GAS LEAKAGE MONITORING AND ALERTING SYSTEM

LITERATURE SURVEY

Online Monitoring of Geological CO2 Storage and Leakage Based on Wireless Sensor Networks, Hui Yang, Yong Qin, Gefei feng, and Hui Ci

In this paper a real-time monitoring system for CO2 gas leakage had been developed successfully that which can able to realize the storage automatically and show in LCD display through a wireless medium. This is expensive system and used in wireless, many sensors have been implemented in different location along with the GPS module to collect the data of location and time information. The monitoring equipment consists of CPU, air environment sensors, GPS receiver module and secure digital memory card for storage of data along with liquid crystal display (LCD) module and GPRS wireless transmission module. The CPU automatically stores the data in storage module and displays it in LCD display. The GPRS module continuously transmits the collected information to data center server. The online monitoring WebGIS clients are developed using the PHP language which connects a local server and runs on Apache web server. Where MYSQL is used for the database because of its speed and browser web maps has been created, optimized with Open Layers JavaScript web-mapping libraries.

Gas Leakage Detection Based on IOT, Suma V, Ramya R Shekar, Akshay Kumar

In this paper MQ-5 gas sensor is used to detect the leakage of gas and when the gas is going to be empty it will send the notification to the gas agency to book a cylinder automatically through WIFI using IOT. Suppose if the gas leakage is sensed an SMS will be send to the authorized person. For making this system a microcontroller ATMEGA328 is used to interface with the GSM module, LPG sensor and with some output devices like Buzzer, LCD display, Relay etc., The sensor used in this model can be sensed and it detects gas leakage and the authorized person will get the notification for remaining percentage of gas in the cylinder and also some actions will be occurred to pre-book a new cylinder. It helps to their safety and to prevent the major accidents and also protects their life and property from the accidents due

to the gas leaking. The major purpose of this work is to a safe and easy way for booking a gas and to detect the gas leakage for avoiding the accidents.

IOT Based Industrial Plant Safety Gas Leakage Detection System, Ravi Kishore Kodali, Kusuma Priya Nimmanapalli, Greeshma, R.N.V., Yatish Krishna Yogi Borra

In this paper proposes that these days there are so many fire-accidents in industries due to the gas leaks. These causes a very big damage to the industry equipment's and human life also. With this gas leaks human deaths are becoming more and more now-a-days. So, this project proposes a leakage detector to detect the gas leakage and sends a warning message to the people through the mobile SMS. This project includes low cost MQ4, MQ6, MQ135 gas sensors to detect LPG, Methane, and Benzene gas leaks and also used ESP-32 as a WIFI module. The above-mentioned gases are uploaded in the UBIDOTS cloud and then the login details are included in the warning message so that the user can check the message, and stop the gas leaking. They used a sound alert using Buzzer for detecting a gas leaking and send an SMS to the concerned person using IFTTT web service, where SMS will be sent to the mobile number with very less delay. They also used different colors of LEDs to specify the gas leaked like RED LED indicates as presence of LPG where as GREEN LED indicates as no presence of LPG.

Gas Leakage and Fire Detection using Raspberry Pi, Sourabh Jamadagni, Priyanka Sankpal, shwetali Patil, Nikita Chougule, Shailesh Gurav

In this paper Raspberry Pi Model 3 is interfaced with GSM module to work as a Gas Leakage and Fire Detection Monitoring System. Here MQ-2 gas sensor is used to detect the gas leakage. This paper has the growth in the industrial monitoring system using IOT. Raspberry Pi plays an important role where all components interfaced with it. Gas leakage and Fire detection is the process of identifying potentially hazardous gas leaks and fire by sensors. These sensors alert the people by sending the SMS through the GSM. Whenever the gas and fire are detected by sensor, a voltage is generated in it and it gives as input to raspberry pi. The SMS is sent by the GSM when the gas and fire is detected. This will detect the gas leakage and fire and it will be informed to the user through SMS. This system is cost effective and more effective than the existing system, solves the problem in an effective way.

Smart Gas Leakage Detection with Monitoring and Automatic Safety System, S.M. Zinnuraain, Mahmudul Hasan, and Md. Akramul Hakque, and Mir Mohammad Nazmul Arefin

This paper indicates gas leakage detection with monitoring and automatic safety system. This project designed a system which notify the user through Internet of Things from the mobile app. They designed a safety system because LPG is a highly hazardous and inflammable gas with the help of IOT through the mobile app. Here they used MQ-2 gas sensor to detect the LPG gas where elements like propane and butane is used. And also, in this system they used Wi-Fi module for communication medium for sending the results and notifications through the mobile app. Node-MCU ESP-8266 used for communication purpose and they used the software named "BLYNK" for mobile app. Mainly this system is to avoid accidents by gas leakage and to monitor the gas level of LPG cylinder for household purpose.

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