, L. M. Ilgenfritz, R. N. Hunter, and A. L. Whitman, Bell Telephone Laboratories, Inc.

39-79. Some Applications of the Type "J" Carrier System, L. C. Starbird and J. D. Mathis, Southwestern Bell Telephone Company

PROGRAM

SESSIONS IN MAIN BALL ROOM — STUDENT SESSIONS IN ROOM A

9:00 a.m.-12:05 p.m.—Student Session

J. M. Wilson and J. Y. Bowman, Presiding

Papers from Student Branches of Rice Institute, University of Missouri, Missouri School of Mines and Metallurgy, University of Texas, and University of New Mexico

10:30 a.m.—Recess

10:45 a.m.-12:05 p.m.—Technical Session

Louis P. Thein and Marvin Thrasher, Presiding

- 39-87. Carrier Pilot Relaying, L. F. Kennedy and E. H. Bancker, General Electric Company
- 39-81. Out-of-Step Blocking and Selective Tripping with Impedance Relays, H. R. Vaughan, Westinghouse Electric and Manufacturing Company, and E. C. Sawyer, Gulf States Utilities Company

12:15 p.m.—Luncheon meeting with Houston Engineers' Club, Rice Hotel

1:30-3:15 p.m.—Technical Session

P. H. Robinson and B. F. Meador, Presiding

- Geophysical Prospecting, Dr. L. W. Blau, Humble Oil and Refining Company
- 39-83. Electrical Equipment Used in Reflection Seismograph Prospecting, C. C. Nash and C. C. Palmer, Humble Oil and Refining Company

3:15 p.m.—Recess

3:30-5:15 p.m.—Symposium: Electricity in Pipe Line Corrosion

Leader:

J. C. Stirling, Stanolind Pipe Line Company

Contributors:

R. A. Brannon, Humble Pipe Line Company
V. L. Nealy, Texas Pipe Line Company
W. H. Stewart, Sun Oil Company
David Harrell, Jr., Houston Pipe Line Company
Earl Lipscomb, Western Union Telegraph Co.

7:00 p.m.—Dinner Dance, Main Ball Room, Rice Hotel



A Scene on One of Houston's Municipal Golf Courses

Wednesday, April 19

9:00-10:30 a.m.—Technical Session

A. L. Jones, Jr., and V. O. Clements, Presiding

- 39-88. Improvements in the Construction of Condenser Bushings, A. J. A. Peterson, Westinghouse Electric and Manufacturing Company
- 39-85. Equivalent Electrical and Mechanical Double Frequency Systems with Special Application to Short-Circuit Stresses in Simple Bus Structures, E. W. Boehne and W. S. Weil, Jr.
- 39-86. A Survey of Contemporary Practice in the Application of Factory-Built Sub-stations, F. M. Starr, General Electric Company

9:00 a.m.-12:15 p.m.—Student Session

W. C. Morris and A. J. McCrocklin, Presiding

Papers from Student Branches of Oklahoma A. and M. College, Kansas State College, Texas Technological College, University of Oklahoma, and Southern Methodist University

10:30 a.m.—Recess

10:45 a.m.-12:15 p.m.—Technical Session

J. S. Porter, Presiding

- 39-89. Mutual Inductance, Impedance, Power, and Symmetrical Components Expressed in Terms of Matrices, Myril B. Reed, Armour Institute of Technology
- 39-90. Signalling over Zero Sequence Network, J. D. Browder, Oklahoma Gas and Electric Company

12:15 p.m.—Luncheon-Conference of Counselors and Branch Chairmen

1:30-3:15 p.m.—Technical Session

L. E. Cook and H. M. Stewart, Presiding

- 39-91. Recent Developments in Generator Voltage Regulation, C. R. Hanna, K. A. Oplinger, and C. E. Valentine, Westinghouse Electric and Manufacturing Company
- 39-78. Combined Voltage and Phase Angle Control under Load, H. L. Reynolds, Allis-Chalmers Manufacturing Company

1:30-4:30 p.m.—Student Session

John Burt and J. Jacobson, Presiding

Papers from Student Branches of University of Arkansas, University of Kansas, Washington University, and A. and M. College of Texas

3:30 p.m.—Recess

3:45-5:00 p.m.—Symposium: Operating Experiences of Utilities with Rural Lines

Leader:

Bryce Brady, Oklahoma Gas and Electric Co.

Contributors:

P. H. Underwood, Houston Lighting and Pr. Co.
G. W. Bean, Texas Electric Service Company
N. B. Gussett, San Antonio Public Service Co.
R. R. Miner, Kansas Gas and Electric Company
C. M. Lytle, Kansas City Power and Light Co.
L. E. Cook, Texas Power and Light Company
E. B. Jennings, Southwestern Bell Telephone Co.



Beach Scene at Galveston and Portion of the Famous Seven and One-half Mile Seawall Which Entirely Protects the City from Any Possible Storm Damage

GENERAL INFORMATION

Rules on Presenting and Discussing Papers

Papers presented at technical sessions may be presented in abstract, presentation not to exceed fifteen minutes, 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 opened for general discussion. Ten minutes for prepared discussion and ten minutes for open discussion will be allowed on each paper. Those presenting written discussions will be selected from the various Sections in the South West District. Open discussions are invited and all members should feel free to enter into them.

It is preferable that a member who wishes to discuss a paper give his name in advance to the presiding officer of the session at which the paper is to be presented. Each discussor should step to the front of the room and announce, so that all may hear, his name and professional affiliations. Three typewritten copies of discussions prepared in advance should be left with the presiding officer.

Other discussions to be considered for publication must be submitted, typed double spaced, in triplicate to C. S. Rich, Secretary, Technical Program Committee, A.I.E.E. headquarters, 33 West 39th Street, New York, N. Y., on or before May 3, 1939.

Student Branch Convention

Three student sessions are given in detail in the program. The Tuesday afternoon session should be of particular interest to students as the speakers will bring valuable information about the relatively new field of electricity in geophysics and petroleum prospecting.

All trips and entertainment features of the meeting are open to students. Branch Counselors should contact the Counselor at Rice Institute for information on trips to oil fields, sulphur mines, or other points of interest. The Branches at Rice Institute and the A. & M. College of Texas will act as hosts. Facilities at all of the hotels are available for students at \$1.25. Counselors should make reservation direct with the hotel for their student groups.

Registration

Please fill in and mail the enclosed Advance Registration Card, which will assist the committees making arrangements and avoid congestion at the registration desk. Please complete the registration on arrival. A registration fee of \$2 will be charged all non-members except Enrolled Students and the immediate families of members.

Hotel Reservations

All members planning to attend should make their own hotel reservations early by writing direct to the hotel. All the hotels listed are within a few minutes walk of the Rice and are largely or entirely air conditioned.

Principal Hotels in Houston, Texas and Rates

Hotel	Single room	Double with Bath	
	with bath	Double bed	Twin beds
Rice*	\$2.50 to \$6.00	\$4.00 to \$7.00	\$6.00 to \$8.00
Ben Milam	2.50 to 5.00	3.50 to 4.00	4.50 to 5.00
Lamar	2.00 to 6.00	4.00 to 6.00	5.00 to 8.00
Sam Houston	2.00 to 3.00	3.00 to 4.00	4.00 to 5.00
Texas State	3.00 to 5.00	4.50 to 5.00	5.00 to 8.00
Wm. Penn	2.00 to 3.00	3.00 to 4.00	4.00 to 5.00

* Meeting Headquarters.

COMMITTEES

General Meeting: F. C. Bolton, L. T. Blaisdell, V. O. Clements, Seth Evans, and H. C. Dillingham.

Attendance and Publicity: J. B. Arthur, Chairman; V. O. Clements, Seth Evans, T. M. Keiller, P. H. Robinson, C. F. Terrell.

Entertainment: H. P. Heafer, Chairman; J. E. Jennings, V. P. Parr, H. M. Stewart, Hezzie Clark, A. C. Krachy.

Finance: E. M. Wise, Chairman; L. B. Bricker, J. S. Copeland, L. G. Neuman, Hezzie Clark, E. T. Gunther.

Hotels and Registration: H. F. Staacke, Chairman; W. M. Davies, M. L. Donaldson, J. S. Waters.

Meetings and Papers: N. F. Rode, Chairman; A. L. Jones, M. J. Thrasher, H. M. Stewart, E. J. Karston, J. S. Porter, Louis Theim, E. A. Heath, J. S. Malsbary.

Student Activities: N. F. Rode, Chairman of Counselors, J. S. Waters, R. P. Ward.

Transportation and Inspection: L. K. Del Homme, Chairman; W. M. Davies, M. L. Donaldson, J. S. Waters.

Issued by

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