

Application of Model Free Adaptive Control in Main Steam Temperature System of Thermal Power Plant

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Abstract : At present, the cascade PID control is widely used to control the super-heating temperature (main steam temperature). As the main steam temperature has the characteristics of large inertia, large time-delay, and time varying, etc., conventional PID control strategy can not achieve good control performance. In order to overcome the bad performance and deficiencies of main steam temperature control system, Model Free Adaptive Control (MFAC) P cascade control system is proposed in this paper. By substituting MFAC in PID of the main control loop of the main steam temperature control, it can overcome time delays, non-linearity, disturbance and time variation.

Keywords : model-free adaptive control, cascade control, adaptive control, PID

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