Mechanical Governing System Makes Rapid Response to Load Changes

"Easy to Start... Simple to Adjust"
Report Operators at New Person Station

pace with power demands which have nearly in the last four years, Public Service of New recently put into operation its new semi- Person Station at Albuquerque. The first on the line, a duplicate of which is now on is a General Electric 20,000 kw unit, gov- a standard G-E mechanical-hydraulic system.

onse to load changes is fast...so fast that the speed will be held below trip speed even full load is dropped from the generator in- eously. Because the governor does no actual ther than to position a relay cylinder, accuracy Safety and dependability are increased by the insensitivity to dirt or changes in oil viscosity.

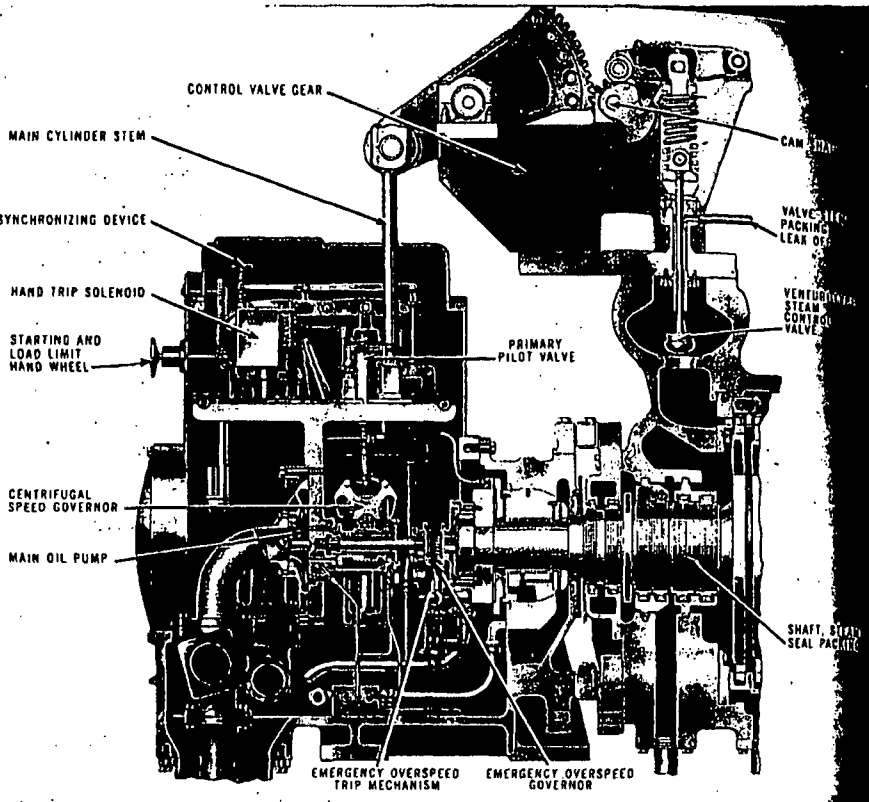
Station operators find the governor ideal from their point of view. "The turbine is easy to start because the handwheel requires almost no pressure," reports one. "It's simple to adjust the settings—there's no lagging to pull off to reach the governing mechanism."

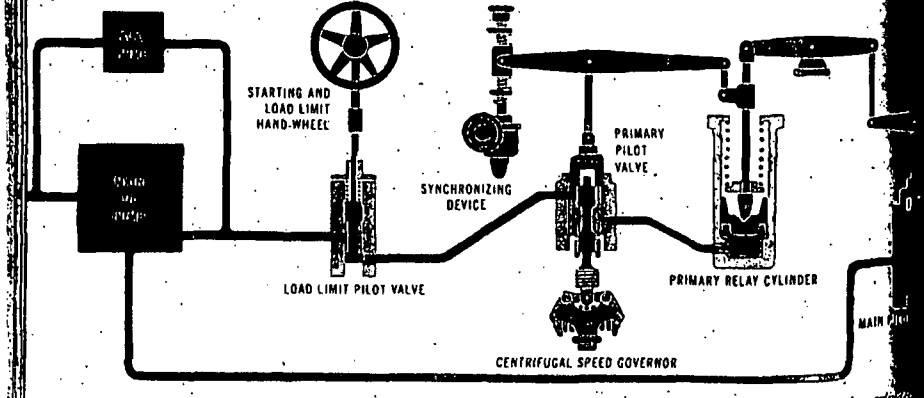
Despite its basic simplicity, the governor is flexible enough to meet a variety of system requirements. For instance, the turbine will "ride through" emergency conditions when operating personnel need to attend other equipment in the station.

Governing refinements are a major G-E contribution to power station efficiency—an additional assurance that General Electric offers more turbine for the utility's investment dollar.

Leader in Turbine Generator Progress

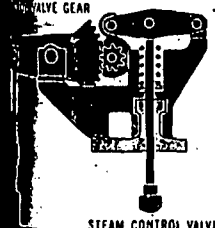
GENERAL ELECTRIC





HOW THE TURBINE GOVERNOR OPERATES. During starting, the operator brings the turbine up to rated speed by turning the *handwheel*. The *main pump* supplies oil to the system through the *load limit pilot valve*. If the turbine tends to slow down with increased load, the *centrifugal speed governor*, gear driven from the turbine shaft, opens wider the *primary pilot valve*. This valve meters oil to the *primary relay cyl* which simultaneously opens wider the *main pilot* through a mechanical linkage and restores the primary valve bushing to a new position. Pressure is increased the *main cylinder* which lifts the *valve gear* and allows steam to enter. When the main cylinder is lifted, it re

TION OF FRONT END of 20,000 *Electric turbine, showing* hydraulic governing system.



valve to its controlling the system is in equi- e new load. If the to speed up on de- the system operates in

GOVERNOR FEATURES are discussed by J. M. Baker, Governor and Control Engineer; *A. D. Somes, Manager of Turbine Engineering; and L. D. Whitescarver, Manager of Marketing in G.E.'s Medium Steam Turbine, Generator & Gear Department.*