Safe Maximum Limit of Operating Capacity for Each Section of Bus.

Reactive Component Dispatching.

Auxiliaries in Steam and Hydro-Electric Plants.

Fighting Generator Fires.

Trend of Modern Power Station Design.

PHILIP TORCHIO, *Chairman.*

ANNUAL REPORT OF THE ELECTRO-PHYSICS COMMITTEE

To the Board of Directors,

THE Electrophysics Committee desires to receive suggestions for future work. It seems well, therefore, for this purpose to re-state from the report of last year the policy that this Committee has endeavored to carry out. It is as follows:

1. To encourage original papers of high technical standard, marking advances in electrophysics.

2. To have each year a broad, interesting, general lecture, free from mathematics, dealing with modern physics.

3. To promote a more complete cooperation and mutual understanding between the engineer and the physicist.

It is our object to keep open the "line of communication" between the pure physicist and the strictly applied physicist or engineer.

A joint meeting was held with the American Physical Society in Philadelphia, October 10-11th. The Physical Society session gave a notable discussion on the present status of theories of atomic structure. A review of this subject designed for engineers has been printed in the JOURNAL. The A. I. E. E. papers showed how these theories had been practically applied in the study of crystal structure and in the solution of vacuum tube problems. Other papers covered a variety of subjects marking advances in electrophysics.

Talks were given in an evening session by past presidents of the two Societies. It was the object of these talks to promote cooperation. The titles are significant—"The Indispensability to Each Other of Pure and Applied Science" by H. A. Bumstead; "Pure Science and Industrial Research" by J. J. Carty.

Additional technical papers have been given at other sessions.

F. W. PEEK, JR., *Chairman.*

ANNUAL REPORT OF THE TRACTION AND TRANSPORTATION COMMITTEE

To the Board of Directors,

TWO meetings were held under the auspices of the Traction and Transportation Committee; one at the mid-winter convention in New York in February, and the other at a regular meeting of the Institute in Pittsburg, March, 1920.

At the New York meeting there was presented and discussed a symposium paper entitled: "The Economic

Supply of Power for the North East Atlantic Seaboard." This paper made reference to an item before Congress calling for a survey of the situation between Boston and Washington looking toward the establishment of a national policy in the matter of the generation and distribution of power through the means of which large economies could be effected as applying to labor, fuel and other materials.

The meeting passed a unanimous vote recommending that the Board of Directors of the Institute appoint a special committee to be known as the "Committee on Super Power System." This committee has since been appointed.

Since the above meeting, Congress has approved the proposed survey and appropriated \$125,000 for the purpose.

The Pittsburg meeting included the presentation and discussion of papers relating to the design of the Minneapolis and St. Paul Electric locomotives by the General Electric Co. and by the Westinghouse Electric and Mfg. Co.; also papers concerning automatic substations and protection to substations.

Both of these meetings were largely attended and much valuable information and data were presented, all of which has appeared or will appear in the TRANSACTIONS.

There seems to be no disagreement on the part of any members of the committee in the Conclusion (1) that Super Power Systems stand as future guarantors for economical generation and distribution of power and (2) that the electric locomotive has demonstrated its ability as applying to passenger, freight or switching movement, to outclass the steam locomotive in capacity and control.

WM. S. MURRAY, *Chairman.*

DRYING FLOODED ELECTRICAL EQUIPMENT

A description is given of the methods employed to dry out an electric generator, switchboard and motors which had been under water for more than a week in a flooded basement, the water being contaminated with sewage and sludge.

A corrugated sheet iron house was built round the generator and engine, and two wood-burning stoves were placed inside this housing. A temperature of about 90 deg. cent. was maintained for five days and nights, by which time the generator was fairly dry except for moisture inside the V-rings of the commutator. This moisture was removed by heating the commutator itself, the generator being run with the shunt field disconnected and the armature short-circuited through the series winding. This stage in the process occupied a day and a half. The switchboard instruments were returned to the maker. (K. A. Reed, *Power*, Feb. 17, 1920. 3½ cols., 2 figs.)—*The Technical Review.*