ABSTRACT

Automatically controlled water level control systems are required at this time, the system must have small errors to minimize errors. To create a system with a small error required a method, one of which is the Fuzzy Logic method.

Fuzzy Logic is generally applied to problems that contain elements of uncertainty, inaccuracy, and disruption. Fuzzy Logic was originally developed that computers can imitate human intelligence than computer is expected to do things that when need human intelligence. The user interface is required to monitor the response of the water level control and change its altitude to make it easier for users to operate.

In this final project, Fuzzy Logic control system is implemented on water level control system. The input obtained in the form of water level and the output achieved is the water level will always be at the desired point despite being given any disturbance. At the time of testing from 5.5 cm to 16 cm the system requires a rise time of 228.70 seconds, 0.1 cm overshoot, and settling time of 241.29 seconds. The system is designed using a direct current water pump as an actuator and the sensor used is an ultrasonic sensor.

Keywords: Control system, fuzzy logic, water level control.