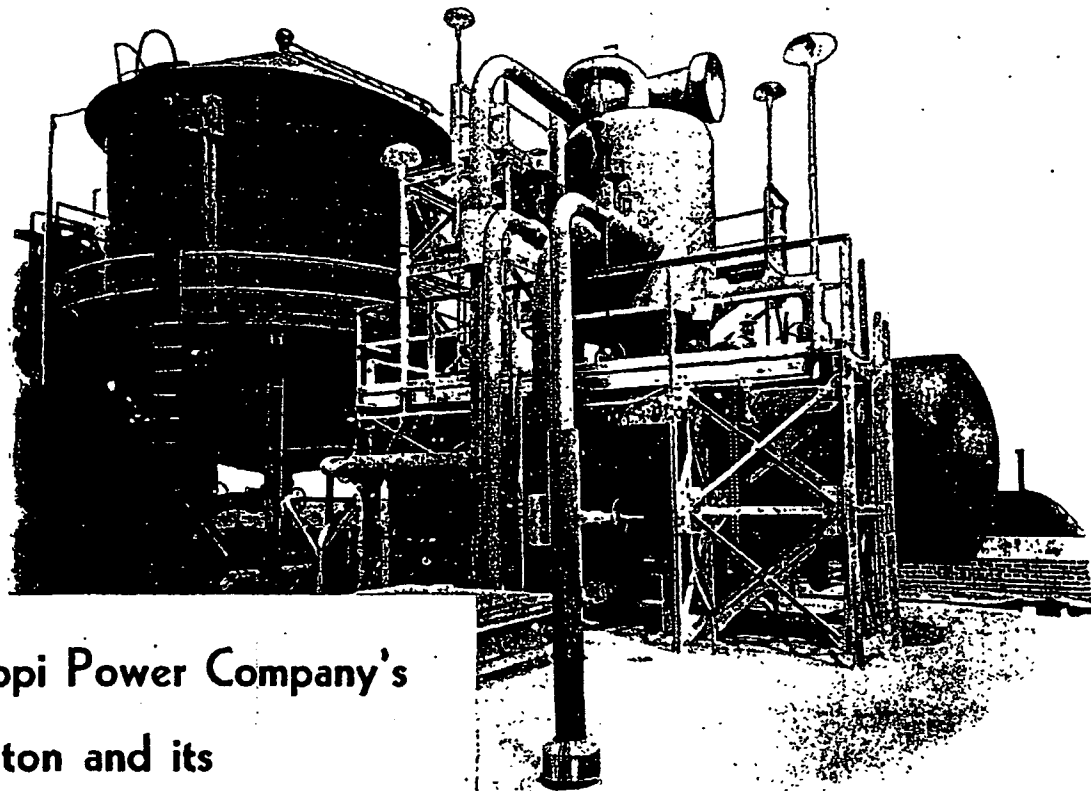




Mississippi Power Company's Plant Eaton and its **feedwater cycle**

One of the Elliott 225,000-lb-per-hr deaerating feedwater heaters installed on the roof of the plant. These units consist of vertical heaters mounted on horizontal storage tanks. There are also Elliott 7500-lb-per-hr deaerating evaporator preheaters and twelfth-stage closed heaters. Elliott strainers also serve the plant.

● The first unit in new Plant Eaton of the Mississippi Power Company, located on the Leaf River near Hattiesburg, Miss., went into operation in March, 1945. The No. 2 unit, a duplicate of the first, started operating in July, 1947. The third unit is scheduled for 1949. The plant is laid out for an ultimate four units with a total capacity of about 100,000 kw.

Each 22,500-kw turbine-generator receives steam from a single boiler operating essentially as a separate station. Steam and feedwater mains will be tied together to permit interchange of steam between units during emergencies. The turbine end of each generating unit faces its boiler with no partition separating them.

Plant design was guided to a great extent toward keeping operating personnel to a minimum. All rotating equipment and control points are on the

boiler and turbine floor and in the basement. No operator need go above these levels to perform any duties, except for an inspection of the deaerator on the roof about once a watch. Only seven operators per shift are needed to run the two units now installed.

Because of the major importance of Plant Eaton in maintaining service on the Mississippi Power Company system and the small margin between ground elevation and floodwater levels, a dike was built around the entire plant.

Some details of the feedwater cycle may be of interest. Condensate is pumped from the hot well through the ejector inter- and aftercondensers and an Elliott closed low-pressure heater to the Elliott deaerating heater, which is located on the roof to give maximum head on the boiler-feed pump. The latter pumps from the deaerator water storage tank,