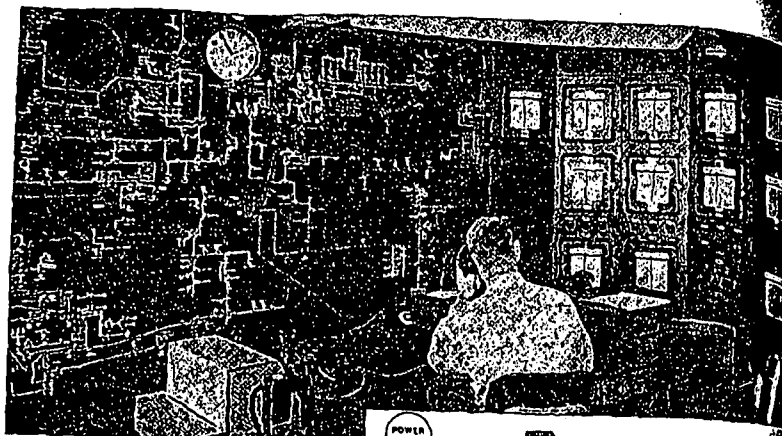




Above: System operating room showing portion of a system map and 12 Micromax Load Recorders. At Right: Block diagram showing interconnections and 9 Micromax instruments which show tie-line load. The instruments shown in the photograph but omitted in the diagram are for tie-line bias, net interchange, and net system load.

Economic Distribution Of System Load

IS SPEEDED BY L&N TELEMETERING AND CONTROL

The lines radiate in various directions to the north, south and east from one of the country's big power systems, joining them to their power-company "neighbors". This pool of generating capacity carries a heavy interstate electric load, and the Company has found that L&N load telemetering and load-frequency control equipment is a "very definite help" in meeting the complex needs of system operation. The instruments help in two ways:

1. Operators can see continuously the load at any metered point. Because they can read either instantaneous load or load trends for some hours past, they can make on-the-spot decisions with speed and accuracy, and their instructions are carried out automatically.

2. Executives can examine, at their convenience, the records for any period of time, and can base broad operating and policy decisions on a fuller knowledge of the shape and peculiarities of system conditions.

Over ninety per cent of all interconnected capacity in the entire country uses L&N load-frequency equipment. Whether your facilities are interconnected or isolated, whether they need telemetering or just flat frequency control, there's an L&N equipment to suit your local conditions and handle all engineering and operating situations. We will send facts on request—you'll possibly need them in the future, if not now. Leeds & Northrup Co., 4910 Spruce Ave., Philadelphia 44, Pa.



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POWER

W. SWAIN, EDITOR • MARCH 1948 • ESTABLISHED IN 1882

WANTED: A PROGRAM

A GRATIFYING PERCENTAGE of central-station turbines now on order are "standards." Their purchasers will benefit by savings in cost and all-important delivery time. Thus the standardization program jointly sponsored by ASME and AIEE begins to pay dividends.

What about the turbines not covered by this program? In particular, what about the units from 500 to 7500 kw, approximately three-quarters of which go into industrial plants to provide process steam as well as electricity? Need for savings in equipment cost is certainly no less in industry than in the utility field.

As L E Newman points out in his thoughtful article on pp 73-75, industrial turbine-generators are built in bewildering variety to meet specialized needs of process-power plants. They can be manufactured with reasonable economy under these adverse conditions only because individual makers have been able to achieve some standardization in their own operations.

The typical unit is a combination of elements, each of which has been standardized to some degree. Yet the number of possible combinations is so great that it proves impossible to build more than a few units from any one set of drawings. It is likewise difficult to manufacture for stock, which would help level out peak and valleys in demand. The net result of these and other conditions is unavoidably higher cost, longer and less reliable delivery schedules and diversion of engineering talent from the prime job of improving products.

After analyzing the variables, Newman offers concrete proposals that promise to cut the number of possible combinations while still fitting

at least half the cases without hardship. This leaves a substantial number of "specials" but it must be remembered that standardization doesn't mean higher-cost specials; it means lower-cost standard units.

Aware that such a program is too ambitious for industry today, the author presents it as a basis for discussion, with the hope that power engineers can agree on some similar set of standards. These would serve to guide equipment selection for new plants, where conditions permit freer choice than in extensions and modernizations. In this way standardization would tend to come about naturally, and each forward step would be tested by experience.

This will not be an easy job. The technical complexities are apparent. Not so apparent, but perhaps more important to success or failure, are the problems imposed by the spread of interests involved. Where is the common meeting ground for engineers of oil refineries and paper mills, chemical plants and steel mills, breweries and metal-working establishments? How can their needs and opinions be canvassed? Most important, who will take the lead in bringing these interests together?

Experience with large-turbine standardization reveals the advantages. Delay only further complicates the problem. Let's tackle it now!

Read and weigh the merits of Newman's proposals; give some thought to ways in which you and your industry can work with other power engineers and industries to arrive at mutually agreeable standards. Let's have your comments and ideas—POWER will gladly serve as your clearinghouse and forum.

John A. Smith