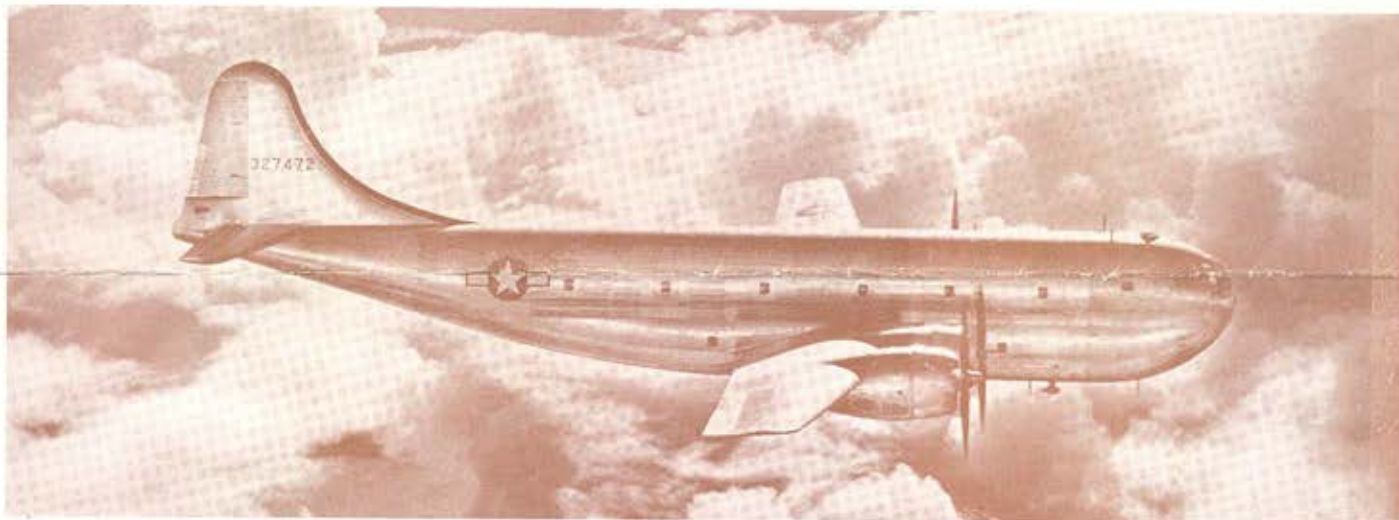




# Pacific Coast Meeting

AUGUST 27-30, 1946

SEATTLE, WASH.  
Olympic Hotel



C-97 Army Transport now in production at Boeing Aircraft Company Plant No. 2, which will be visited during the meeting. Aviation papers will be presented Thursday.

*Courtesy of Boeing Aircraft Co.*

## MEETING FEATURES

**ENTERTAINMENT:** The President's reception will be held at 8:00 p.m., Tuesday, August 27, in the Junior Ball Room of the Olympic Hotel.

A theatre party is planned for Wednesday, August 28th, at 8:00 p.m. in the "Penthouse Theatre" at the University of Washington. This theatre, of unusual design with the audience surrounding the stage is staffed entirely by Students of the School of Dramatics.

The Banquet will be held at 7:00 p.m., Thursday, August 29th, in the Spanish Ball Room of the Olympic Hotel. One feature of the entertainment at the Banquet will be the presentation of the golf prizes from the previous day's tournament.

**THE GOLF TOURNAMENT** will be held at the Inglewood Golf and Country Club on Wednesday afternoon, August 28th, starting at 1:00 p.m. The competition will be medal play on handicap in foursomes. The main prize for member competition will be the John B. Fiske cup. There will be prizes for low net, low gross, and kickers handicap. Inglewood is about 10 miles from Seattle and transportation will be furnished to and from the course.

**LADIES' ENTERTAINMENT** will be furnished to ladies who are registered at the meeting. There will be scenic boat rides and automobile sightseeing trips. Places of interest which will be visited include the floating bridge over Lake Washington, the University of Washington, the Lake Washington ship canal locks and the Seattle Art Museum. Arrangements are being made for a tea and other amusements.

### INSPECTION TRIPS

**BOEING AIRCRAFT COMPANY** Plant No. 2 is located in Seattle adjacent to Boeing Field, Seattle's Commercial Airport, about 30 minutes' drive from meeting headquarters. This is the home of the famous B17 Flying Fortress and B29 Superfortress Army bombers. At present the plant is producing C97 Army transports which are a postwar adaptation of the B29 wing design. The most interesting part of the plant to most visitors will be the wind tunnel with its 20 foot fan where air speeds approaching that of sound are obtained. Visitors may also observe the assembly work on planes under pro-

duction. Trips will be scheduled throughout the meeting to suit convenience and to arrange the inspection parties in small groups.

**PUGET SOUND NAVY YARD** is located at Bremerton across Puget Sound from Seattle. This is one of the largest Navy Yards in the United States and is capable of drydocking the largest battleships and aircraft carriers. Many fighting ships are now in the Yards and will be open to visitors. The various shops of the Yards will also be open to inspection for those interested in industrial engineering. To reach the Navy Yard visitors must take a ferry at Coleman dock and it takes about an hour to make the trip each way. One trip is scheduled for Wednesday afternoon.

**SEATTLE NAVAL STATION** is located at piers 90 and 91 about 15 minutes' drive from meeting headquarters. There are at present a large number of warships berthed at the station. These ships are in various stages of deactivation and comprise in part the 19th fleet, an inactive fleet to be berthed in North Pacific waters. Trips will be scheduled to the Naval Station throughout the meeting and at the convenience of the visitors.

**ELECTRIC POWER PLANTS:** The nearest hydroelectric plant to Seattle is the Snoqualmie plant of the Puget Sound Power & Light Co. which is about an hour's drive from the center of Seattle. This plant provided Seattle with its first hydroelectric power nearly a half century ago. It is of interesting construction with its generators at the bottom of a shaft hewn in the solid rock which also carries the penstocks.

The City of Tacoma's hydroelectric plant at Alder Dam on the Nisqually River is the newest hydro plant in the Northwest. It is about 2 hours' drive from Seattle by car.

The city of Seattle's Skagit River development is closed to visitors due to construction work in progress.

The Shufleton steam plant of the Puget Sound Power and Light Company is at Renton about a half hour's ride from meeting headquarters.

Distribution substations of the Puget Sound Power and Light Co. and of the Seattle City Light, including new mercury-arc-rectifier railway substation will be open for inspection.

# PACIFIC COAST MEETING—PROGRAM

(All sessions to be held in the Oly

## ADVANCE COPIES OF PAPERS

Preprints of technical papers may be obtained by mail by remitting price indicated to the A.I.E.E. Order Department, 33 West 39th Street, New York 18, N. Y.; if purchased at A.I.E.E. headquarters or at the meeting 5¢ less per copy. For convenience an order form is enclosed. Only numbered papers will be available in advance-copy form. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured.

Please order by number only and enclose remittance.

## Tuesday, August 27

8:00 a.m.—Registration

9:45 a.m.—Opening Session

C. F. TERRELL, Presiding

Address: "Development of Atomic Power." Bruce R. Prentice, Gen. Elec. Co.

46-185. Columbia River Power. E. I. Pease, H. W. Goodhue, ACO.<sup>†</sup> U. S. Engr. Office, Seattle. 20 cents by mail.

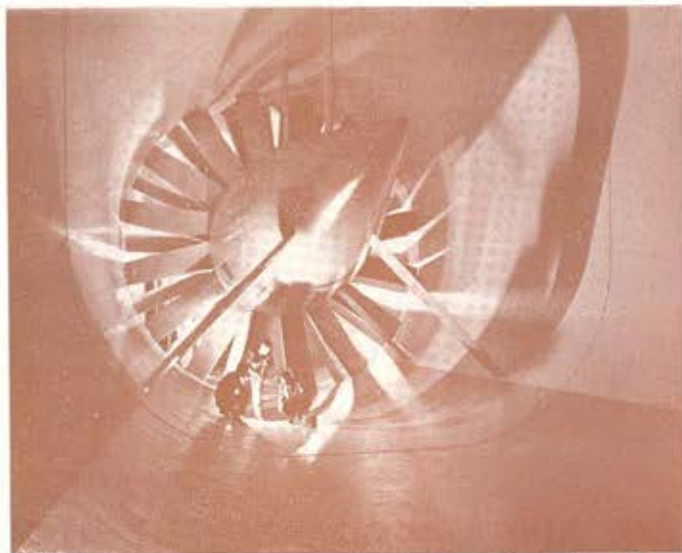
46-178. Power-System Development for Service to Hanford Plutonium Plant. B. V. Hoard, J. R. Curtin, Bonneville Pr. Adm. 20 cents by mail.

2:00 p.m.—Central Stations

Thomas INGLEDOW, Presiding

46-184. Specific Engineering Problems in Rural Electrification and Electro-Agriculture. M. M. Samuels, Rural Elec. Adm. 30 cents by mail.

46-201. Hydroelectric Power-System Design. S. M. Denton, ACO.<sup>‡</sup> U. S. Dept. of the Interior, Denver. 25 cents by mail.



Courtesy of Boeing Aircraft Co.  
Giant Fan in Wind Tunnel of the Boeing Aircraft Company

46-191. Design Factors to Promote Reliability of Hydro-electric Station Auxiliaries. C. L. Killgore, U. S. Dept. of the Interior, Denver. 15 cents by mail.

46-195. The Use of Business Machines in Determining the Distribution of Load and Reactive in Power-Line Networks. P. D. Jennings, G. E. Quinan, Puget Sound Pr. & Lt. Co. 15 cents by mail.

46-177. 4,370,000-Kva Short-Circuit Tests on Grand Coulee 230-Kv Bus. W. H. Clagett, U. S. Bur. of Rec.; W. M. Leeds, Westinghouse Elec. Corp. 20 cents by mail.

8:00 p.m.—President's Reception

## Wednesday, August 28

9:00 a.m.—Industrial and Railroad

W. C. SMITH, Presiding

46-186. Comparisons of Railway Motive Power for Operation in the Pacific Northwest. T. M. C. Martin, Bonneville Pr. Adm. 30 cents by mail.

46-91. High-Voltage Ignitron Rectifiers and Inverters for Railway Service. J. L. Boyer, C. G. Hagensick, Westinghouse Elec. Corp. 30 cents by mail.

CP.\* A New D-C Control for Cargo Handling. S. Rifkin, W. R. Morton, General Elec. Co.

46-179. Fault-Current Measuring Device. M. J. Lantz, Bonneville Pr. Adm. 15 cents by mail.

46-187. Teaching Electricity and Magnetism. V. P. Hessler, Univ. of Kansas. 20 cents by mail.

46-194. Self-Excited Electromagnetic Drive for a Resonant Fatigue Machine. A. R. Willson, Boeing Aircraft Co. 15 cents by mail.

1:00 p.m.—Golf Tournament for the John B. Fisker Cup

2:00 p.m.—Student Session

E. W. SCHILLING, Presiding

Carrier Current through Power Distribution Networks. V. Clayton, E. Jones, Univ. of Utah.

Railway Signalling. F. Curry, Univ. of Arizona.

Operation of an Electronically Controlled Direct-Current Motor. R. Angell, Univ. of Idaho.

Reconnection of an Induction Motor for Different Speeds. G. D. Cowles, Univ. of Southern Calif.

Electronic-Controlled Circuit Breaker. W. R. Aiken, Univ. of Calif.

8:00 p.m.—Theater Party

# I-SEATTLE, WASH., AUG. 27-30, 1946

(Olympic Bowl at the Olympic Hotel)

## Thursday, August 29

### 9:00 a.m.—Aviation

E. F. EVENSON, Presiding

Address: "Military Aviation."

- 46-193. Effects of Thermal Characteristics of Aircraft Generators on Load Analysis. Stanley Rogers, Gen. Vultee Aircraft Corp. 20 cents by mail.
- 46-190. Electrical Anti-Icing of Aircraft Windshields. J. D. McCrum, Douglas Aircraft Co., Inc. 20 cents by mail.
- 46-188. An Electronic Frequency Meter and Speed Regulator. Ellis Levin, Boeing Aircraft Co. 20 cents by mail.
- 46-197. One-Hundred-Fifty-Thousand Horsepower Applied to Aeronautical Research. J. A. White, Nat'l Advisory Comm. for Aeronautics. 15 cents by mail.
- 46-192. An Improved Azimuth Indicating System for Aircraft. E. E. Lynch, R. A. Pfuntner, Gen. Elec. Co. 20 cents by mail.
- 46-180. Control and Protection of Aircraft Direct-Current Power Systems. B. O. Austin, Westinghouse Elec. Corp. 15 cents by mail.

### 2:00 p.m.—Power Systems

E. A. LOEW, Presiding

- 46-189. Dielectric Strength of Station and Line Insulation to Switching Surges. P. L. Bellaschi, L. B. Rademacher, Westinghouse Elec. Corp. 20 cents by mail.
- 46-182. Long-Distance Power Transmission—As Influenced by Excitation Systems. C. Concordia, S. B. Cray, F. J. Maginniss, General Elec. Co. 30 cents by mail.
- 46-181. An Oscillograph for Recording Transient Recovery Voltages. W. G. Hoover, Stanford Univ. 20 cents by mail.



Battleships in the U. S. Naval Station, which will be visited during the Meeting

46-200. Sensitive Ground Relay Protection for Complex Distribution Circuits. L. F. Hunt, Southern Calif. Edison Co., Inc. 15 cents by mail.

46-196. Characteristics of a 400-Mile, 230-Kv Series-Capacitor Compensated Transmission System. B. V. Hoard, Bonneville Pr. Adm. 30 cents by mail.

### 7:00 p.m.—Banquet

## Friday, August 30

### 9:00 a.m.—Discussion on the Organization of the Engineering Profession

C. B. CARPENTER and J. F. FAIRMAN, Presiding

As has been done in other sections of the country, this session has been arranged to afford members in the Pacific Coast region an opportunity to participate in a discussion of the several projects under consideration by the Institute's Committee on Planning and Co-ordination.

It is hoped that members who plan to attend will review and discuss among themselves in advance the information about the activities of the Committee on Planning and Co-ordination, which has been published in recent issues of *ELECTRICAL ENGINEERING*. In particular, a lively discussion from the floor is anticipated about the respective merits of the four plans of organization of the engineering profession, outlined in the progress report of the Professional Activities Subcommittee, which appeared in *ELECTRICAL ENGINEERING*, April 1946, pages 169-73.

The views of a representative cross-section of the members in the Pacific Coast region about these important matters will be most helpful to the committee in its work.

### 2:00 p.m.—Communications

F. D. McMILLAN, Presiding

- 46-198. Television—A Review of Present Status. E. W. ACO.<sup>‡</sup> Engstrom, R. D. Kell, RCA. 15 cents by mail.
- CP.<sup>°</sup> Four-Tone Dual Channel Carrier Shift Telegraph System. F. J. Werthmann, Werthmann Radio Co.
- 46-183. Application of Compandors to Telephone Circuits. C. W. Carter, Jr., A. C. Dickieson, D. Mitchell, Bell Tel. Labs., Inc. 25 cents by mail.
- 46-199. Field Tests of Power-Line Carrier-Current Equipment. R. H. Miller, Pacific Gas. & Elec. Co.; E. S. Prud'homme, General Elec. Co. 15 cents by mail.

ACO.<sup>‡</sup>: Advance copies only available; not intended for publication in *TRANSACTIONS*.

CP.<sup>°</sup>: Conference paper, no advance copies are available; not intended for publication in *TRANSACTIONS*.



Grand Coulee Dam and Power Plants of the U. S. Bureau of Reclamation, which may be visited driving to and from the Meeting

**LUMBER INDUSTRIES:** Inspection parties will be formed throughout the meeting for those interested in the lumber industry. The Seattle Cedar Lumber Co. and the Aircraft Plywood Co. are located in Seattle and easily reached. There are a number of interesting lumber industries in Everett which is about an hour's drive from Seattle. These include a very large and modern lumber mill at Weyerhaeuser Mill B and two large pulp mills, the Weyerhaeuser pulp mill, and the Sound View Pulp and Paper Co. Of special interest are new chipper and barker equipment where the bark is removed by a high pressure jet of water.

### SIGHTSEEING

**COLUMBIA RIVER PLANTS:** The two large government power projects at Grand Coulee and Bonneville on the Columbia River can be visited by motorists on their way to or from the meeting. Grand Coulee Dam which was constructed by the Bureau of Reclamation and is the world's largest masonry structure is about 2 hour's drive west of Spokane. Bonneville Dam which was constructed by the U. S. Army Engineers and has extensive boat locks and fish elevators is about an hour's ride east of Portland. Arrangements will be made to visit these dams under the guidance of persons well qualified to explain engineering features.

**NATIONAL PARKS:** Mount Rainier National Park is about three hours drive from Seattle and can be reached by bus or private car from either Seattle or Tacoma. Snow capped Mount Rainier with its many glaciers is well worth a visit and will be greatly enjoyed by those who make the trip. Mount Baker National Park is also about 3 miles drive from Seattle and is easily reached by those driving to Vancouver.

**CANADIAN CITIES:** The cities of Victoria and Vancouver in British Columbia provide excellent trips before or after the meeting. Victoria is reached by boat from Seattle and the round trip can be made in one day. Vancouver can be reached by boat from Seattle via Victoria but requires 2 days for the round trip. Vancouver can also be reached by train or car from Seattle in about four hours. Both cities have many beautiful parks and gardens. Those visiting Canada may be assisted in making hotel reservations at the registration desk.

**THE UNIVERSITY OF WASHINGTON** is located in the North end of Seattle and can be reached in one half hour from the City center. The engineering buildings including the new civil engineering testing laboratory will be of particular interest. Other points of interest include the Wind Tunnel, the University library, and the drama department theatres, the Penthouse, and the Show Boat.

**HOTEL ACCOMMODATIONS:** The Hotel and Registration Committee are handling reservations for the Olympic Hotel, meeting headquarters. The enclosed hotel reservation card, addressed to Mr. C. H. Cutter, chairman of the Hotel and Registration committee, should be used to make reservations.

The Olympic hotel has reserved 200 double rooms with twin beds. The rates are \$6, \$7, \$8, and \$10 for two people. Those desiring room reservations should promptly fill out the card indicating the rate of room desired and the number of occupants in party, and mail as directed. Due to the limited number of rooms available at the headquarters hotel, those desiring rooms are urged to apply immediately. Confirmation will be sent by post card if desired.

Those desiring rooms at other Hotels in Seattle are asked to make their reservations direct with the hotels. Those insisting on single rooms should write direct to the Olympic Hotel.

**ADVANCE REGISTRATION:** Please fill out and mail the advance registration card promptly. This will save time at the registration desk which will be located in the lobby of the Olympic Bowl and will open at 8:00 a.m., Tuesday, August 27th. A Registration fee of \$2.00 will be charged nonmembers except enrolled students and immediate families of members.

H. H. HENLINE, *Secretary*

### COMMITTEES

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