

**IMPLEMENTATION OF PID CONTROLLER IN CASCADE MODE FOR
TWO TANK SYSTEM**

by
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FINAL PROJECT REPORT

Submitted to the Electrical & Electronics Engineering Programme
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CERTIFICATION OF APPROVAL

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

Sharidatul Husna binti Hamidon

ABSTRACT

This report basically discusses the research done and basic understanding of the chosen topic, which is **Implementation of PID Controller in Cascade Mode For Two Tank System**. The objective of the project is to improve the efficiency of the process control on the Mobile Flowmeter Calibration Trainer through implementation of PID controller in cascade mode. Whereas in the existing system, the controller used to control the flow of the plant is working in single mode which is less efficient. This pilot plant is equipped with three different flowmeter which are Coriolis Flowmeter, Vortex Flowmeter and Orifice Flowmeter. The Coriolis Flowmeter is used as the master flowmeter and two others flowmeter can be connected in series with master flowmeter. In addition this project will also include the installation of two channel flat bed recorder on the pilot plant. This project will begin with numerous researches either by journal references or seeking internet information that accomplished based on the project title. In order to seek out for significant information, the next action to be taken is consulting certain problem regarding to the process control with expert technician. Several experiments will also be conducted as the introduction to have basic knowledge towards the plant. The scheduled experiments are Comparative Study of different Flowmeter and Flow Control and Controller Tuning. Then, fine tuning method for optimum controller technique and MATLAB simulation will be conducted. The performance of PID controller in single mode operation and cascade control will be compared. At the end of this project it is hope that the efficiency of process control for Mobile Flowmeter Calibration Trainer can be improved.

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LIST OF ABBREVIATIONS

MV	Manipulated Variable
CV	Controlled Variable
SP	Set point
Ti	Integral Time
Td	Derivative Time
PB	Proportional Band
P	Proportional Algorithm
PI	Proportional Integral Algorithm
PID	Proportional Integral Derivative Algorithm

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APPENDICES

APPENDIX A
MOBILE FLOWMETER CALIBRATION TRAINER



APPENDIX B
DRAWING FOR PILOT PLANT