

ABSTRACT

A fire occurred in a densely populated residential area, one of which was caused by the explosion of LPG gas cylinders, both 3 kg and 12 kg cylinders. The explosion was due to a leak in the gas cylinder, regulator, or hose from the regulator to the stove. Leaks that sometimes go undetected by humans can be fatal. One way to minimize the risk of a gas cylinder explosion, an LPG gas leak protection system is designed.

In this final project design project, the system applied is to detect leaks and cut off the gas flow from the LPG gas cylinder by adding a solenoid tap on the hose from the regulator to the stove. In addition, to provide monitoring information on gas levels and leaks, an application is used on an Android device that is connected to the device via the IoT platform.

In this final project, the system has been running well in disconnecting and providing information to the application if a gas leak occurs and the system does not cause sparks while working. It takes 1.11 seconds to cut off the gas flow, and 1.6 seconds to forward the information to the application that a gas leak has occurred.

Keyword: *LPG Gas Protection , , Solenoid Valve, IoT, NodeMCU, MOSFET*