

ABSTRACT

Aquascape as a vehicle for soul-soothing entertainment is very beneficial for some circles. To maintain the health of the Aquascape, a neutralization system is needed and that is continuous. The Tsd-10 Turbidity Sensor and the DS18B20 temperature sensor retrieve data on the parameters of turbidity and water temperature in the Aquascape. Then these data are compared with the "reference-values" that have been set and stored in the MCU Node ESP8266. The measured data to be compared are turbidity levels <25 NTU, and aquarium temperatures between 20 °C to 28°C. The research designed a monitoring system for turbidity and water temperature in Aquascape and the DS18B20 sensor to measure water temperature, as well as the TSD 10 sensor to measure the level of water turbidity. Sensor testing was carried out by comparing conventional measuring devices with the DS18B20 and found an average error of 1.09%. The TSD 10 sensor performs 3 levels of water turbidity namely coffee water, tea water and mineral water with respective values of 287 NTU, 68 NTU and 8 NTU. The pump was tested for turbid water, which initially had a value of 287 NTU to 20 NTU in about 3.5 hours. On the fan, a warm water test was carried out which was poured into the aquarium with an initial temperature value of 30.5°C to 29.5°C in about 7.5 minutes.

Keyword: Internet of thing, Turbidity, Blynk