Abstract

Accurate modeling of hydraulic turbine and its governor system is essential to depict and analyze the system response during an emergency. In this paper, both hydraulic turbine and turbine governor system are modeled. The hydro turbine model is designed using penstock and turbine characteristic equations and its governor system is modeled using PID controller. The simulation model is developed using MATLAB SIMULINK. The dynamic response of governing
system to the disturbances such as load variation on the generator parameter is studied. The results graphically demonstrate the effect of load variation on generator parameters.

References

- Goyal H., Hanmandlu M., and Kothari D. P. "An Artificial Intelligence based Approach for Control of Small HydroPower Plants", Centre for Energy Studies, Indian
Index Terms

Computer Science

Soft Computing

Keywords

Hydro Power Plant  Turbine Model  Penstock  Pid  Turbine Governor