ABSTRACT

Pinhole detector is a production machine supporting unit that functions to detect small and large holes in the production process of PE sheet separator for wet batteries consisting of control panels, cameras, and lights.This unit has an important role in the company and the production process so that the functions and conditions of the unit This must be maintained properly to get good product results.

The problem that often occurs in this pinhole detector unit is the pinhole detector of the lamp turns off and the lack of light complexity Affects holes in the production sheet unnecessarily because it does not know whether there is a hole sheet or not. Light intensity and lamp functions are very complicated in this unit, so in this case where it is needed and a system that can protect and control the light using the NODE MCU ESP 8266 circuit with an Arduino program that is equipped with a Light Dependent Resistor or LDR Light Sensor mounted on a hole detector lamp needle, the latest data obtained by the sensor and the MCU NODE will be sent to the Blink Application on an android smartphone via WI-FI with the aim to be monitored daily and remotely via a smartphone.

Based on the analysis and testing results that have been carried out on this design, the error value obtained when lux is valued 106 is 5.64% and lux error is 745 which is 0.39% with a maximum temperature effect of 35.1 ° C on the Light Dependent Sensor resistor. The time that requires a smartphone of 1 second to read the light and then present and delay 1 second for the buzzer to turn off the lights or light less than 250 lux.

Keywords: Light Intensity Monitoring with IoT, Light Monitoring of Pinhole Detector Lights, Light Monitoring based on Arduino and IoT