ABSTRACT

ABDUL ROHMAN Making Simulation LPG Leak Detector With Sensor MQ-5 For Input PLC, Supervisor FARIED WADJDI and READYSAL MONANTUN.

This study aims to create a leak detection system LPG automatically in the form of a simulation model by using Programmable Logic Controller as a control. Thesis manufacturing operations performed in the laboratory of Programmable Logic Controller (PLC), Department of Electrical Engineering, Faculty of Engineering, State University of Jakarta. The study was conducted because of the high percentage of fire due to leakage of LPG 3 kg, caused by leakage factor LPG cylinder 3 kg, LPG hose leaking at 3 kg, and the seals were broken on LPG 3 kg. This causes a fire due to leakage of LPG cylinder 3 kg. To find a leak LPG (Propane and Butane) then we do the research to simulate the LPG leak detector that is designed to anticipate the negative effects of LPG as fuel.

The workings of LPG leak detectors are MQ-5 when the sensor does not detect a LPG (Propane and Butane) leak then the system is in standby, but when there is a leak in the LPG cylinder 3 kg MQ-5 then the sensor will detect any leaks in the LPG (Propane and Butane), and after the concentration LPG (Propane and Butane) detected the alarm, solenoid valve, and a gas lamp fault will work simultaneously.

Conclusion LPG (Propane and Butane) leak detectors work automatically so well, it is shown when tool detects a leak LPG cylinders 3 kg, tool flow directly working as planned.

Keywords: Sensor MQ-5, PLC, LPG (Propane and Butane).