

ABSTRACT

Oil pollution in water is a serious problem for society. One example of marine pollution is oil pollution. Marine pollution by oil can have a bad effect on marine life. The fact is that water and oil cannot combine due to differences in polarity characteristics. If left or not separated the oil will continue to float on the sea surface. The sea will be polluted as long as the oil is still in the water. Therefore, a solution is needed to separate the oil and water. Therefore, in this study, an oil and water separator system was designed using the IoT (Internet of Things)-based disk skimmer method.

In this study the authors used the disk skimmer method as a method of separating oil and water. The system applies the IoT concept to monitor the volume of separated oil. The disk skimmer system is a system of separating oil from water with the help of a rotating disc as a carrier of oil from water. The system uses a turbidity sensor to detect oil in the water, an ultrasonic sensor to calculate the volume of separated oil and uses blynk as an IoT interface to display the volume of separated oil.

The results of the oil separator efficiency test obtained are the separation of oil and water at a volume of 200 mL, an average removal efficiency of 87.8%, oil and water separation at a volume of 250 mL, an average removal efficiency of 85.2%, oil separation and water at a volume of 300 mL obtained an average lifting efficiency of 92.3%..

Keywords: *Internet of things, Disk Skimmer Method, Oil pollution, blynk*