IMPLEMENTATION OF AN AUTOMATIC RADIATOR WATER LEVEL DETECTION TOOL IN A KOMATSU EGS 1200 ENGINE AT PT MEGA POWER TBK USING SENSOR BASED (IoT)

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ABSTRACT

In this research, a design will be made for a Radiator Water Level Detector Device on a Kamtsu EGS Engine Using Sensor Based (IoT), this automation technology is used to detect water levels, and can carry out regular Radator water replacement on Komatsu EGS Engine Radiators. Methods in the height detection system radiator water which is integrated into the WhatsApp application is carried out using study sources, supporting theoretical basis, data or information as a reference in carrying out experiments, creating and preparing the final project. At this stage using data flow diagrams (flowcharts), block diagrams , and discusses the working system of the radiator water level detection system to describe the stages of problem solving along with the data flow with symbols that are easy to understand. The results of the overall tool testing were carried out to determine whether the tool made was successful or not. After testing each component and the assembly process, the entire tool testing process is carried out. From the test results, the ESP8266 Node MCU which is connected to the WhatsApp application using a tethering network is in good condition. The water level switch sensor connected to the ESP8266 Node MCU successfully communicated to WhatsApp. Based on the results of the tool testing carried out, this tool at a distance of 85 meters is no longer connected to Wi-Fi with the NodeMCU ESP8266 has been working with data such as a distance of 80 meters is still connected to Wi-Fi, meanwhile. This automatic radiator water level detection tool has been tested 10 times with a success rate of 100%.

Keywords: water, radiator, monitoring, Wi-Fi, NodeMCU ESP8266