

## **ABSTRACT**

*Water heater is a hardware or electronic device that can control water's temperature so water's temperature level ascended several degrees. Over the time, the technology becomes more powerful and has many function. First, a water heater only used to heat the water, but after that era it has many functions, such as for cooking food, for shower, or taking a bath and for other human needs.*

*But there are still limitations and disadvantages of it, like a temporary accuracy and temperature's resistance. To solve this problems, the authors designs a water heater system implemented with fuzzy logic control as a controller.*

*After fuzzy controller has been implemented on the system, rise time of temperature to get the set point 40°C is 15 second, and overshoot is 0,88°C and settling time is 2 minute 12 second. meanwhile the rise time of height to get setpoint 5 cm is 22 second and the overshoot is 7,19 cm.*

*Keywords : fuzzy logic, water temperature, water heater.*