

ABSTRACT

The background of this research is to assist the community in regulating the ecosystem or seawater pollution caused by an oil spill. Oil spills in seawater are pollution that have an impact on water degradation and have an impact on the sustainability of marine ecosystems. To reduce oil pollution in seawater, a tool is needed to separate oil from water, one of which is using an oil separator with a Belt Skimmer.

In this study, the authors focus on designing an IoT-based oil separator. The design system uses a Belt Skimmer to transport oil in puddles. An arduino microcontroller was added to determine the oil content in the water obtained from the color and altitude sensors. The data received will run the Belt Skimmer to transport the oil and separate it with a scrapper so that the oil can flow. The results of the study aim to obtain the efficiency and sensitivity of the sensor to the object with an average experimental result of 90%. The resulting oil content data will be sent to the wifi module and displayed on the Internet of Things platform. At the end of this design, a tool is found that can reduce oil pollution in water.

Keywords: *Oil pollution, IoT Platform, Belt Skimmer, Internet of Things.*