

Implemented Cascade with Feed Forward by Enthalpy Balance Superheated Steam Temperature Control for a Boiler with Distributed Control System

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Abstract : Control of superheated steam temperature in the steam generation is essential for the efficiency safety and increment age of the boiler. Conventional cascade PID temperature control in the super heater is known to be efficient to compensate disturbance. However, the complex of thermal power plant due to nonlinearity, load disturbance and time delay of steam of superheater system is bigger than other control systems. The cascade loop with feed forward steam temperature control with energy balance compensator using thermodynamic model has been used for the compensation the complex structure of superheater. In order to improve the performance of steam temperature control. The experiment is implemented for 100% load steady and load changing state. The cascade with feed forward with energy balance steam temperature control has stabilized the system as well.

Keywords : cascade with feed forward, boiler, superheated steam temperature control, enthalpy balance

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