

عنوان مقاله:

Modeling of Two Pressure Steam Turbine and Governor System in MAPNA Combined Cycle Power Plants

محل انتشار:

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خلاصه مقاله:

In this paper, we have proposed a dynamic model for two stages HP-LP₁ steam turbine and governor control system, which is used in typical MAPNA combined cycle power plants. This model is based on real process data extracted from power plant DCS² and governor control system. Power plant real input data have been integrated in a MATLAB spread sheet and applied to the model. Then the model outputs are obtained and compared to the real process data. In a combined cycle power plant, like what we have evaluated in this paper, main input is the electrical power of gas turbines-generators connected to HRSG's and the main output is electrical power of steam turbine-generator, respectively. However, there are some peripheral parameters like steam pressure upstream turbine, or governor control valves position, that could be useful to realize the steam turbine and governor system performance. In the proposed model, we have used not only the main input/output parameters, but also peripheral parameters to show the accuracy and conformity of model outputs with actual process values. Comparing simulated model output parameters and power plant real data, indicates high accuracy and small error which is shown in this paper through comparative curves and accumulative error calculations.

کلمات کلیدی:

Power Plant, STG, Governor, DCS, HRSG

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