IMPLEMENTATION OF MAMDANI FUZZY METHOD ON DRAINAGE CONTROL SYSTEM ON DIRTY WATER FOR ENERGY CONSUMPTION EFFICIENCY

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ABSTRACT

Public awareness to save electrical energy is still low. Excessive and inappropriate use of electricity often occurs in the community, such as the use of electricity in lecture rooms that have been completed. We often encounter excessive or wasteful use of electricity in people's lives. With the problems as described above, a system or tool is needed that can be used automatically to control the flow of electricity so that electricity usage can be regulated and savings occur in its use. By using the mamdani fuzzy method to be more specific, it means that in the process the mamdani fuzzy method pays more attention to the conditions that will occur for each fuzzy area, resulting in more accurate decision results. This is the background for researchers to develop a tool or prototype that can control pump speed and pump duration. This tool was developed using Aduino Uno components as a microcontroller, Turbidity Sensor, Water Level Sensor, DC Motor, LCD. The testing process is carried out in 10 different scenarios, so that it can determine the working process of the prototype in conditions that are in the fuzzy membership function and produce a 100% success rate.

Keywords *: Fuzzy Mamdani, Pump, Turbidity Sensor, Arduino Uno*