

Southern District Meeting

April 3-5, 1957
Jackson, Miss.

Headquarters
Heidelberg Hotel



View of downtown Jackson, Mississippi

The AIEE Southern District Meeting will be held in Jackson, Mississippi, April 3-5, 1957. The Heidelberg Hotel will serve as headquarters for the meeting and all technical sessions will be held there.

A well rounded technical program which will include sessions on Communications, Transmission and Distribution, Metals and Insulated Cables, Computers, Transformers, Protective Devices, Chemical Industry, Power Generation, Telemetering, Microwave Radio Systems and System Engineering, has been arranged by the District Meeting Committee. The District Student Paper Competition is also scheduled during the meeting. Mr. Chester McKee is Chairman of Student Activities for District #4.

SOCIAL ACTIVITIES for the members and their guests are complete in every respect. There will be a hospitality hour, a luncheon and a dinner dance with music furnished by TEX BENEKE and his orchestra. For the ladies there will be a Bridge and Canasta luncheon, a coffee hour each morning and a variety of sightseeing trips. Arrangements are being made to hold over the annual "Natchez Pilgrimage" which officially ends on March 31st. Here you will see

ante-bellum homes which have been restored to their former beauty, graced by their owners dressed in crinolines. The guided tour will include highlights of each of the famous homes. This event is nationally known and has been featured on the network television show, "Wide Wide World."

GENERAL SESSION: The meeting will be called to order at 9:30 a.m., Wednesday, April 3, by Mr. R. D. Yarbrough, General Chairman. Mr. Yarbrough will introduce the Honorable J. P. Coleman, Governor of Mississippi, who will bring a message of welcome. Mayor Alan Thompson of Jackson will next welcome us to his delightful city. The major address will be given by Mr. Oliver Emmerich, Editor of the McComb Enterprises Journal.

INSPECTION TRIPS: Five interesting inspection trips have been arranged for the members attending. These are the Vickers Plant of the Century Mfg. Co., the Telephone Dial Toll and T V Center, the Rex Brown Steam Electric Station, the Mississippi Products Corp., and the Armstrong Cork Co. Each of these inspection trips is scheduled for late afternoon, after the technical sessions have been adjourned.

Continued on page 4

ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 40c each (80c 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 3

9:30 a.m.—General Session

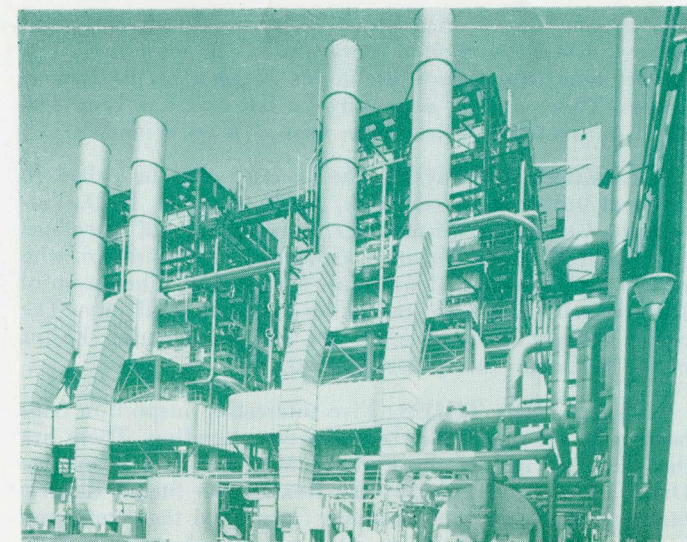
Introduction. R. D. Yarbrough, Gen. Chm.
 Address of Welcome. Gov. J. P. Coleman.
 Address of Welcome. Mayor Allen Thompson.
 Address: J. O. Emmerich, McComb Enterprises Journal

12:00 noon—Luncheon

Address. M. S. Coover, President AIEE.
 Talk on Satellites. Naval Research Lab.

2:00 p.m.—Communications

- DP.* Communication Industries Problems of the Past with Some Prediction for the Future. R. G. Elliott, Southern Bell Telephone.
- DP.* Short Haul Telephone Equipment and Engineering. Frank Bates, Southern Bell Telephone.
- DP.57-391 The Application of Negative Impedance on Long Rural Telephone Lines. H. T. Uthlaut, Southern Bell Tel. & Tel. Co.



Delta Steam Electric Station
 Mississippi Power & Light Co.

2:00 p.m.—Distribution and Transmission

- DP.* Combined Single-Phase and Three-Phase Loading of Open-Wye and Open Delta Transformer Banks. H. M. Bankus and J. E. Gerngross, General Electric Co.
- DP.* The Cause of 3 ϕ Voltage Unbalance and Their Effects on Induction Motor Performance and Protection. H. I. Madden and C. A. Becnel, Westinghouse Electric Corp.
- DP.* Series Capacitors with Distribution Transformers. John Sainz, General Electric Co.
- DP.* Derivation of Unbalance Tolerance in 3 ϕ Systems. A. G. Cook, Miss. Power & Light.

2:00 p.m.—Metals and Insulated Cables

- DP.* The Electrical Pig. Harold W. Adams, Reynolds Metals Co.
- DP.* High Strength Aluminum Alloy Conductors. Dr. E. W. Greenfield, Kaiser Aluminum & Chemical Corp.
- DP.* Aluminum Tubular Bus Conductors for Outdoor Substations. D. H. Sandell, Aluminum Co. of America.
- DP.* Recent Development in Polyethylene Insulating Materials. J. A. Snyder, Bakelite Corp.

Thursday, April 4

9:00 a.m.—Computers

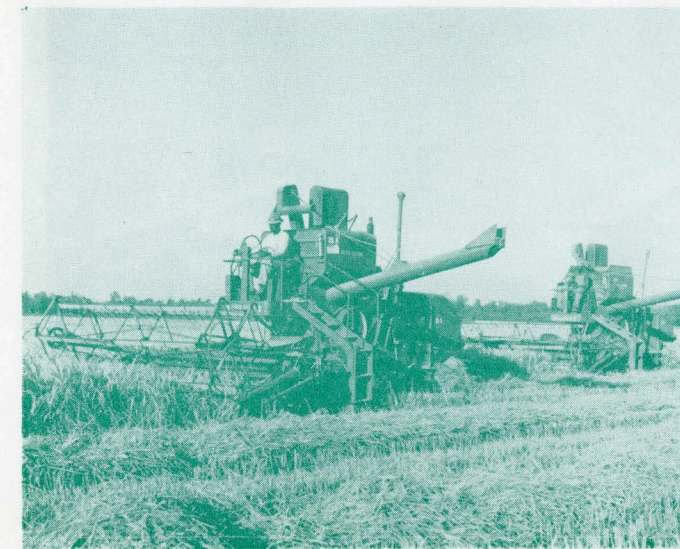
- DP.* Principles of Analogue Computers. H. A. Owen, Jr., Duke University.
- DP.* An Analogue Application: The Computation of Rocket Flight. Dr. E. H. Tompkins, Jr., N. C. State College.
- DP.* Principles of Digital Computers. Dr. Victor S. Carson, N. C. State College.
- DP.* An Application of Digital Techniques to Data Processing. B. W. Richardson, Jamestown, N. C.
- DP.* Panel Discussion on Other Applications of Computers. H. E. Whitted, Northwestern Bell Telephone Co.; H. A. Owen, Jr., Duke University; Dr. E. H. Tompkins, Dr. Victor Carson, North Carolina State College; B. W. Richardson, Jamestown, N. C.

9:00 a.m.—Communications

- DP.* Carrier System as Applied to Subscriber Line Usage. J. D. Howard, Jr., American Telephone & Telegraph.
- DP.* P1 Rural Carrier Systems. Robert F. Clark, Bell Telephone Laboratories, Inc.
- DP.* Memory-Logic-What Electronics Can Do. J. H. Felker.

2:00 p.m.—Transformers

- 57-392. New Concepts in Evaluating Electric Equipment III Insulating System — The Problems Encountered. M. L. Manning, Pennsylvania Transformer Co.
- DP.* A New Approach to the Problem of Transformer Noise. J. R. Mann, Allis-Chalmers Mfg. Co.
- DP.* Effect of Manufacturing Process on Dielectric Strength of Transformer Materials. Dr. W. T. Sackett, Battelle Memorial Institute.
- DP.* Progress in Power Transformer Development. H. J. Mason, General Electric Co.



Agriculture in the New South

2:00 p.m.—Computers

- 57-393. Synthesis of Closed Loop System using Curvilinear I Squares. J. N. Embler, Aluminum Co. of America; and C. H. Weaver, University of Tennessee.
- DP.* Electronic Computer Machines. Dr. Steven L. Jamison, IBM.
- DP.* Electronic Aircraft Navigation. Fritz Schwaemmle, Delta Air Lines.

2:00 p.m.—Transmission and Distribution

- DP.* High Voltage Measurements and Equipment Surges on Transmission Lines. J. W. Skooglund, West Penn Power Co.
- DP.* A New Approach to the Calculation of Lightning Performance of Transmission Lines. C. F. Wagner, Westinghouse Electric Co.
- DP.* Fiber-Glass Poles and Crossarms. C. W. Peterson, Line Material Co.

2:00 p.m.—Defense

- DP.* Short Range Rocket Weapons. Ray Turner, Redstone Arsenal.
- DP.* Space and Guided Missiles. Dr. Ernst Stuhlinger, Redstone Arsenal.

7:30 p.m.—Dinner Dance

Friday, April 5

9:00 a.m.—Protective Devices

- DP57-394. The New Thyrite Magne-Valve Distribution Arrester. G. E. Desaulniers, E. C. Dakshang, E. A. Evans, T. J. Carpenter, General Electric Co.
- DP.* Interrupting Test-High Voltage Expulsion Fuses. T. A. Burdeshaw, Southern States Equipment Corp.
- DP.* Load Switching's Future-Unlimited. John R. Conrad, S. & C. Electric Co.
- DP.* A New Fuse Link for Distribution Transformers. T. W. Curtis and J. W. Enk, A. McGraw Electric Co.

9:00 a.m.—Chemical Industry

- DP.* Selection and Electrical Equipment for the Chemical Industry. W. H. Plengs, Spencer Chemical Co.

- DP.* Cathodic Protection Grounded Techniques. J. E. James, Eastman Kodak Co.

- DP.* Cathodic Protection as Applied to Cellular Type Submerged Shipway Bulkhead. O. J. Streever, Newport News Shipbuilding & Dry Dock Co.

- 57-395. A New Voltage Circuit for Semi-Conductor Rectifiers. I. K. Dortort, I-T-E Circuit Breaker Co.

- DP.* Aluminum Production. H. W. Graybill, Railway & Industrial Engineering Co.

2:00 p.m.—Power Generation

- DP.* Kilowatt and Horsepower—The Gas Turbine Does More. W. B. Wilson, General Electric Co.

- DP.* Automatic Station Logging. Ted Gluck, Panellit Corp.

- DP.* The Need and Proposed Use of an Analog Computer in Steam Power Station. F. W. Shipley, Mississippi Power & Light Co.

- DP.* Utilization of Engineering Manpower in Large Reactor Design. David W. McLenegan General Electric Co.

2:00 p.m.—Radio—TV—Microwave—Telemetry

- DP.* An Application of Microwave to Power System Protective Relaying. W. E. Rhine, Motorola Communications and Electronics.

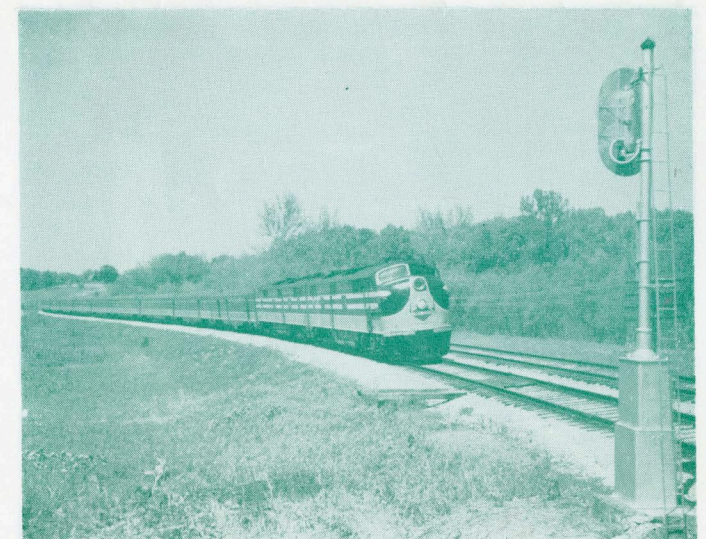
- DP.* Problems of Laying Out and Operating Microwave System. R. C. Harris, American Telephone & Telegraph Co.

- DP.* Selective Telemetry for Gas Pressure Station Control. M. E. Forrest, Atlanta, Ga.

- DP.* Systems Design in the Application of Power Line Carrier. K. P. Park, Westinghouse Electric Corp.

2:00 p.m.—System Engineering

- DP.* Present Day Trends in Industrial Distribution. Mr. C. F. Kucera, Allis-Chalmers Mfg. Co.
- 57-9. Surveys of Arc Furnace Installations on Power Systems and Resulting Lamp Flicker. Arc Furnace Working Group of System Planning Subcommittee. Presented by B. L. Lloyd, Westinghouse Electric Corp.



Illinois Central Railroad

AIEE SOUTHERN DISTRICT MEETING

Mississippi Products Company. This is one of the largest industrial manufacturers in Jackson, employing approximately 1,000 people in the manufacture of sewing machine cabinets, television and radio cabinets, and finished furniture. The plant offers a good opportunity to see interesting detailed work of veneer and panel furniture assembly. One can see the process from the log to completed furniture.

Rex Brown Steam Electric Station of Mississippi Power & Light Company. This is a 143,000 KW outdoor steam plant, using underground water and cooling towers. A new addition of 230,000 kilowatts is being added in 1959. It is one of three steam stations on this company's system which totals 420,000 KW.

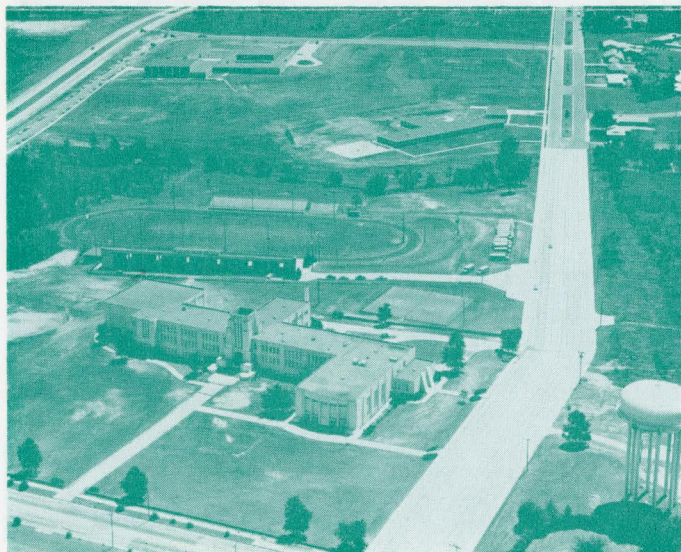
Century Manufacturing Company. This company is a subsidiary of National Presto Industries. The inspection party will have an opportunity to see the manufacturing processes necessary for producing electric and gas appliances. This is a new and modern industry for this area. Approximately 650 people are employed.

Vickers, Inc. This is a completely air-conditioned manufacturing plant for hydraulic pumps which are used in aircraft. The industry is new in this area and the inspection party can see a completely modern precision manufacturing process. Guided tours in parties of eight or ten will be arranged so that specific machine operations can be observed.

Armstrong Cork Company. This plant manufactures resilient floor covering in 9-inch squares and this inspection tour will prove to be quite interesting. We will have an opportunity to visit the entire plant on a guided tour so that all phases of tile manufacturing can be observed.

Southern Bell Telephone Building. This tour will enable visitors to see local dial equipment, a time announcing service, long distance switchboard, and a TV control center, including color monitor. Since two coaxial cables cross in Jackson, this is quite a switching center for TV and long distance service.

LADIES' PROGRAM: The ladies' headquarters will be in the Heidelberg Hotel. Coffee and doughnuts will be served every morning during the meeting at 9:30 a.m. Hostesses will be on hand at all times to extend a welcome, help you get acquainted and answer any questions. Thursday, April



Jackson's Modern School Buildings



Delta Air Lines

4, the ladies will be entertained at a Bridge and Canasta luncheon from 12:00 noon to 5:00 p.m. During the week, cars and guides will be available for tours of local and distant points of interest.

ADVANCE REGISTRATION: Please register in advance by returning the accompanying advance registration card properly filled out. In so doing you will save time in completing registration details upon arrival at the hotel. The registration fee for members will be \$3.00 and for nonmembers \$5.00. Student members and members of families will not be required to pay a fee. Registration facilities will be located in the lobby of the Heidelberg Hotel.

HOTEL RESERVATIONS: A large number of rooms are available at the Heidelberg Hotel, meeting headquarters, and at the Robert E. Lee, Wilthall and Edwards Hotel.

Rates are as follows:

Single Room	\$ 5.00 to \$ 8.00
Double Room	\$ 7.00 to \$11.00
Twin Bed Suites	\$18.00

TRANSPORTATION: Access to Jackson can be made by rail, air or highways. The Illinois Central and Gulf, Mobile and Ohio Railroads have regularly scheduled connections into Jackson. The Delta Air Lines have good schedules to the Capitol City. The best highway connections entering Jackson, Mississippi would be the U. S. Routes 49, 51 and 80.

Members of the 1957 Southern District Meeting Committee: General Committee: Richard D. Yarbrough, Chairman; Norris L. Stampley, Vice Chairman; James R. Burnie, Secretary; C. A. Rogillio, Treasurer; Advisory Committee: R. Baxter Wilson, H. G. Turner, Marvin E. Collum; Committee Chairmen: Mrs. J. B. Fountain, Ladies' Committee; R. Baxter Wilson, Finance; J. L. Maxwell, Technical Program; Ray W. Braswell, Publicity; T. M. Salisbury, Printing & Tickets; Robert E. Briggs, Registration; Fred C. Weems, Hotel Arrangements; Joe B. Fountain, Transportation; T. R. Brock, Inspection Trips; Dr. Chester McKee, Francis D. Joffrion, Students; Jay G. Gates, Dinner Dance.

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