ABSTRACT
TEMPERATURE CONTROL SYSTEM MINIATURE BASED ON PROGRAMMABLE LOGIC CONTROL OMRON CJ-1M

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Miniature to be made is the project of PT. Karunia Prima Engineering from the develop result of mixing control system in industrial. Its development to temperature mixing control system with Programmable Logic Control Omron CJ-1M. The system will be discussed in this thesis is the temperature control system.

Research will focus on the assembly of components with PLC Omron CJ-1M, such as heater's pot, solenoid valve 24VDC, ultrasonic's sensor siemens, thermocouple type k, a couple stainless as censor of water level, waterpump. The system of temperature control on tank A and tank B use PID controller and PWM system. Temperature control system on the mixing tank will be use flowrate ratio control from tank A and tank B. Touch screen media with CX-Designer Program will be perform the temperature control graphic.

Key words : Temperature mixing control system, PLC Omron CJ-1M, Touch Screen, CX-Designer.