

Prototype Design of Electronic Oil Pressure Monitoring System on MWM TCG 2020 V20 Engine

Dio Perkasa

*Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : dioperkasaa26@gmail.com*

ABSTRACT

With the increasing consumption of electricity in the community, the state electricity company (PLN) took steps to build many power plants spread throughout Indonesia. Among them are Gas Engine Power Plants (PLTMG). This plant uses a gas-fueled engine, precisely at the 25MW PLTMG Koto Gasib using the MWM TCG 2020 V20 engine as a generator engine to supply electrical energy in Siak Regency in particular. At the PLTMG 25MW Koto Gasib there is an oil pressure monitoring tool before the filter that has been directly integrated into the engine and pressure monitoring after the filter was created with the aim of knowing the amount of oil pressure and the condition of the filter located on the engine. In this study, the authors developed the oil monitoring tool which previously could only be monitored via LCD into a pressure monitoring tool based on the Blynk and LCD applications, with the aim of being able to help more precisely in the work of the 25MW PLTMG Koto Gasib. With the development of this tool, pressure monitoring will be easier in terms of monitoring, it can be through the Blynk application that is connected to the workers' cellphones, laptops or computers. Based on the results of research that has been carried out the system works as expected with a percentage error when the low pressure condition is 3.01% Low Pressure, when the Normal Pressure condition is 2.05%. And the percentage of error when the High Pressure condition is 2.41%. With this monitoring system concept, oil pressure monitoring can be monitored remotely in real-time.

Keywords: *Blynk, LCD I2C, Monitoring, PLTMG, Sensor SKU237545.*