



Joint Districts 4 & 13 Meeting

April 5, 6, 7, 1961

New Orleans, La.

Headquarters

Jung Hotel

SCHEDULE OF EVENTS

Wednesday—April 5

- 8:30 A.M.—Registration
- 11:30 A.M.—Welcoming Luncheon
- 2:00 P.M.—Technical Sessions
 - Ladies' "See New Orleans" Tour
 - Student Conference
 - Inspection Trip
- 5:30 P.M.—Hospitality Party

Thursday—April 6

- 8:00 A.M.—Registration
- 9:00 A.M.—Technical Sessions
 - Student Conference
 - Inspection Trip
- 10:00 A.M.—Ladies' "Breakfast at Brennan's"
- 1:00 P.M.—Vieux Carre Walking Tour
- 1:30 P.M.—Harbor Tour
 - Inspection Trip
- 2:00 P.M.—Technical Sessions
- 7:00 P.M.—Refreshment Hour —
Dinner Dance

Friday—April 7

- 9:00 A.M.—Technical Sessions
 - Inspection Trips
- 10:00 A.M.—Student Business Meeting
- 10:30 A.M.—Special Ladies' Program
- 2:00 P.M.—Technical Sessions
 - Inspection Trips



New Orleans, Louisiana

New Orleans plays host to Districts 4 and 13 for their **1961 Joint Meeting**. Visitors always enjoy New Orleans "Old World Charm" and world-renowned cuisine.

The Jung Hotel, Headquarters for the Meeting, has allotted a full complement of rooms. Rates are as follows: Singles \$8.00 - \$10.00, Double \$12.00 - \$14.00, Twin \$13.00 - \$16.00, Suites \$23.00 up. Use reservation card enclosed.

TECHNICAL PROGRAM

The **Technical Sessions** will cover the latest developments in many fields of interest to AIEE members. The program encompasses the Application of Electricity in Medicine, Power and Communications, Industry, Shipbuilding, and Missiles. Along with Engineering Education, of strong regional interest is one session devoted to Geophysical Exploration.

SOCIAL EVENTS

"Welcome to New Orleans" Luncheon, Wednesday 11:30 A.M. - 1:30 P.M. This function for both delegates and their ladies will officially open the meeting. Feature of the program will be a talk by Mr. "Pie" Dufour, New Orleans author, whose "A la mode" column appears daily in the New Orleans States-Item.

"Hospitality Party", Wednesday, 5:30 P.M. - 7:00 P.M. This event for delegates and their ladies will provide a springboard for a night "out on your own" with an opportunity to enjoy internationally famous cuisine at any of the many of New Orleans' renowned restaurants. Entertainment during the cocktail hour will be provided by a Dixieland group.

"Refreshment Hour and Dinner Dance", Thursday, 6:30 P.M. - 11:59 P.M. Delegates and their ladies are invited to enjoy an evening of fun, dining and dancing. A versatile orchestra will intersperse New Orleans Jazz with music for dancing.

LADIES' PROGRAM

"See New Orleans" Tour, Wednesday, 2:00 P.M. - 4:30 P.M., by professional guides, is designed to show how a dynamic city like New Orleans has been able to mold the past with the present. It will include a visit to civic, residential and educational areas.

Continued on page 4

JOINT DISTRICTS 4 & 13 MEETING

ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 50¢ each (\$1.00 each to nonmembers), by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Coupon books in \$10 denominations are available for those who wish to avoid remittance by check or otherwise. The Transactions Papers will also be published in the bimonthly publications.

Note: Unnumbered District Papers (DP.*) may be available at or after the meeting, if copies are provided by the author. They are not intended for publication in the Transactions and are not presently scheduled for reproduction in any form by the Institute.

Note: The TRANSACTIONS papers will be printed in the bimonthly publications as follows:

- I COMMUNICATIONS AND ELECTRONICS
- II APPLICATIONS AND INDUSTRY.
- III POWER APPARATUS AND SYSTEMS.

Wednesday, April 5

1:30 p.m.—Student Papers Competition

Lounges 9 and 10

Chairman: Chief Judge of Student Papers, District 4.

2:00 p.m.—Communications

Green Room

Chairman: FRED C. HOLLINS, American Telephone & Telegraph Co.

- DP.* "Recent Developments in Digital Feedback Communication Systems." L. S. Schwartz, New York University—Discussion—G. D. Framton.
- DP.* "Microwave Communication in the Gulf of Mexico." E. B. Stevenson, Continental Pipe Line Company.
- DP.* "The Telephone Concentrator for Central Office Service Extension." Roy C. Hingle, Southern Bell Telephone & Telegraph Company.
- DP.* "Administration of Exchange Area Trunks for Good Transmission." John D. Howard, Jr., Southern Bell Telephone & Telegraph Company.

2:00 p.m.—Geophysical Exploration

Room 3

Chairman: W. D. STROUD, The Okonite Co.

- DP.* "Electronic Surveying in Offshore Areas." Joseph De Lerno, Jr., Offshore Navigation, Inc.
- DP.* "Environmental Problems of Electrical Components in Well-Logging." Albert C. Skellie, Schlumberger Well Surveying Corporation.
- DP.* "Semiconductor versus Conventional Design in Seismic Amplifiers and Effects on Performance." Fred Hefer, Dresser Electronics, Southwestern Industrial Electronics Division.

2:00 p.m.—System Engineering and Planning

Tulane Room

Chairman: JACK DAVEY, Louisiana Power and Light Co.

- DP.* "Higher Secondary Utilization Voltages." A. L. Baxter, Allis-Chalmers Manufacturing Co.
- DP61-492. "Digital Computer Analysis of a Radial Power System." G. A. Mathews, J. M. Barber, and J. C. McKee, Jr., Mississippi State University.
- DP.* "Voltage Regulation on Urban Systems." E. J. Kleine, Allis-Chalmers Manufacturing Co.
- DP.* "The Methods and Policy of Voltage Control on Louisiana Power and Light Co. System." H. L. Deloney, Louisiana Power and Light Co.

2:00 p.m.—Missiles

Room 2

Chairman: H. I. MADDEN, Bedell and Nelson Engineers, Inc.

- DP.* "A Communications Engineer Looks at Conical Scanning for Missile Tracking." Frank Cox, Space Technology Laboratories Inc.
- DP.* "Automated Testing of the Tracking Capabilities of Missile Ground Guidance Equipment." T. G. North, J. B. Casey, J. B. Crouch and J. L. Collins, Western Electric Co.
- DP.* "The State of the Art of Electro-Magnetic Signal Attenuation in Ionized Planes." Horst Poehler, Space Technology Laboratories Inc.

Thursday, April 6

8:30 a.m.—Student Papers Competition

Lounges 9 and 10

Chairman: Chief Judge of Student Papers, District 13.

9:00 a.m.—Commercial and Residential Applications

Room 3

Chairman: GEORGE C. SCHROEDER, Schroeder and Associates

- DP.* "The Electrical Supply System for the New Electrical Engineering Building at Louisiana State University." L. V. McLean and A. K. Ramsey, Louisiana State University.
- DP.* "Correcting the Inadequacies of Residential Service Entrance Facilities." C. B. Grund, Jr., Southern Services, Inc.
- DP.* "Application Trends, Commercial and Residential." M. G. Zervigon, Zervigon Associates, Inc.
- DP.* "Electric Heating for Home and Office." E. E. Parks, Nashville Electric Service.

9:00 a.m.—Industrial Application I

Tulane Room

Chairman: M. G. MYERS, Westinghouse Electric Corporation

- DP.* "The Application of Digital Computers to Industrial Process Control Problems." R. S. Gillette, General Electric Company.
- DP61-493. "A Supervisory Control and Telemetry Installation in an Industrial Plant." Hugh O. Bourque, Ethyl Corporation.
- DP.* "Surge Protection for Industrial Plants." Jack R. Pope, Carolina District, Westinghouse Electric Corporation.
- DP.* "The Conversion of Existing Industrial Power Systems from Ungrounded Neutral to Grounded Neutral." H. B. Greear, General Electric Company.

9:00 a.m.—Shipbuilding

Room 2

Chairman: E. E. LEONARD, JR., Avondale Shipyards, Inc.

- DP.* "Some Aspects of Automation for Ships." S. A. Haverstick, Westinghouse Electric Corp.
- DP.* "Electrical Instrumentation of Marine Propulsion Plants." A. K. Smith, Ingalls Shipbuilding Corp.
- DP.* "Concepts in the Versatility of Marine Electrical Systems." R. S. Berney, Alabama Drydocks and Shipbuilding Co.

9:00 a.m.—Transmission and Distribution

Green Room

Chairman: F. E. JOHNSON, JR., New Orleans Public Service Inc.

- DP61-488. "The Lightning Stroke—II." C. F. Wagner and A. R. Hileman, Westinghouse Electric Corp.
- DP61-489. "Mechanism of Breakdown of Laboratory Gaps." C. F. Wagner and A. R. Hileman, Westinghouse Electric Corp.
- DP.* "A Progress Report on Incipient Fault Detection on Cables." H. J. Edwards, Jr., New Orleans Public Service Inc.
- DP.* "Lightning Protection of River Crossings." E. J. Allen, General Electric Company and H. L. Deloney, Louisiana Power & Light Company.

2:00 p.m.—Substations and Switchgear

Room 3

Chairman: M. W. STUMPF, New Orleans Public Service Inc.

- DP.* "The Role of Grounding Cells in the Effective Cathodic Protection of Lead Sheathed Power Cables in Substation Exit Systems." S. E. Trouard and M. J. Maier, New Orleans Public Service Inc.
- DP.* "Points for Consideration in Selecting Transmission Line and Substation BIL." R. L. Lindsey and H. H. Strozier, Georgia Power Co.
- DP.* "Proposed New Breaker Ratings and Their Effect on Applications." A. H. Knable, Allis-Chalmers Manufacturing Co.
- DP61-496. "First Report on Field Investigation of the Effects of Conductor Aging and Cleaning on Electrical Connections." O. A. Boyer and J. Hus, Burndy Corp.

2:00 p.m.—Industrial Application II

Tulane Room

Chairman: H. O. BOURQUE, Ethyl Corporation

- DP61-495. "Control Design in Automatic Gas Transmission." D. C. Washburn, Jr., Westinghouse Electric Corporation.
- DP.* "Testing High Voltage Cables with Direct Current." J. C. Pittman, American Cyanamid.
- DP.* "A New Look at Acyclic Generation." J. R. Burnett and L. M. Harvey, General Electric Co.
- DP.* "A Practical Low Voltage Multiple System for Landing Field Lighting." Robert M. Garth, U. S. Navy.

2:00 p.m.—Instrumentation

Room 2

Chairman: JOE A. LOUPE, JR., Kaiser Aluminum & Chemical Corporation,

- DP.* "The Gyro Integrating Moss Flowmeter." F. P. Singletary, General Electric Company.
- DP.* "Measurement of Large Direct Currents in Electrolytic Processes by Methods of the AC-DC Metering System." C. H. Elliot & H. F. Morvant, Kaiser Aluminum & Chemical Corporation.
- DP.* "Automatic Lease Monitor and Control Systems." O. E. Pott-hoff, General Electric Company.
- DP61-490. "Analysis of Measuring Circuits for Radio Influence Voltages." Professor Fred O. Simons, Jr., and Paul B. Jacob, Jr., Mississippi State University.

2:00 p.m.—Education

Green Room

Chairman: J. C. MCKEE, JR., Mississippi State University

- DP.* "The Engineering Profession's Stake in Technical Institute Education." Dean A. Ray Sims, University of Houston.
- DP61-494. "The Undergraduate Curricular Revolution." Charles R. Vail, Duke University.
- DP.* "Engineering Science, A Philosophy." Karl Brenkert, Jr., Auburn University.
- DP.* "The Relation of the Engineering Ph.D. To the Future Development of the South." Thomas F. Jones, Jr., Purdue University.
- DP.* "Engineering Training in the Communications Industry." K. G. Walters, Western Electric Co.

Friday, April 7

9:00 a.m.—Electricity in Medicine

Room 3

Chairman: C. J. SPERRY, JR., Tulane University

- DP.* "Electrical Instrumentation in Medicine." H. E. Hoff and L. A. Geddes, Baylor University.

- DP.* "The Electrical Nature of Brain Activity." L. M. N. Bach, Tulane University.

- DP.* "Recent Advances in the Square-Wave Electromagnetic Flowmeter." E. J. Dennard, Western Electric Co.

- DP.* "A Single-Channel Miniaturized FM Transmitter for Remote Recording of Subcortical Potentials." C. J. Sperry, Jr. and C. P. Gadsden, Tulane University.

9:00 a.m.—Power Generation

Green Room

Chairman: C. P. ALMON, JR., Tennessee Valley Authority

- DP.* "The Energy Storage Type of Peaking Capacity." Arnold Rich, Bureau of Power, Federal Power Commission.

- DP61-491. "Station Service Design Considerations for 650 mw Units at TVA Paradise Steam Plant." L. R. Sellers and B. M. Maxwell, Tennessee Valley Authority.

- DP.* "Computer Control at Little Gypsy Generating Station." W. T. Hess, Louisiana Power and Light Co.

- DP.* "Southwestern Electric Power Co.'s Automatic Dispatching System." W. J. Googe, Southwestern Electric Power Co. and E. D. Crane, Westinghouse Electric Corp.

9:00 a.m.—Power System Communications and Relays

Tulane Room

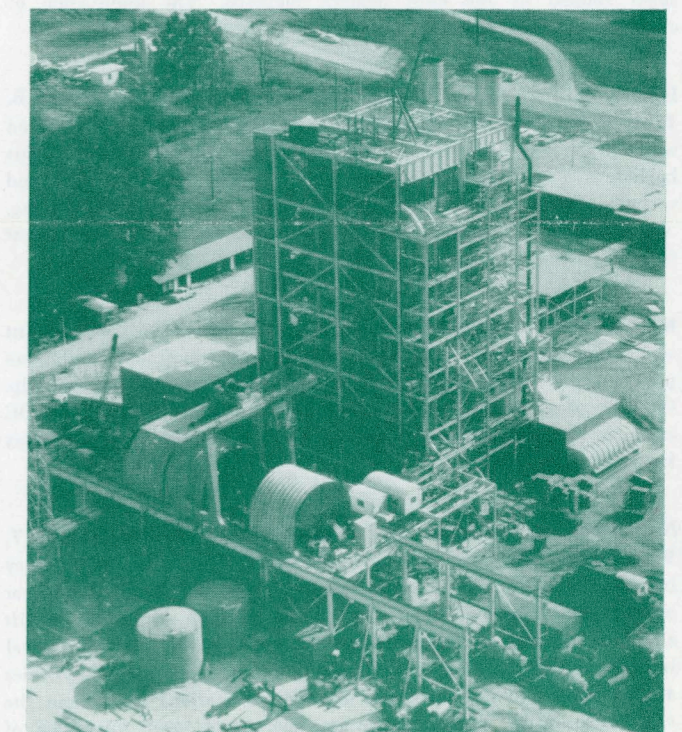
Chairman: W. J. WORTMAN, Duke Power Co.

- DP.* "New Concepts in Molecular Electronics." S. J. Angello, Westinghouse Electric Corp.

- DP.* "New Digital Telemetry Equipment to Share Analogue Channel." P. B. Robinson, General Electric Co.

- DP.* "A Review of New Orleans Public Service Inc. Back-up Relaying Practice." A. J. Bartlett, New Orleans Public Service Inc.

- DP.* "A New Approach to Loss of Field Protection and Stability Protection and Stability of Generating Units." Jack Davey, Louisiana Power and Light Co.



Little Gypsy S. E. Station

JOINT DISTRICTS 4 & 13 MEETING

CONTINUED FROM PAGE 1

"Breakfast at Brennan's" Thursday, 10:00 A.M. to introduce you to a never-to-be-forgotten breakfast in true New Orleans style.

"Tour of Vieux Carre" Thursday, 1:00 P.M. This walking tour has been planned for you to enjoy viewing a section of our city which is truly old world transplanted in the new. Historic French and Spanish Architecture will be seen along with quaint patios, antique shops and many French Quarter Restaurants.

Special Ladies' Meeting Friday, 10:30 A.M. Mr. J. G. Adams will present an illustrated lecture on "The Total Electric Home". His talk will illustrate electrical appliance development for the home of the future.

A convenient room has been reserved for morning and afternoon coffee for the ladies. Bridge tables and cards will be available. Members of the Ladies' Activities Committee will be present throughout the day to welcome and assist visiting ladies.

INSPECTION TRIPS

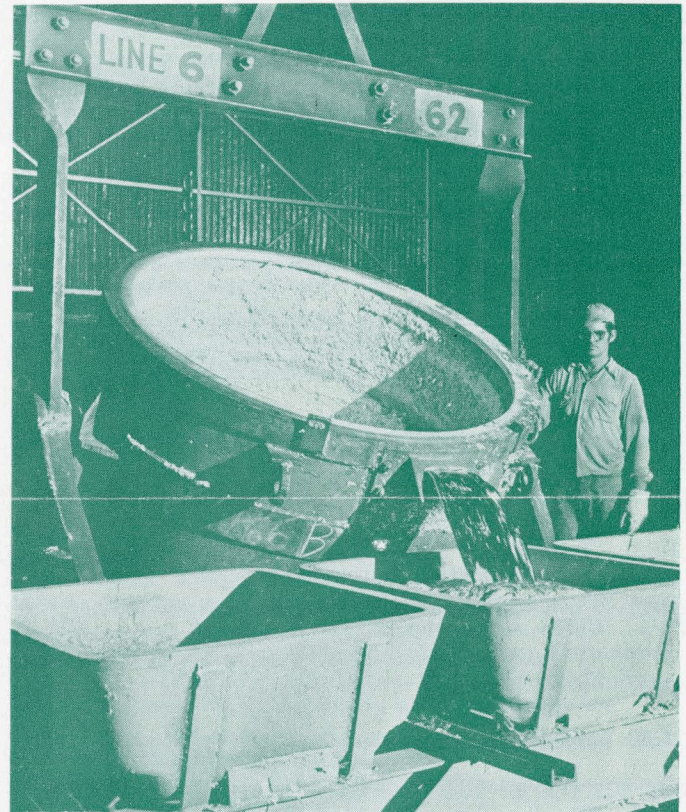
Avondale Shipyards—Wednesday, April 5, 2:00 P.M. Avondale Shipyards is one of the South's largest manufacturers of small and medium sized industrial and military vessels. The manufacture of offshore equipment and thermally insulated barges are two of their many unique Engineering endeavors.

American Sugar Refineries—Thursday, April 6, 9:00 A.M. This trip will afford delegates the unusual opportunity of seeing sugar refined by the most modern methods. The application of electrical principles to this industry is of genuine interest.

Harbor Tour, Yacht "Good Neighbor"—Thursday, April 6, 1:30 P.M. Foreign ambassadors and other dignitaries are feted while in New Orleans aboard this sleek well appointed yacht. This harbor trip on the Mississippi River covers, both visually and verbally, the growing port of New Orleans and is most interesting. Space aboard the yacht is limited and will be allotted on a first request first served basis.

Kaiser Aluminum and Chemical Corporation, Chalmette Plant—Friday, April 7, 9:00 A.M. The largest aluminum production plant in the United States will be viewed on this inspection trip. Of particular interest is the generation of large quantities of DC currents by both gas engine driven generators and by rectification from AC generation.

New Orleans Sewerage and Water Board—Friday, April 7, 9:00 A.M. The City of New Orleans, located in a slight valley between Lake Pontchartrain on the north and the Mississippi River on the south, finds itself in the unique position of having to lift all of its rainfall by pumps to an elevation above Gulf water level in order to effect drainage. Pumping power is generated at 25 cycles at this plant and is distributed to pumping stations throughout the city. Also to be viewed is the purification of large quantities of river water for use as drinking water for the City.



Kaiser Aluminum Plant

Little Gypsy Steam Electric Station, Louisiana Power and Light Co.—Friday, April 7, 2:00 P.M. This 230,000 Kw Generating Station is named for the plantation which it occupies in part and is located a short distance up river from New Orleans. This is the first *completely* automated plant to be built in the world and is capable of computer controlled start-up and shut-down operation.

Jackson Brewery—Friday, April 7, 2:00 P.M. An opportunity to tour facilities and to see fine beer brewed at one of New Orleans' many breweries will be afforded by this inspection trip.

REGISTRATION

Your Registration cards received in the mail should be filled out and returned promptly. This will save time in completing registration details upon arrival at the hotel and will permit the committee to make necessary arrangements for all inspection trips.

The registration fee will be \$4.00 for members, \$7.00 for non-members, and \$2.00 for ladies. No registration fee will be required from students or members of families.

COMMITTEES

Members of the Joint District Meeting Committees are:
Chairman: J. R. Rombach; Vice-Chairman and Ladies' Activities J. C. Ryan; Secretary, S. Cambias, Jr., 317 Baronne St., New Orleans, La.; Assistant Secretary, M. L. Hurstell; Treasurer, E. I. Blanchard; Committee Chairmen: Program, J. A. Cronvich; Finance, B. P. Babin; Registration, P. A. Dimberg; Entertainment, C. F. Dunn; Hotels, G. H. Kellermann; Inspection Trips, H. A. Schaeffer, Jr.; Publicity, R. J. Meyer; Student, G. W. Webb.

Issued by

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

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

PRINTED IN U.S.A.