DESIGN LOCAL CONTROL UNIT (LCU) PRESSURE PROCESS CONTROL AT MINIPLANT WORKSHOP INSTRUMENTATION LABORATORY

Name : Andi Saehul Rizal
NRP : 2407 030 049
Department : Diploma of Instrumentation Engineering
Advisor Lecturer I : Fitri Adi Iskandariantio, ST. MT
Advisor Lecturer II : Ir.Zulkifli,Msc

Abstract
In the process control system there are variables that must be controlled, such as pressure, temperature, flow, and level. In general process control system consists of measuring devices, controllers, and Final control element. In each control loop needed a controller that controls the system can be controlled. Local Control Unit (LCU) is the smallest combination of hardware that is designed in a control system which will be linked with the Human Machine Interface (HMI). LCU takes its input from the measuring instrument (transmitter) and the operator command, then used as data for calculating the output signal so that the desired process to follow orders. After calculating the control is completed, the LCU sends control output to the actuator that serves to regulate the pressure. In this LCU design using microcontroller AT MEGA 8535 which will be connected to the HMI that can be monitored and controlled with a distributed control system. Pressure control system here using the fashion kontinous mode PID control. With the value of $K_p = 2$, $T_i = 0.5$, $T_d = 1$ to obtain the rise time of 80 seconds, settling time of 80 seconds

Key words : Local Control Unit (LCU), Pressure, Mikrokontroler AT MEGA 8535
(halaman ini sengaja dikosongkan)