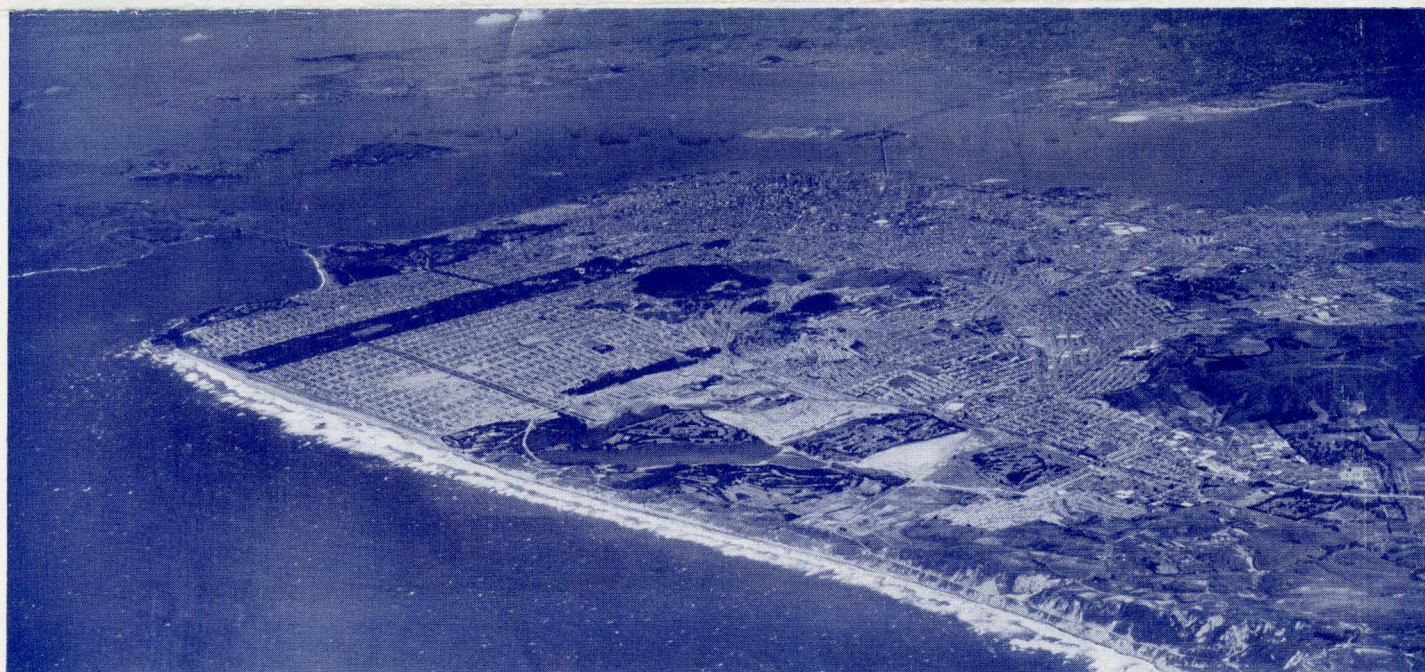


PACIFIC GENERAL MEETING

August 23-26, 1949

San Francisco, Calif.

Fairmount Hotel



San Francisco from 17,000 Feet

Moulin Studios

MEETING FEATURES

The Pacific General Meeting will be held this year in San Francisco from August 23 through 26. Headquarters will be at the Fairmount Hotel. A comprehensive program of technical meetings, inspection trips, and social functions has been planned.

We are fortunate to have the 1949 meeting in San Francisco, for this is the Centennial year, marking the 100th anniversary of the great California gold rush. San Francisco will be the center of several celebrations and special events planned to commemorate the history of 100 years ago. Members planning to attend the Pacific General Meeting will find it worthwhile to include a vacation with their visit to San Francisco.

The meeting will be opened by the Chairman, George C. Tenney, at 10:00 a.m., August 23. A general session with W. C. Mullendore as speaker will follow the welcoming remarks by San Francisco Section Chairman, T. C. MacFarland.

REGISTRATION

Members should register in advance by filling in and mailing the advance registration card sent with the mailed announcement. Advance registration will permit arrangements to be completed for you before arrival and will save time at the registration desk.

A registration fee of \$3.00 for members and \$5.00 for non-members has been established. This is in accordance with the policy set up by the Board of Directors. Fees will be collected at the hotel registration desk. Do not enclose remittance.

Please indicate the inspection trips you plan to attend, as well as marking your desires for hotel accommodations on the registration card.

The AIEE registration desk in the main lobby of the Fairmount Hotel will be open for preliminary registration between 7:30 and 9:30 p.m. on Monday, August 22nd.

AIEE PACIFIC GENERAL MEETING - PROGRAM - San Francisco,

HOTELS

Rooms have been set aside at the Fairmont, the headquarters hotel, and at two others, the Mark Hopkins Hotel and the Sir Francis Drake Hotel, both within reasonable distance.

The Fairmont Hotel is atop Nob Hill in the City of San Francisco. It is about eight blocks from the center of the theatre and shopping district.

The Mark Hopkins Hotel is directly across California Street from the Fairmont.

The Sir Francis Drake Hotel is approximately halfway between the headquarters hotel and the shopping district.

Hotel reservations should be made by using the advance registration card sent with the mailed announcement.

Room rates are as follows:

Fairmont:

Singles	.....	\$7.00, \$9.00 and \$12.00
Double or Twins	.....	\$8.00, \$10.00 and \$13.00
Suites	.....	\$22 to \$35.00

Mark Hopkins:

Singles	.....	\$7.00, \$8.00, \$9.00 and \$10.00
Doubles or Twins	.....	\$10.00, \$11.00, \$12.00 and \$13.00
Suites	.....	\$20.00, \$25.00 and \$30.00
Double Bedroom Suites	.....	Add \$12.00

Sir Francis Drake:

Singles	.....	\$6.00, \$7.00 and \$8.00
Doubles	.....	\$8.00, \$9.00 and \$10.00
Twins	.....	\$9.00, \$10.00 and \$11.00

Arrangements have also been made to accommodate up to 100 male students and male faculty members at the University of California International House, 2299 Piedmont Avenue, Berkeley, California. The accommodations will provide single and double rooms with detached bath at \$2.00 per person per day.

The International House is an attractive modern establishment immediately adjacent to the University of California. A transbay train or bus trip of about one hour is required from the headquarters hotel to the International House.

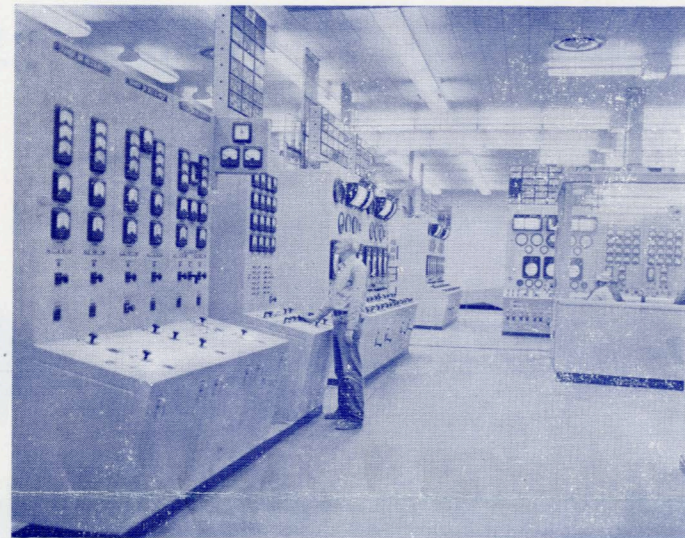
SOCIAL FUNCTIONS

The social program will include a banquet, a general luncheon, and a number of events especially planned for the ladies. Since space at all functions will be limited, it is desirable that advance reservations be made. Reservations will be made on a first come-first served basis. The reservation card enclosed with the mailed announcement should be used and enclosed with remittance for tickets. Tickets for all events will be ready for you at the registration desk.

BANQUET

An informal banquet with entertainment will be held at 7:30 p.m. on Thursday, August 25, in the Gold Room of the Fairmont Hotel. An excellent dinner will be served and will be followed by a program of first class entertainment, featuring stars of the stage and radio. This banquet promises to be the highlight of the social functions.

The total price will be only \$7.50 per person. It is requested that as many as possible make advance reservations.



Control Room at Station 'P' of P. G. & E. Company

GENERAL LUNCHEON

On the opening day, August 23, a general luncheon will be held at 12:00 noon in the Terrace Room of the Fairmont Hotel. Our new Institute President, Mr. J. F. Fairman will address the group. The luncheon price will be \$3.00 per person.

LADIES ENTERTAINMENT

Three outstanding functions have been arranged for the ladies. Any one, or all of them may be attended as desired.

On the afternoon of Tuesday, August 23, there will be an informal tea in the Green and Garden Rooms of the Fairmont Hotel. The time will be 3:30; the charge, \$3.00.

On Wednesday, August 24, starting at 10:30 a.m., there will be an outing to Palo Alto and a visit to Stanford University. A specially arranged luncheon will be served at the unique tea shop, the Allied Arts. The objets d'art on display at this unusual shop will delight those attending. The complete trip, including lunch and transportation will cost \$3.00.

On Thursday, August 25, again starting at 10:30 a.m., there will be a tour of San Francisco, including a trip to Fisherman's Wharf, a boat cruise on beautiful San Francisco Bay, and a visit to Chinatown where luncheon will be served at the exotic Cathay House. San Francisco's Chinatown is the largest outside the Orient. The price will be \$3.00.

Recognizing that many ladies will want to shop or visit while in San Francisco, no entertainment function has been arranged for Friday.

Reservations should be made by using the reservation card enclosed with the mailed announcement. Note that a "package deal" is offered which includes all ladies' entertainment functions, for only \$6.00.

STUDENT ACTIVITIES

Several student meetings have been scheduled, including a dinner on Friday evening. For the convenience of visiting students staying at the International House a number of functions will take place on the campus of the University of California at Berkeley.

INSPECTION TRIPS

The committee has arranged a group of inspection trips to important electrical installations in the San Francisco Bay Area. Each member, regardless of his interests, will find one or more trips appealing.

Station P. Pacific Gas and Electric Company, San Francisco

This station is the newest steam turbine generating plant of the P. G. and E. The second 110,000 kw generator has recently gone into service. All parts of this modern station will be inspected.

Radiation Laboratory, University of California, Berkeley

The U. C. Radiation Laboratory, which is the headquarters of the renowned Nobel prize winning physicist, Dr. Ernest O. Lawrence, has the world's largest Cyclotron, ten times more powerful than any other nuclear accelerator. In addition to the Cyclotron, other facilities of this outstanding laboratory will be viewed.

Network Calculator—Pacific Gas and Electric Co., San Francisco

The new P. G. and E. a-c network calculator is of the most modern type. It includes facilities to simulate 14 generators, 164 line impedance units, 48 loads and 80 auxiliary units.

U. S. Naval Shipyard, Hunters Point, San Francisco

There are several unique electrical installations at the San Francisco Naval Shipyard. The nation's largest dry-dock includes an underground network distribution system; the yard has the world's mightiest electric crane; and the electronic and instrument shops are unsurpassed.

Mission Substation, P. G. and E., San Francisco

Mission Substation is a completely indoor, 110,000 volt station located in a heavily congested area in the City of San Francisco. The building itself and the installed equipment include many novel and unusual design features.

Columbia Steel Company, Pittsburg, California

Of particular interest at Columbia is the new continuous tin plate installation. Modern electric drives are used on the pickling line, cold reduction mill, electrolytic cleaning line, the temper mills, trimming and shearing lines, and tinning lines.

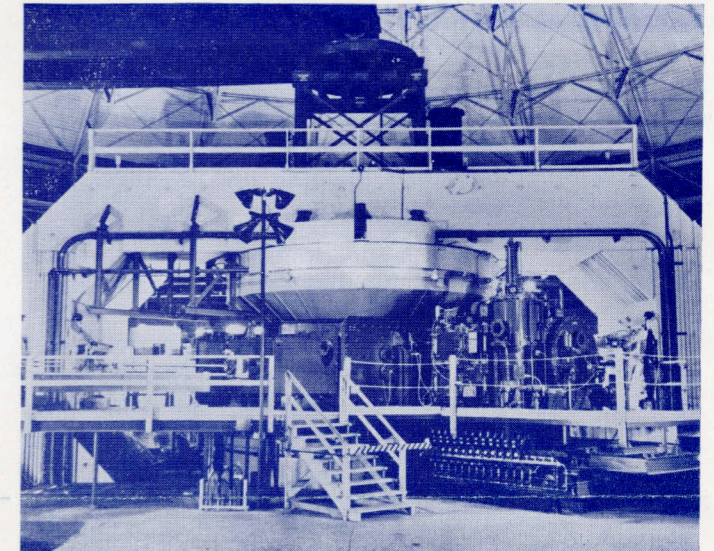
Ames Laboratory, National Advisory Committee for Aeronautics, Moffett Field, California

Ames Laboratory has ten wind tunnels in operation, the larger ones requiring 36,000 and 50,000 driving horsepower. The more important of these installations will be included in the inspection.

Pacific Telephone & Telegraph Company, Oakland

The new Oakland Telephone building now being completed will be the regional switching center for Northern California, Western Nevada and the Pacific Northwest. The installation of crossbar toll dialing equipment is the first west of Chicago and will work with similar installations in Philadelphia, New York, Boston, Cleveland and Chicago.

A nominal charge will be made to cover bus transportation on inspection trips.



New York Times Photo

World's Largest Cyclotron at University of California

GOLF

The annual golf tournament will be held at the Peninsula Golf and Country Club in San Mateo County, on Thursday afternoon, August 23, at 12:00 noon. Players are assured of perfect golfing weather since the automatic air conditioning, normal in San Francisco in August, will not be turned on.

Where desired, arrangements will be made for play in foursomes. All arrangements will be made by the Golf Committee at hotel headquarters.

Competition will be medal play on handicap. AIEE members will be playing for the John B. Fiskin Cup. There will be other prizes for low gross and also low net, and numerous prizes based on handicaps worked out by the committee. The greens fee for the tournament will be \$3.50.

Transportation will be furnished to and from the course, when desired. Luncheon may be had at the club by prior reservation with the committee. Return to the Fairmont Hotel will be in ample time to preprae for the banquet where the prizes will be awarded.

COMMITTEE

All arrangements for the Pacific Meeting have been completed by the committee working with the General Chairman, George C. Tenney. Committee men are:

George C. Tenney, Chairman
C. E. Baugh, Vice Chairman
J. A. Robinson, Secretary
W. F. Poynter, Treasurer
J. L. Buckley, Registration
D. I. Anzini, Program
R. O. Brosemer, Hotel
I. W. Borda, Entertainment & Reception
W. J. Warren, Student Activities
W. R. Nodder, Trips & Local Transportation
H. C. Verwoert, Transportation
W. L. Winter, Sports
Remi Bollaert, Publicity

ADVANCE COPIES OF PAPERS

Members may obtain preprints of technical papers at the uniform price of **30¢ each (60¢ each to non-members)** by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. Conference papers denoted by CP** are intended for presentation only, and are not available. 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 \$9 denominations are available for those who wish to avoid remittance by check or otherwise. Most of the papers ultimately will be published as AIEE PROCEEDINGS and in the TRANSACTIONS.

Monday, August 22

7:30-9:30 p.m.—Advance Registration
Main Lobby—Fairmont Hotel

Tuesday, August 23

8:30 a.m.—Registration
Main Lobby—Fairmont Hotel

10:00 a.m.—Opening of Meeting
Gold Room
George C. Tenney, Chairman

Welcome: T. C. McFarland, Chairman, San Francisco Section.

10:15 a.m.—General Session
Gold Room
George C. Tenney, Chairman

Address: The Social and Economic Responsibilities of the Engineer. W. C. Mullendore, President, Southern California Edison Company, Ltd.

12:00 m.—Luncheon Meeting
Terrace Room
Address: Our Institute and its Future. James F. Fairman, President, AIEE. All members, guests and ladies welcome.

2:00 p.m.—Power Generation and Distribution
Red Room
W. R. Johnson, Presiding

CP.** Electric Load Growth in California for the Next 20 Years. R. P. O'Brien, California Public Utility Commission.

CP.** The New Swedish 380 Kv System Now Under Construction. A. Rusck, Swedish State Power Board.

49-200-ACO.* Post-war Planning for High Voltage Transmission in Northern California. W. R. Johnson, Pacific Gas and Electric Company.

CP.** Application of Series Capacitor and Double Conductors in the Swedish Long-Distance Transmission System. B. Rathsmann, Swedish State Power Board.

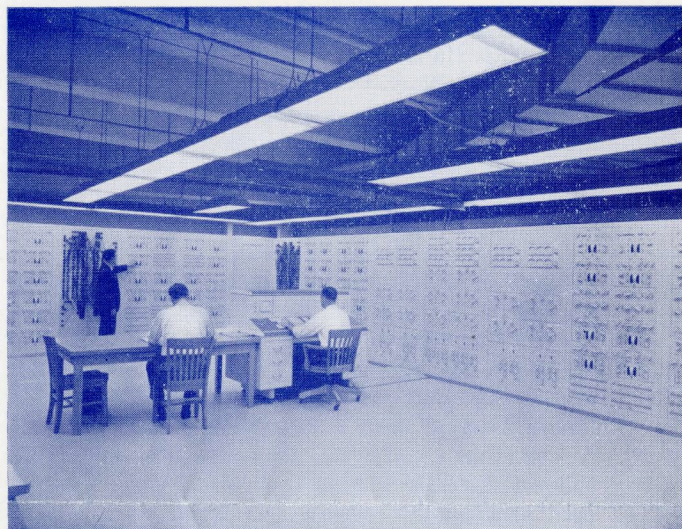
2:00 p.m.—Air Transportation
Vanderbilt Room
S. D. Summers, Presiding

CP.** A New Aircraft D. C. Generator Control System. G. A. Phillips, General Electric Company.

49-201-ACO.* Directional Current Circuit Protector. C. E. Gagnier and E. L. Caustin, Carma Manufacturing Company.

49-202. Current Rating of Aircraft Cable. W. H. Askew, A. T. McClinton, Naval Research Laboratory.

CP.** Predicting the Current Capacity of Aircraft Cable. Milton Schach, Naval Research Laboratory.



Network Calculator Pacific Gas and Electric Company

CP.** 30 Volt DC and 120 Volt DC Aircraft Circuit Breakers. P. J. Reifschneider, B. S. Beall, III General Electric Company.

48-203. Protection of the Airplane Main Bus. D. W. Exner, Boeing Airplane Co. Presentation By Title Only.

7:00 p.m.—Meeting—District, Section, and National Officers and Student Counselors
Vanderbilt Room

Wednesday, August 24

9:00 a.m.—Inspection Trip, Station "P" Steam Plant, Pacific Gas and Electric Company

9:00 a.m.—Home Heating Symposium
Garden Room
J. C. Beckett, Presiding

CP.** Electric Space Heating Methods. Stuart Forsyth, Westinghouse Electric Corporation.

CP.** Effect of Increased Residential Space Heating on Power System Economics. G. E. Bishop, Coast Counties Gas and Electric Company.

CP.** Power Distribution for Electric Space Heating. B. H. Martin, Tennessee Valley Authority.

CP.** Heat Pump Experience in Portland, Oregon Area. W. E. Gordon, Portland General Electric Company.

CP.** Electric Space Heating Load Control. J. C. Beckett, Wesix Electric Heater Company.

9:30 a.m.—Power and Instruments
Red Room
Lloyd F. Hunt, Presiding

CP.** Comparison of American and Foreign Practice of High Voltage Transmission and Generation. Lloyd F. Hunt, Southern California Edison Company.

49-203-ACO.* When Should A Generator be Rewound? E. A. Crellin, Pacific Gas and Electric Company.

49-221. Insulator Flashover De-ionization Times as a Factor in Applying High Speed Reclosing Breakers. A. C. Boisseau, B. W. Wyman, W. F. Skeats, General Electric Company.

AIEE PACIFIC GENERAL MEETING—PROGRAM—San Francisco, Calif., August 23-26, 1949

49-205. Deionization Time of High Voltage Fault-Arc Paths. E. J. Harrington, Bonneville Power Administration; E. C. Starr, Oregon State College.

49-206. A Transient Fault Locator for High Voltage Transmission Lines. L. R. Spaulding, C. C. Diamond, Bonneville Power Administration.

9:30 a.m.—Air Transportation

Vanderbilt Room
H. F. Rempt, Presiding

CP.** A 120-Volt DC Multiple Generator Aircraft Electrical System. J. D. Miner, R. J. Lusk, Westinghouse Electric Corporation.

49-207. Weight of the 120-Volt DC System Versus the 3-ACO*. Phase, 208 Volt, 400 Cycle, AC System. W. F. Moore, General Electric Company.

CP.** A Generator Control and Protective Panel for 120 Volt DC Aircraft System. D. E. Fritz, O. C. Walley, Jack and Heintz Precision Industries, Inc.

49-219. D. C. Power Supplies and Starters for Starting Aircraft Jet Engines. P. T. Kunigonis, Jack and Heintz Precision Industries, Inc.

48-229. A Rectified A-C Electric System for Aircraft. L. M. Cobb, W. L. Kershaw, Q. E. Erlandson, Glenn L. Martin Co. Presentation By Title Only.

2:00 p.m.—Power Generation and Distribution

Red Room
Noel B. Hinson, Presiding

49-208. Electrical Design Features, Steam Electric Generating, Station 'P'. F. S. Benson, Pacific Gas and Electric Company.

CP.** Automatic Supervisory Control of Remote Hydroelectric Power Plants. R. F. Hind, C. L. Killgore, U. S. Bureau of Reclamation.

CP.** Transformer Grounding Neutral Current Limitation with Neutral Voltage Shift During Ground Faults. Martin J. Lantz, Bonneville Power Administration.

49-209. Matching Electrical Characteristics of McNary Generators and Transformers with Bonneville Power Administration System. B. V. Hoard, Lewis Weiner, Bonneville Power Administration.

2:00 p.m.—Electronics and Communications

Garden Room
R. D. Miller, Presiding

CP.** Expanding the Pacific Coast Telephone Network. D. I. Cone, C. V. Fowler, Pacific Telephone and Telegraph Company.

49-210. A Proposal for Broad Band Coupling of Power Line Carrier Equipment. R. H. Miller, Pacific Gas and Electric Company.

49-211. Modern Carrier Current Test Equipment and Its Application. R. L. Brinton, Pacific Gas and Electric Company.

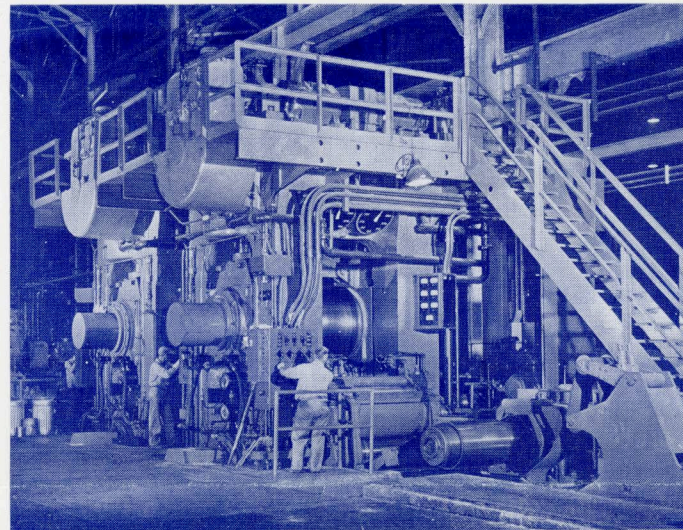
CP.** Sound Powered Telephone Systems. A. P. Egerman, San Francisco Naval Shipyard.

2:00 p.m.—Air Transportation

Vanderbilt Room
W. V. Boughton, Presiding

CP.** Design of 120 Volt DC Aircraft Generators. A. Fisher, General Electric Company.

49-213. The Design of Insulating Systems for Small Rotating ACO.* Machines by the Determination of Corona Starting Voltage. R. D. Jones, E. M. Stanbery, General Electric Company.



Cal-Pictures

Temper Rolling at Columbia Steel

CP.** Flexural Vibration in Aircraft Engine Accessories. Irving Kalikow, General Electric Company.

CP.** A Modern Air Transport Generator Protection System. C. A. Toliver, Lockheed Aircraft Corporation.

48-214. Aircraft Carbon-Pile Voltage Regulators, Fundamentals and Design Improvements. B. O. Austin, H. H. C. Richards, Westinghouse Electric Corp. Presentation By Title Only.

1:30 p.m.—Inspection Trip to Radiation Laboratory—University of California

7:30 p.m.—Meeting Student Branch Officers and Counselors—University of California

Engineering Building

Thursday, August 25

9:00 a.m.—Inspection Trip—San Francisco Naval Shipyard, Hunter's Point

9:00 a.m.—Inspection of Pacific Gas and Electric Company Calculating Board

Basement P. G. & E. Co. Bldg.
245 Market Street

9:30 a.m.—Industrial

Garden Room
Ralph A. Hopkins, Presiding

CP.** Steel and Electricity in Partnership at Columbia Steel's New Mill at Pittsburg, California. George L. Beaver, General Electric Company.

49-215. Series Capacitors to Correct Voltage Fluctuations Caused by Induction Motors. T. A. Bettersworth, Pacific Gas and Electric Company.

49-216. Dielectric Strength of Oil with Variations of Pressure and Temperature. W. G. Hoover, W. A. Hixson, Stanford University.

49-217. Electrical Design Features of Mission Substation, a High Voltage Subtransmission Station in San Francisco. Einar Nilsson, Pacific Gas and Electric Company.

9:30 a.m.—Conference on Aircraft Electrical System Protection

Vanderbilt Room
Karl Martinez, Presiding

CP.** Philosophy of Aircraft Electrical System Protection. L. R. Larson, Naval Research Laboratory.

10:00 a.m.—Conference Meeting on Calculating Board Operation

Room 1506, P. G. & E. Co. Bldg., 245 Market Street
Dr. A. Tilles, Presiding

12:00 m.—Golf at Peninsula Golf and Country Club—San Mateo

1:30 p.m.—Inspection Trip to Mission Substation, Pacific Gas and Electric Company

2:00 p.m.—Conference on Aircraft Electrical Systems

Vanderbilt Room
Karl Martinez, Presiding

CP.** A New Approach to Aircraft Electrical Systems. E. F. Kotnik, Consolidated-Vultee Aircraft Corp.

7:30 p.m.—Banquet and Presentation of Golf Prizes

Gold Ball Room

Informal—Entertainment.

Friday, August 26

9:00 a.m.—Inspection Trip to New Regional Automatic Toll Switching Center

Pacific T. & T. Co., Franklin Bldg., Oakland

9:30 a.m.—Student Session

Garden Room
Professor I. J. Sandorf, Presiding

CP.** Topographic Presentation Radar. Walter Hirschberg, California Institute of Technology.

CP.** Design of a Tit-Tat-Toe Machine. Robert Haufe, California Institute of Technology.

CP.** Protection of Polyphase Machines from Unbalanced Voltages. Joe Ylarraz, University of Santa Clara.

CP.** An Electronic Flux Meter. P. B. Gallagher, University of Santa Clara.

9:30 a.m.—Air Transportation

Vanderbilt Room
C. F. McCabe, Presiding

49-223. Light Weight Aircraft Transformers. D. S. Stephens, Westinghouse Electric Corp.

CP.** A Phase Adapter for Aircraft. F. W. Maxstadt, California Institute of Technology.

49-218. An Electric De-Icing System for Aircraft. E. W. Giloy, The Glenn L. Martin Co.

49-214. Lightning Stroke Damage to Aircraft. J. H. Hagenguth, General Electric Co.

49-224. Analysis of Relay Servomechanisms. D. A. Kahn, Curtis-Wright Corp.

49-222. Development and Application of Electric Heating to De-Icing of Aircraft Propellers. J. H. Sheets, E. J. Sand, Curtiss-Wright Corp. Presentation By Title Only.

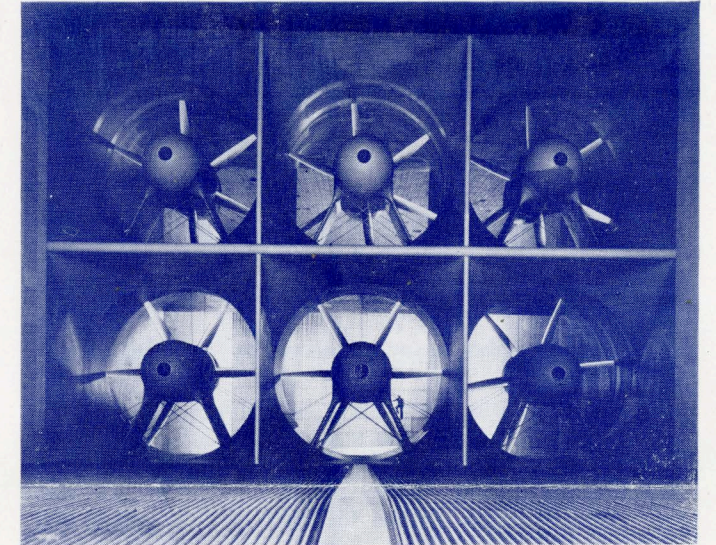
1:30 p.m.—Inspection Trip to Columbia Steel Company, Pittsburg, California

1:30 p.m.—Inspection Trip to Ames Aeronautical Laboratory, Moffett Field

2:00 p.m.—Electronics and Science

Garden Room
D. I. Cone, Presiding

CP.** The University of California Proton Synchrotron. G. M. Farly, University of California Radiation Laboratory.



N.A.C.A. Photo

Full Scale 36,000 H.P. Wind Tunnel, Moffett Field

CP.** The Stanford Linear Accelerator. R. F. Post, Stanford University.

CP.** The Outlook for the Nuclear Power Plant. Dr. I. Perlman, University of California Radiation Laboratory.

CP.** Radiac Instruments. C. E. Parker, San Francisco Naval Shipyard.

2:00 p.m.—Power Generation and Distribution

Vanderbilt Room
Waldo E. Enns, Presiding

49-220. 220 KV Transmission Line Tesla to Midway. E. M. ACO.* Wright, Pacific Gas and Electric Company.

49-204. Some Oscillographic Methods of Investigating Mechanical and Hydraulic Conditions During Operation of Hydraulic Units. L. R. Engvall, Bureau of Reclamation.

CP.** Tests of Load Interrupter Switches for 115 KV Service. O. A. Demuth, H. L. Rorden, Bonneville Power Administration.

CP.** Field Tests on 115 KV Interrupter Switch.

1. A. C. Schwager, Schwager-Wood Corporation.
2. P. B. Hoyer, Electrical Engineers Equipment Co.
3. R. F. Gibbons, Pacific Electric Mfg. Corp.

49-212. Magnetic Heating of Transmission Line Clamps. V. L. Crabb, J. M. Sheadel, The Ohio Brass Co.

CP.** Conductor Armor For Reinforcement, Damping, Splicing and Repair. T. F. Peterson and J. C. Little, American Steel and Wire Co.

2:00 p.m.—Student Session

Room 104—Engineering Bldg.
University of California
Professor V. L. Palmer, Presiding

6:30 p.m.—Student Dinner and Meeting

University Cafeteria
University of California

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

ACO.*—Advance copies only available, not intended for publication in TRANSACTIONS.

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