

ABSTRACT

The main component of LPG (*Liquefied Petroleum Gas*) consist of Propane (C_3H_8) and Butane gas (C_4H_{10}) which melted. At room temperature, LPG will be shaped gas. While the utilization, as in households or industry, LPG will be modified in liquid form, by suppressed (kg/cm^2 4-5). This type of LPG usually used or stored in a special tank pressurized tube. Conversion of LPG gas into liquid form in this way, it is hoped will facilitate the distribution and utilization. However, in general use pressurized LPG gas tank are often poses several problems, such as difficulty of detecting when a gas leak caused by a tube or tube installation tool unselective regulator. So in this final project will be designed and implemented a tool used to detect the pressure and leakage of LPG in the pressure tube.

In this final project is realized of LPG pressure and leakage detector, the tool is made by using pressure sensor to detect the gas pressure in the tank, a temperature sensor to be able to know the temperature of air around the tank and TGS2610 as a LPG gas sensor to detect of leakage the gas tank. While to algorithms process used ATMEGA8535 AVR microcontroller, and the results will be displayed on the LCD.

This tool can be used to determine the existing level of gas pressure in the tank, knowing the air temperature around the tank by indicator red and green LED and find out as early as possible in case of gas leakage. So that the use of pressurized gas tube of LPG will continue to be safe and comfortable.

Key word: Microcontroller, pressure, LPG, LCD, temperature.