DESIGN OF LEVEL CONTROL SYSTEM ON HP FEEDWATER HEATER WITH CASCADE AND OVERRIDE METHOD IN PT. IPMOMI, PAITON, EAST JAVA.

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Abstract
This thesis is did for redesigning a level control system on HP Feedwater Heater, which not only control the heater output, but also capable of controlling the condensate heater input from another heater. The simulation studies established with application of cascade control system between level and condensate flow with override/selective control system using virtual test by DCS. Result obtained from simulation, the control system in bringing process level to normal set point has 0.2% maximum overshot, 190 second of settling time, 0.02 error steady state and 361 of ITAE. In addition of 50% load case on one of the heater, the system is able to overcome disturbances and do not cause emergency drain on the heater, but resulted in increased levels on other heater. In general, this control system has better performance than feedback control system.

Keyword : HP Feedwater Heater, level control system, cascade, override, selective, DCS.