ABSTRACT

The baby incubator is a closed container whose warmth can be regulated by heating air at a certain temperature, so it can serve to warm the baby, many infant incubators still using conventional or on-off heating systems that cause the temperature in the incubator to be fluctuating.

Based on that, the researcher made the module of "Sistem Kendali Temperatur Inkubator Bayi Dengan Metode Logika Fuzzy" by using one crisp input that is temperature error value with 2 types of linguistic variables ie maximal error 1.5 and 0.5 using 5 labels, and on each variable linguistic error There will be 2 experiments of PWM output variable PWM 1 and PWM 2. The researcher designs an infant incubator where the temperature value is monitored using personal computer via serial communication using PL2303 for data retrieval, the actual temperature value and the temperature of the setting will be displayed on the LCD, the humidity parameter is not Will be set but only displayed on the LCD.

In lingusitic variable with error 1.5 obtained best system is at set temperature 34C type PWM 2 with overshoot equal to 0.07C and error average equal to 0,08%, worst system there is at set temperature 33C type PWM 2 with overshoot equal to 0.31C and error An average of 0.93%. While on the lingusitic variable with error 0.5 the best system is at the set temperature 34C type PWM 1 with overshoot of 0.17C and error average of 0.05%, the worst system is in the set temperature 33C type PWM 2 with overshoot of 0.53C and error Average of 0.51%.

Keyword : Fuzzy, Incubator