PAPER 1:

YEAR: 2018

NAME: IoT based Gas leakage detection system with database logging, prediction and smart alerting system.

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

CONTENT: The system 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.

METHODOLOGY: This method detects and constantly monitor the gas leak and use alert mechanisms to notify the users and concerned authority 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, sent by DHT22 sensor.

PROS: These values will also help in making more precise system as the cases of false alarms can be reduced. These values will also help in making more precise system as the cases of false alarms can be reduced. Reduced Cost.

PAPER 2:

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: An overall conclusion IOT based toxic gas detector is it has become more efficient, more applicable to today's applications and smarter**.**

METHODOLOGY: LPG gas sensor module enters into 3 zones:

♣ Heating zone ♣ Armed zone ♣ Trigger or sensing zone

Operating with the help of Raspbery pi 3 model attached with embedded system with required input and output gas level with the help of gas sensors was achieved. This results in a more efficient in operation because it is connected to a common free IOT based web page specially built to notify or email the responsible authority automatically so reduces the stress of constant monitoring. **Linux** and **Python** were used.

PROS: An overall conclusion IoT based toxic gas detector is it has become more efficient, more applicable to today's applications and smarter.

PAPER 3:

YEAR: 2018

NAME: Gas leakage detection and smart alerting system using IoT

AUTHOR: Shital Imade, Priyanka Rajmanes, Aishwarya Gavali, Prof. V. N. Nayakwadi

CONTENT: In this paper, IoT technology is used 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 gases.

METHODOLOGY: 1: ***Smart Gas Level Monitoring, Booking & Gas Leakage Detector over IoT***: The gas booking/order is being done with the help IOT and that the continuous weight measurement is done using a load cell which is interfaced with a Microcontroller (to compare with an ideal value). For ease it is even has been added with an RF Tx & Rx modules which will give the same information. When it comes it to security of the kit as well as gas container we have an MQ-2(gas sensor), LM 35(temperature sensor), which will detect the surrounding environment for any chance of error. Whenever any change is subjected in any of the sensors (load cell, LM35, Mq-2) a siren (60db) is triggered.

PROS : This prototype has been to bring a revolution in the field of safety against the leakage of harmful and toxic gases in environment and hence nullify any major or minor hazard being caused due to them. This system will be able to detect the gas in environment using the gas sensors. This will prevent form the major harmful proble.

PAPER 4:

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: This paper 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 microcontroller based toxic gas detecting and alerting system. The hazardous gases like LPG and propane were sensed and displayed and notify each and every second in the LCD display. If these gases 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: The advantage of this automated detection and alerting system over the manual method is that it offers quick response time and accurate detection of an emergency and in turn leading faster diffusion of the critical situation.

PAPER 5:

YEAR : 2017

NAME: Gas Leakage Detection and Smart Alerting and Prediction Using IoT

AUTHOR: Asmita Varma, Prabhakar S, Kayalvizhi Jayavel

CONTENT: The proposed gas leakage detector is promising in the Field of safety.

METHODOLOGY: Gas Leakages in open or closed areas can prove to be dangerous and lethal. The traditional Gas Leakage Detector Systems though have great precision, fail to acknowledge a few factors in the field of alerting the people about the leakage. Therefore, we have used the IoT technology to make a Gas Leakage Detector having Smart Alerting techniques involving calling, sending text message and an e-mail to the concerned authority and an ability to predict hazardous situation so that people could be made aware in advance by performing data analytics on sensor readings.

PROS: Highly precise and continuous sending of notifications via message or e mail enhances the communication and data delivery.

PAPER 6:

YEAR: 2020

NAME: Gas leakage detection and alerting system using Arduino Uno

AUTHOR: Syeda Bushra Shahewaz and Ch. Rajendra Prasad

CONTENT: This paper demonstrates how Arduino can be incorporated into this gas detection process and how effective it is.

METHODOLOGY: An alarm unit is used to vibrate an alarm which is buzzer. Buzzer gives an audible sign of the presence of LPG volume. The sensors are widely used to detect essence of propane, iso-butane, LPG and even smoke. If the LPG sensor senses gas leak sensor output goes to active low (logic-0) condition. Low signals are overlooked by the Arduino and gas leakage is been noticed by the Arduino. The Arduino UNO turns on the LCD and buzzer. It even turns on the GSM modem for sending messages.

PROS: This prototype has an advantage to combine a sensitivity response time. Detection of the LPG gas leakage is incredible in the project system. Applicable usefully in the industrial and domestic purpose.

PAPER 7:

YEAR: 2021

NAME: IoT based home safety gas leakage detection and automatic booking system

AUTHOR: Dr.Suma Christal Mary .S , Dr.Josphine Leela.R ,Dr.Vedhapriyavadhana.R ,Dr.Ignisha Rajathi.G

CONTENT: The aim of this paper is to introduce another framework consequently books a cylinder at the point when the gas is going to discharge is by sending a notice to the gas office using Wifi using Internet of Things approach. In addition to that sensor is utilized to identify gas spillage at home.

METHODOLOGY: In this proposed system, the gas leakage is detected by gas sensor MQ6 which is interfaced by arduino and automatic booking is designed and this device will be a single system with multiple applications for LPG consumers. If the gas leakage is detected by LPG gas sensor the device gets on with buzzer alarm and displaying alert message in LCD display simultaneously switch on the exhaust fan and start the DC motor, external coupling is made to turn off the gas regulator.

PROS: The main advantage of the paper is that it not only senses and detects the gas leakage but it also enables us to book a new cylinder by sensing or measuring the weight of the cylinder. The system helps customers to upgrade their safety and protect life and property from reputed accidents.

PAPER 8:

YEAR: 2020

NAME: LPG gas leakage detection using IoT.

AUTHOR: Dr. Chetana Tukkoji, Mr. Sanjeev Kumar A. N

CONTENT: This paper provides a brand new approach to discover LPG discharge supported microcontroller based Arduino.

METHODOLOGY: This prototype can be developed associate degree Arduino based LPG gas detector alarm, if gas leakage happens. The LPG detector MQ6 is associate degree correct LPG sensing device that acquires the signal intensity. Associate degree economical Arduino based signal process mechanism is followed that effectively quantizes the non-inheritable electrical signal. The intensity of the LPG leakage is classed into 3 categories, such as LOW, MEDIUM and HIGH based on square measure. This paper conjointly shows the ratio and temperature over the alphanumeric display.

PROS: This device are often used to avoid these issues by sleuthing and conjointly preventing outpouring of LPG.The advantage of this automated detection And alerting system over the manual technique is that it offers fast latency And correct detection of an emergency and successively leading quicker diffusion of the vital situation'