**PAPER 1**

**YEAR :** 2019

**NAME :** Gas Leakage Detection and Alert System using IoT

**AUTHOR :** Sayali Joshi, Shital Munjal, Prof. Uma B. Karanje

**CONTENT :** We design and develop a proposed system which includes some safety factors. Safety has been a major issue in today's day to day life. LPG and CNG i.e. petroleum gas and compressed natural gas are most commonly used in residential and commercial places for cooking purposes and in various vehicles as a replacement for costly fuels like diesel, petrol.

**METHODOLOGY :** We design and develop a proposed system which includes some safety factors. Safety has been a major issue in today's day to day life. LPG and CNG i.e. petroleum gas and compressed natural gas are most commonly used in residential and commercial places for cooking purposes and in various vehicles as a replacement for costly fuels like diesel, petrol [7]. These gasses are filled in cylinders which are easily undamageable. But leakage can take place through pipes or regulators or knobs which may cause accidents like suffocation, uneasiness or sometimes may catch fire and short circuit as well.

**PROS**: The simple gas leak detector is its simplicity and its ability to warn about the leakage of the LPG gas. On detection it will send an alert SMS and the gas supply knob of the cylinder will be switched off automatically.

**PAPER** 2

**YEAR :** 2017

**NAME :** Internet of Things (IOT) Based Gas Leakage Monitoring and Alerting System with MQ-2 Sensor

**AUTHOR :** Rohan Chandra Pandey, Manish Verma, Lumesh Kumar Sahu

**CONTENT :** The principle of operation IOT based gas leakage and monitoring system was shown by operating the Raspberry pi 3 model attached with an embedded system with required input and output gas level with the help of gas sensors. This results in a more efficient operation because it is connected to a common web page specially built to notify or email the responsible authority automatically so reduces the stress of constant monitoring. The choice of using a real time gas leakage monitoring and sensing the output levels of gas has been clearly observed by the help of this system.

**METHODOLOGY :** The main objective of the work is designing a microcontroller based toxic gas detecting and alerting system. The hazardous gasses like LPG and propane were sensed and displayed and notified each and every second in the LCD display. If these gasses exceed the normal level then an alarm is generated immediately and also an alert message (Email) is sent to the authorized person through the INTERNET and used ARM development board.

**PROS :** This paper's choice of using a real time gas leakage monitoring and Sensing the output levels of gas has been clearly observed by the help of this system.

**PAPER** 3

**YEAR :** 2018

**NAME :** IOT Based Gas Leakage Detection System with Database Logging, Prediction and Smart Alerting-

**AUTHOR :** Chaitali Bagwe, Vidya Ghadi, Vinayshri Naik, Neha Kunte

**CONTENT :** IOT based Gas Leakage Detection System with Database Logging, Prediction and Smart Alerting"will detect gas leakage using MQ5 sensor (used for detecting natural gasses) and check the presence of excess amounts of harmful gasses and alerting through alarms. With the help of IOT it will alert concerned authorities about the condition through SMS using the GSM module and an email will be sent using NodeMCU. It will also forward the sensor values to the database for collecting and analyzing the data.

**METHODOLOGY :** we will detect and constantly monitor the gas leak and use alert mechanisms to notify the users and concerned authorities about the mishap. It will also analyze the leak and make the data available to users via internet.Also the system uses the temperature and humidity values, send by DHT22 sensor, since the behavior of the gasses varies according to temperature and humidity of the surrounding area.These values will also help in making more precise system as the cases of false alarms can be reduced.

**PROS :** This project helps in making the system much more cost effective in comparison with traditional Gas detector systems. The system alerts and responds quickly in case of gas leakage with the help of an alerting mechanism and by sending SMS and Email to the user or concerned authority.This system also allows users to perform analysis and prediction.

**PAPER** 4

**YEAR :** 2018

**NAME :** INTERNET OF THINGS (IOT) BASED GAS LEAKAGE MONITORING AND ALERTING SYSTEM WITH MQ-6 SENSOR

**AUTHOR :** Rohan Chandra Pandey , Manish Verma , Lumesh Kumar Sahu, Saurabh Deshmukh

**CONTENT :** we are designing a microcontroller based toxic gas detecting and alerting system. The hazardous gasses like LPG and propane were sensed and displayed and notified each and every second in the LCD display. If these gasses exceed the normal level then an alarm is generated immediately and also an alert message (Email) is sent to the authorized person through the INTERNET and used ARM development board.

**METHODOLOGY :** The Operation of IOT based gas leakage and monitoring system was operated by the Raspberry pi 3 model attached with an embedded system with required input and output gas level with the help of gas sensors. This results in a more efficient operation because it is connected to a common free IOT based web page specially built to notify or email the responsible authority automatically so it reduces the stress of constant monitoring. The choice of using a real time gas leakage monitoring and sensing the output levels of gas has been clearly observed by the help of this system

**PROS :** The automated detection and alerting system over the manual method offers quick response time and accurate detection of an emergency and in turn leading to faster diffusion of the critical situation.

**PAPER** 5

**YEAR :** 2018

**NAME :** GAS LEAKAGE DETECTION AND SMART ALERTING SYSTEM USING IOT

**AUTHOR :** Shital Imade, Priyanka Rajmanes, Aishwarya Gavali

**CONTENT :** we use IOT technology for enhancing the existing safety standards. While Making this prototype has been to bring a revolution in the field of safety against the leakage of harmful and toxic gasses in the environment and hence nullify any major or minor hazard being caused due to them. We have used the IOT technology to make a Gas Leakage Detector for society which has Smart Alerting techniques involving sending text messages to the concerned authority and an ability performing data analytics on sensors.

**METHODOLOGY :** In this project Our main aim is to propose the gas leakage system for society where each flat has gas leakage detector hardware. This will detect the harmful gasses in the environment and alert the society member through alarm and sending notification.

**PROS :**This system will be able to detect the gas in the environment using the gas sensors. This will prevent form the major harmful problem