

FINAL YEAR PROJECT REPORT

DIPLOMA IN ELECTRICAL (INSTRUMENTATION) ENGINEERING

SCHOOL OF ENGINEERING

MARA INSTITUTE OF TECHNOLOGY

SHAH ALAM, SELANGOR

SEQUENCE CONTROL OF A REACTOR SYSTEM

BY USING PROGRAMMABLE LOGIC CONTROLLER

BY

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ABSTRACT

This project is about the application of Programmable Logic Controller (PLC) in controlling the sequence of a reactor system. In order to design a good control system, a study of the characteristic of the PLC and the equipments used will be required.

In this project, the PLC is used to control water flow, level and temperature. This is very important in industry since the flow, level and temperature are directly related to the process sequence.

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1.2 PROCEDURE

With reference to figure 1 the following event sequence is required:

1. Start-up
2. Fill tank A and tank B, simultaneously
3. Heat tank A and tank B
4. Heat tank A for 1 minute. After heating A for 30 seconds, start heating tank B for 30 seconds.
5. Empty tank A and tank B into tank C. (7 minutes)
6. Heat tank C for 15 seconds
7. After that, pump out C. This will take 15 minutes
8. After 15 minutes, repeat step 1 and continue the process