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Abstract

A Single tank level control system has one rectangular tank which has inflow of liquid into the tank and out flow through valve. The control System is intended to maintain the level of liquid in the tank at some predefined value irrespective of changes inflow of tank. Conventional PID controller gives better results due to changes in load. Thus change in inflow or changes in predefined values are treated as disturbances to the process. According to these disturbances we need to implement better tuning algorithms to PID controllers. But industrial conventional PID controllers exhibits nonlinear output for the given error values. Thus the approach of non linear PID controller is to include the disturbance parameters to conventional PID controller. The behavior is observed with step input. In this paper we implemented different non linear PID control algorithms on tank level control System and their responses are observed.

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