

CONTROL OF TWO DISSIMILAR NON-LINEAR INTERACTING TANK PROCESS USING MPC

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The two non-linear shaped tanks are interacted together. One is Semi-spherical and another is conical tank. The Coupled Semi-spherical Conical Tank (CSCT) is one of the process models that can be used in processing industries for a complete drainage of the fluids. The both tanks are having dynamics in behavior. The process tank (Conical) level maintaining is the major objective in this thesis. Due to continuous variation in both tanks the conventional Proportional-Integral-Derivative (PID) controller is used to maintain the level at a particular setpoint. The PID controller is not enough to maintain the level of process tank. So the Model Predictive Controller (MPC) is used for the system to control the level at desired set point. The response of PID and the MPC are shown and the results are compared to know about the efficient of the controller scheme.

