

Design and Build a Cigarette Smoke Monitoring Tool in School Bathrooms Using Iot-Based MQ-2 Sensors

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ABSTRACT

The school environment is a smoke-free area. The non-smoking area aims to create a clean, healthy, and smoke-free school environment. The rules for smoke-free areas in schools have been stated in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 64 of 2015. One of the places often used by students or individuals to smoke secretly even though there are rules is the bathroom. Therefore, researchers will create a tool that can monitor smoke in the bathroom using the MQ-2 sensor. The sensor is used as input which is processed by the Arduino Uno and then produces output in the form of a telegram message and a water pump. To output this telegram message using nodemcu. The accuracy value of this tool is 97.3% and the error is 2.6% with the difference between the actual data and the calculated data is 0.1V. The results of these tests obtained a success value of 100% and the average time to detect smoke was 18.4 seconds.

Keywords: *Smoke sensor, MQ2 sensor, Nodemcu, Telegram*