

## **ABSTRACT**

### **DESIGN AND IMPLEMENTATION OF NETWORKED CONTROL SYSTEM BASED BOILER TANK WATER LEVEL CONTROL SYSTEM**

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*Networked Control System is a control system, which sensors, actuators and controllers are connected in one network. By applying NCS, the system can be controlled remotely. The remote control becomes one of the most important things when a plant and the control center (user) are separated at distance, as in the case the control of boiler tank water level control by user.*

*In this study, applied design of Networked Control System is Remote Control System with the WLAN topology. The controller that used on the Networked Control System is fuzzy logic algorithms, it is used to control the water level in boiler tank.*

*The results showed implementation of fuzzy logic control to control the water level in the boiler tank has performance settling time: 57.58 seconds and steady-state error: 0.7%. Bandwith needed for data exchange in the process of Networked Control System is 85.7 KB/s, so that when the number of clients on the router connected simultaneously controlling the system target by computer user, it does not have considerable influence on the response of the controlled system. In this system, the farthest reach for best performance is less than 6 meters.*

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*Keywords: Networked Control System, Remote Control System, Fuzzy Logic.*