

CONTROL ACTIONS:

- Proportional Action
- Reset Action
- Rate Action
- Anticipatory Action from changes in combustion rate

CONTROLLING QUANTITY OR FUNCTIONS:

- Superheat Temperature
- Reheat Temperature
- Sum or Difference of Superheat and Reheat Temperature

EQUIPMENT ACTUATED:

- Desuperheating valves
- Fly-pass dampers
- Tilting burners
- Gas recirculation dampers
- Proportioning dampers
- Condenser valves

THIS ELECTRONIC CONTROLLER HAS THE

flexibility

TO HANDLE YOUR SUPERHEAT-REHEAT CONTROL PROBLEMS

Here is a controller which looks at superheat temperature, reheat temperature or any of their combinations—electronically “computes” the proper control action—and applies it to the correct actuator or group of actuators.

This flexibility of control is vitally important in regulating today's critical superheat-reheat temperatures. Your boiler may employ dampers, tilting burners or valves, separately or in combinations, each having its individual control characteristics. In many steam generators a single actuator affects both superheat and reheat temperatures over part of the load range. As load and furnace conditions require the control to regulate different actuators or groups of actuators, the control actions as well as the controlling quantity or function—superheat, reheat, or the sum or difference of these temperatures—must be varied accordingly.

The built-in electronic intelligence of the L&N Series '50 Controller enables it to consider all these variables simultaneously. This controller has been supplied with as many as four separate

groups of control actions—proportional, reset, rate and anticipatory—to meet individual control needs.

Inherent self-balancing permits rapid automatic transfer from one actuator to another, while introducing a completely new set of control actions, as well as a different control quantity or function.

Inherent flexibility of the Series '50 Controller allows the complete superheat-reheat control system to guard against interaction of the two steam temperature controls and to provide the close temperature regulation your boiler requires.

If you're thinking of tomorrow's—as well as today's—superheat-reheat control problems, why not look to L&N—the only instrument company offering integrated controls for both steam and electrical generation. Write Leeds & Northrup Co., 4810 Stenton Avenue, Philadelphia 44, Pa.

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INSTRUMENTS ELECTRONIC CONTROLS • FURNACES

Power

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TURBINE OVERHAUL, like many another key maintenance operation, is often discussed but rarely pictured. That's why Associate Editor Steve Elonka was so pleased when he was able to enlist the cooperation of John Wolf, chief engineer of F & M Scharler Brewing Co. for a photo record of a job on one of their turbines. Chris Grube, McGraw-Hill photographer, did the “shooting,” with John Nussbaum, first assistant engineer, helping him get the photos he wanted.

The result of some pretty strenuous activity by all concerned appears on the cover and in the article beginning on p. 106. There you see key pictures from the many actually taken, arranged in a meaningful sequence with pithy captions—all for the purpose of telling you more about a turbine overhaul than words alone could ever tell.

Next month...

■ Fuel handling and storage appear deceptively simple. There's no complex theory, but for good results you need plenty of judgment in selecting a system from among the many possible arrangements of a vast array of equipment designs. To make this job easier is the aim of our December “special.”

■ This handbook outlines clearly the basic functions of handling and storage, rounds up for you the tools of the job. It covers fuel oil and gas as well as coal and other solid fuels.

■ Reader reports show top interest in Paul Brindisi's June article on water treatment for packaged firetube boilers. So you'll be glad to know December will carry a companion piece on conditioning water for packaged boilers of the water-tube type.

■ Want to get more and better work from your maintenance crews? A Pennsylvania utility has some novel answers; an upcoming story spills them.

...and future months

■ This issue carries the second of a Phil Swain “Headwork” series giving the low-down on high-pressure steam, and we really mean high—well above the critical. Watch for other stimulating articles by top authorities on super-pressure problems and promises.