RANCANG BANGUN SISTEM PENGUKUR ISI UNDERGROUND STORAGE TANK PADA SPBU BERBASIS INTERNET OF THINGS (IoT)

Muhammad Syukron Mukmin

Program Studi Teknik Elektro, Fakultas Sains & Teknologi Universitas Teknologi Yogykarta Jl. Ringroad Utara Jombor Sleman Yogyakarta E-mail: <u>Sukronmukmin83@gmail.com</u>

ABSTRACT

The rapid increase in the number of vehicles makes the need for vehicle fuel continues to increase. Public Fuel Filling Station (SPBU) is a public infrastructure provided by PT. Pertamina for the broader community in order to meet fuel needs. Each gas station has an Underground Storage Tank (UST) or a fuel tank that functions to accommodate fuel. When measuring the remaining fuel at UST, it turned out that the officer still uses manual measurements where the officer inserted a long iron rod until it reached the bottom of the tank. Later on, he sees the iron rod which was wet with fuel and then he calculates to find out the remaining fuel available in the UST. Based on the information previously described, the author will create an Underground Storage Tank Content Measurement System at IoT-Based Gas Stations. With this tool, officers can check the remaining fuel in the tank using an Android smartphone application then wait for the results to appear. The system's test results and the float level sensor readings showed an error of 0,26% and an accuracy value of 99,74%. Based on the calculation results, the float level has a fairly low error percentage, so it shows the tool is feasible to use.

Keywords: SPBU, Float Level Sensor, Android Smartphone