

Protoype Burner Control of Gas Fuel Oven Machine using Fuzzy Logic Control and Wireless Data Monitoring

Prototipe Burner Control Mesin Oven Berbahan Bakar Gas menggunakan Fuzzy Logic Control dan Monitoring Data secara Wireless

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In the food processing industry that requires a roasting process using an oven machine, the temperature stability produced by the oven machine greatly affects the output produced. Oven machines that are often used are electric and gas oven machines, the burner control system maximizes the use of gas to fuel the oven engine. This system utilizes input from the DS18B20 temperature sensor which is used to read the temperature in the oven engine. The temperature control of the gas-fired burner control system is carried out by a microcontroller using a fuzzy logic method to control the gas valve in the form of a servo motor to open and close the gas valve automatically. For monitoring and controlling the work of the burner control using Internet of things (IoT) technology by utilizing the NodeMCU ESP8266 microcontroller as a processor and sending data wirelessly to an android smartphone via the BLYNK application which can make it easier for users to get information about actual temperature, setting temperature and timer. By using the fuzzy Sugeno, this system can regulate the gas servo valve with an accuracy rate of 99.93%.

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