

LITERATURE SURVEY

INTRODUCTION

Gas leakages resulting into fatal inferno has become a serious problem in household and other areas where household gas is handled and used. Gas leakage leads to various accidents resulting in financial loss as well as human injuries. Keeping this in mind, we made the decision to create an inspection system that detects gas leaks and safeguards workplaces by taking the appropriate precautions at the appropriate moment. This system gives details like how sensors in the project are used to detect gas leaks and switch on the buzzer for danger notification as soon as they are detected. Buzzer is a blatant sign of a gas leak. The GSM alerting message was sent to the person in charge of it by the GSM upon the discovery of the dangerous gas. The importance of finding the gas leak and stopping it are both significant. This project's primary goal is to develop a highly accurate, low-cost system that can detect gas leaks. GSM module is used which alert the user by sending an SMS. This has broader focus beyond kitchen gas leakages. Another approach uses a smart security phone attached gas leakage sensor that senses leakage and sounds an alert alarm as well as sending a SMS to the home owner and emergency services.

PROPOSED METHOD

The existence of dangerous LPG gas leaks in a home, place of business, or a gas storage container that uses optimal characteristics. In order to accomplish this, a buzzer alarm is vibrated by an alarm device. Buzzer provides an aural indication of the LPG volume's presence. The essence of propane, isobutane, LPG, and even smoke can all be detected with the sensors. The sensor's ability to combine sensitivity with response time is a benefit. The LPG sensor's output changes to an active low (logic-0) condition if it detects a gas leak at the workplace or at home. In the project, an Arduino UNO is utilised, and the Arduino picks up on low signals and detects gas leaks. The LCD and buzzer are turned on by the Arduino UNO. GSM module send the SMS to mobile number, The Arduino will control the signal as well as process the information received from the GSM.

RELATED WORKS

Zhao Yang, Mingliang Liu, Min Shao, and Yingjie Ji, 2011; in this paper they told about their research on leakage detection and analysis uses a real time gas leakage monitoring and sensing the output levels of gas using Internet of Things (IOT) Based Gas Leakage Monitoring and Alerting System with MQ-2 Sensor. Chaitali Bagwe, Vidya Ghadi, Vinayshri Naik, Neha Kunte provides constant monitoring and detection of gas leakage along with storage of data in database for predictions and analysis. The IOT components used helps in making the system much more cost effective in comparison with traditional Gas detector systems. A discussion on how the aims and objectives are met is presented by Rohan Chandra Pandey, Manish Verma, Lumesh Kumar Sahu, Saurabh Deshmukh. An overall conclusion IOT based toxic gas detector is it has become more efficient, more applicable to today's applications and smarter. Some techniques have been improved since their first proposal and some new ones were designed as a result of advances in sensor manufacturing and computing power.

CONCLUSION

Gas leakage may leads to severe accidents which results in material losses and human injuries. Gas leakage occurs mainly due to poor maintenance of equipments and inadequate awareness. We can use this technique to save lives in dangerous situations. The GSM module indicates an alert. Propane, CO₂, and other gases are detected by a sensor node. Power usage and transmission range estimates are made. The sensor was constructed using straightforward techniques and an Arduino UNO Micro controller. Node-Red is an open-source visual editor for connecting and communicating within IoT elements. Watson helps organizations predict future outcomes, automate complex processes, and optimize employees' time. This project presented LPG leakage detection and alert system. This system triggers buzzer displays the severity of the leakage to alert people when LPG leakage is detected. This system is very simple yet reliable

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