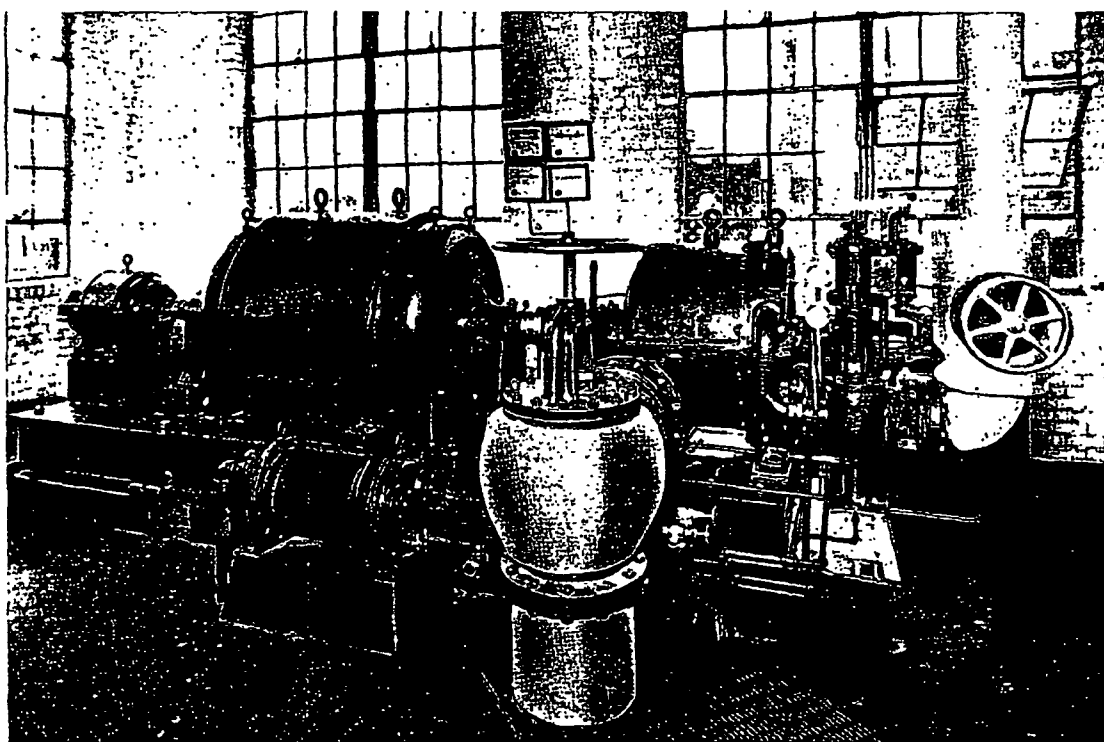




*The Elliott 500-kva., 80% p.f., 4600-volt turbine-generator with direct-connected exciter, which was installed in 1930 at Maybury Sanatorium.*

gallon reservoir. The spring water is pumped directly into the water system, and the requirements greater than the spring water supply are made up from the deep well supply. The water is first heated in a deaerating feed water heater where all oxygen and corrosive gases are removed to prevent the corrosion and pitting of hot-water lines and of boiler drums and tubes. After leaving the deaerator, all water for use in the laundry and boilers is softened by means of a hot process softener. The feed water heater has a capacity of approximately 3100 hp., which is equivalent to 250 per cent of the normal boiler capacity.

A new 500-hp. Stirling type water-tube boiler with turbine-driven underfeed stokers was installed. Motor-driven and turbine-

driven stoker fans were installed so that one or the other may be operated, depending upon the exhaust steam requirements. This same arrangement of drives is also used for driving new centrifugal boiler feed pumps. To make room for the new boiler, it was necessary to remove the smoke stack. Since it was too small to serve all the boilers, it was found to be more economical to erect at a new location a new stack ten feet in diameter and 200 ft. high, and use the space originally occupied by the old stack to erect the new boiler.

The coal-handling system is conveniently arranged, allowing a minimum cost for supplying the stoker hoppers. Coal is hauled by truck to the premises and dumped into storage bins, from which it is

elevated by motor-operated conveyors to overhead bins running the full length of the boiler room. From here it feeds by gravity over a weigh larry into the stoker hoppers.

For the generating room an Elliott 500-kva., 80% p.f., 4600-volt turbine-generator unit with direct-connected exciter was purchased and installed. The turbine is designed for 125 lbs. gauge pressure at the throttle, and exhausts to 5 lbs. gauge back pressure. This generator unit is sufficient to supply all necessary power and light for the institution, which consists of a normal load of 300 kw., including the 75 kw. required for the operation of the ultra-violet ray lamps and X-ray machines. The demand for exhaust steam during the winter months is slightly in excess of the steam exhausted from