GAS LEAKAGE MONITORING AND ALERTING SYSTEM

ABSTARCT

The main aim to make this device is used to monitor the gas and in emergency condition send alert message to concerned user. There are much uses of fuels, gases, etc. in our day-to-day life such as in households, industries, etc. But it can cause vital issues if not used carefully. It was the only cause of many accidents in the past. The purpose of this project is to detect a gas leak and prevent the accident and blocking of gas leaks in vulnerable areas. This includes the MQ6 gas sensor which is used to detect gas leakage in home and industry and is also very much suitable for detecting LPG, i-butane, Hydrogen, Methane, Smoke and Alcohol, etc. But it does not indicate the exact gas concentration. It only illustrates the trend of gas concentration in a suitable error range. This device automatically takes precautions. And even turns off main supply in some time to avoid accidents. And also include the WiFi module to take necessary action immediately by sending an alert SMS to the owner.

PROBLEM STATEMENT

Gas leakage leads to various accidents resulting into both financial loss as well as human injuries. In human's daily life, environment gives the most significant impact to their health issues. The risk of fires, explosion, suffocation, all are based on their physical properties such flammability, toxicity etc. The number of deaths due to the explosion of gas cylinders has been increasing in recent years. The reason for such explosion is due to sub- standard cylinders, old valves, worn out regulators and lack of awareness using gas cylinders add to risks. Inspections by oil companies found that many LPG consumers are unaware of safety checks of gas cylinders.

In other to minimize or eliminate the hazard of gas leakage there is a need for a system to detect and alert on such incidence leading to the development of this project.

LITERATURE SURVEY

The gas leakage is performed by various gas sensors. It worked on gas leaks and mentions that we can take care if a found using a sensor and gas booking can be done automatically when a small amount of gas is taken closed. RFID tag microcontroller, pressure sensors and buzzers are used to monitor gas. Through this paper important parameters are used to find the level of gas in the container. The good purpose of this project is to get notification of gas leak to user when gas leakage is started. Arduino was originally created as a tool for fast sampling and activities for students with no knowledge for electronics. This paper uses a microcontroller, buzzer and a gas sensor to detect gas leakage system. When a gas leak is detected by a gas sensor, the microcontroller turn on the buzzer in critical condition. The author suggest that this message or instruction may be displayed using an LCD display for LPG monitoring. The proposed system detects LPG leaks and alerts customers. The alarm starts when the system notice and increases in LPG leakage concentration by sending an alarm and sending a message to specific mobile phone. The device assures safety and prevents explosions. A microcontroller based system based on gas sensor (MQ6) has been developed in proposed system to detect LPG leakage. The unit is also integrated with an alarm unit to detect signal a leak.

REFERENCE

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