PROCESS DYNAMICS AND CONTROL LAB

Course Code: 15CH1135

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Course Outcomes :

At the end of the Course, the Student will be able to:

CO 1 Evalute the dynamics of first order system.

CO 2 Estimate control valve flow coefficient and flow characteristics.

CO 3 Analyze the behavior of two tanks interacting system for step and impulse inputs.

CO 4 Draw the response of a second order system for under damped, critically damped and over damped system.

CO 5 Examine the response of ON-OFF controller.

LIST OF EXPERIMENTS/PROGRAMMES:

1. Study of On-Off controller.
2. Determination of time constant and Response of a thermometer without thermal well.
3. Determination of time constant and Response of a thermometer with thermal well.
4. Study of two tank interacting Step response
5. Study of two tank interacting impulse response
6. Study of response of Single capacity system.
7. Study of Temperature control dynamics.
8. Estimation of Control valve flow coefficient
9. Estimation of Control valve flow characteristics.
10. Estimation of damping coefficient for U-tube manometer
11. Hysteresis of a control valve.