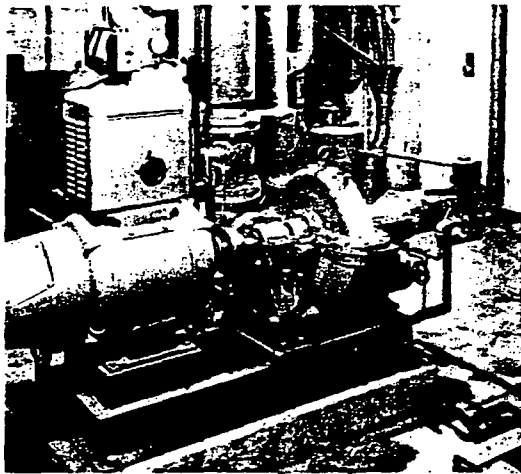


EMERGENCY TURBINE-GENERATOR UNITS

SMALL but important are the automatic emergency steam turbine-generator units which are installed in hospitals, state institutions, industrial plants, and oil refineries. These emergency units are installed to provide auxiliary power for lights, elevators, instruments, and other critical apparatus which must continue to function when the normal power supply fails due to storms, operational difficulties, or accidents. Such installations form a neat, simple, compact, and reliable unit requiring no attendant. The turbine is equipped with two solenoid valves which open on power failure and control the steam flow to the turbine and the cooling water to the turbine bearings. Steam lines and turbine casings are drained through continuously operating traps so that the unit is ready to start on a moment's notice. Because of the importance of these emergency turbine-generator units, they are carefully checked and started up periodically.

The photographs on this page show two views of an Elliott 15-kw emergency turbine-generator unit installation in St. Luke's Hospital, Saginaw, Michigan. This unit furnishes lighting for one operating room, halls, exits, and one dining room. The motors serving the boilers are also on the emergency lighting system, so as to provide continuous boiler operation in the event of a power failure. In this hospital the emergency operating room is on the ground floor; otherwise a larger emergency generator would have been necessary so that the emergency power could also handle one elevator. The consulting engineer responsible for this installation were Schmidt, Garden, and Erikson.



Mounted on the generator is the built-in control. In the housing is the voltage regulator and control panel.

View below shows the unit from the turbine end; the solenoid valve at left controls water to the bearings, solenoid valve at right controls the steam flow to the turbine.

