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Department of Electronics and Communication Engineering

HX8001 - PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

GAS LEAKAGE MONITORING AND ALERTING SYSTEM

Domain of the Project :Internet of things
Batch ID : B12-6A2E
Team ID :PNT2022TMID13412
Academic Year : 2022-2023
Year/Semester : IV/VII

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Objectives

- The main objective of the work is designing microcontroller based toxic gas detecting and alerting system.
- The presence of hazardous LPG gas leakage in a domestic, work place also stored gas container gas which exhibits ideal characteristics is use.
- For the sake, an alarm unit is used to vibrate an alarm which is buzzer.
- The sensor are widely used to detect essence of propane, iso-butane, LPG and even smoke.

Abstract

- IOT is an expanding network of physical devices that are linked with different types of sensors and with the help of connectivity to the internet.
- 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 buzzer and dispaly to the concerned authority and an ability to predict hazardous situation.

Introduction

- Gas leakage leads to various accidents resulting in both material loss and human injuries.
- Liquidized petroleum gas (LPG), which is excessively used in the house and at work places.
- In this project we have determined to develop an examining system which finds the leak of LPG gas and protects the work noticed, sensors of in the project are used to notice the gas leakage and immediately turns ON the buzzer for the danger.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Gas leakage detection and alert system using IOT	Uma Karanje & 2020	International Journal of Scientific Research in Science and Technology	This advantage of this project is its simplicity and its ability to warn about the leakage of the LPG gas. This system uses GSM technique to send the alert message to respective person is no one is there in the house.
Detection of Gas Leakage and Automatic Alert System using Arduino	Juhi Chaudhary and Anurag Mishra & 2020	International Journal of Engineering Development and Research	The primary objective of this basic gas leakage detector is its effortlessness and its capacity to caution its owner about the spillage of the LPG gas. The other preferred standpoint of this framework is its audio cautioning system.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Gas leakage detection and alerting system using Arduino Uno	Syeda Bushra Shahewaz and Chandra Rajendra Prasad & 2020	Global Journey of Engineering and Technology Advances	The LPG gas leakage is incredible in the project system. Applicable usefully in the industrial and domestic purpose. In danger situations we are able to save the life by using this system.
Sensor-Based Gas Leakage Detector System.	Mohammad Monirujjaman Khan & 2020	International Journal of Development and Research	The design of a sensor-based automatic gas leakage detector with an alert and control system has been proposed and discussed in this paper. This is a low-cost, low power, multi featured and simple system device for detecting gas.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
IOT based smart gas leakage detection and alerting system	Rohan K H & 2021	International Journal of Electronics Engineering Research	Many accidents occur in day to day life like explosion because of LPG leakage. Major harm is caused, if gas leakage is not detected early. But now we can detect the gas leakage using the MQ5 gas sesor.
The Smart Gas Leakage Detection with Monitoring and Automatic Safety system	Ms. Shinde Sayali P.1 & 2021	International Journal of Innovative Research & Studies	A model of the proposed system was implemented to prevent accidents due to gas leakage as well as to monitor the gas level of LPG cylinders.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Sensor based gas leakage detection system	Neha Chourasia, Papiha Ajmire & 2022	International Journal of Scientific Research in Science and Technology	It does not Detected Any Moisture. It will not Find Very small Leak. Accuracy of Location need to be carefully verified.
Gas leakage detection and alerting system using GSM and Arduino Uno	Ahsan Kabir Nuhel, Mr. Ethen Deowan & 2022	International Journal of Innovative Research and Technology	Gas leakages resulting into fatal heck has become a serious problem in household leading to financial loss as well as human injuries and deaths.

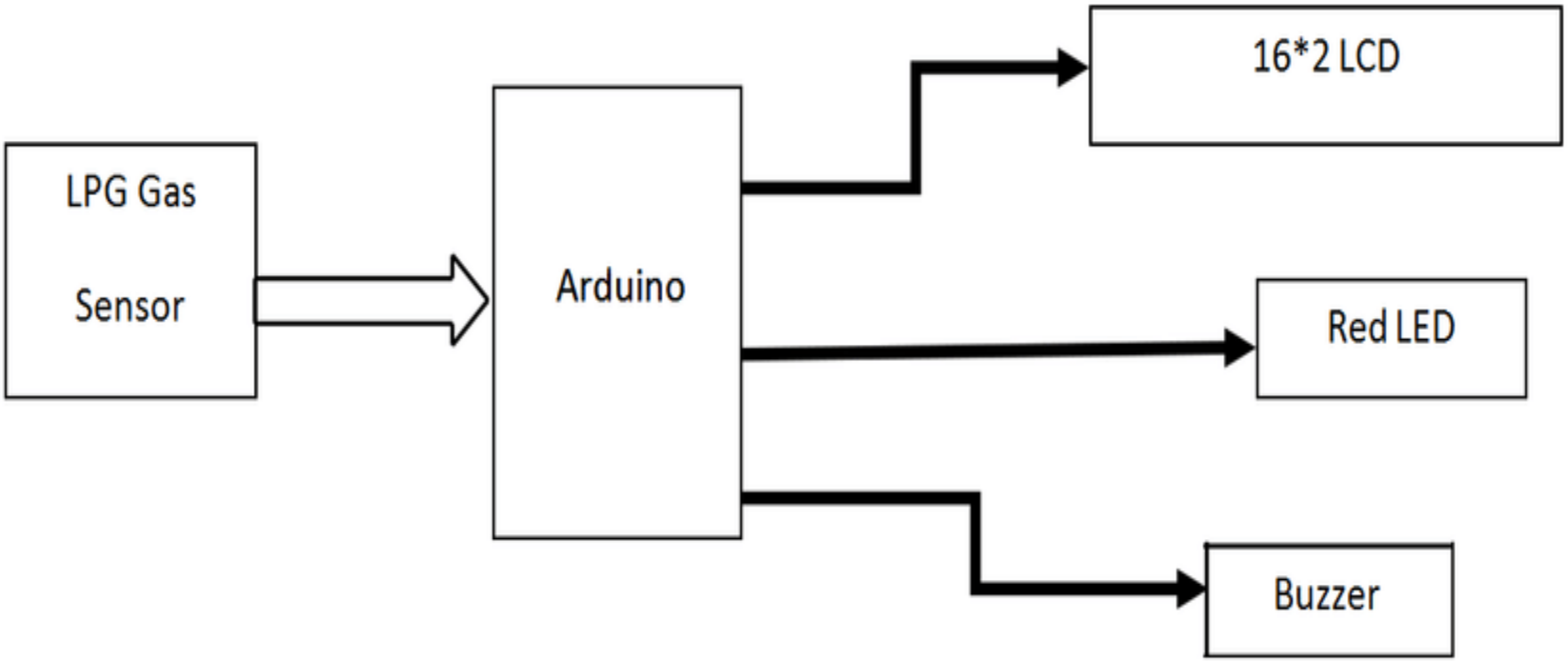
Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Gas Leakage Detection Using GSM Module & Arduino with SMS Alert	Mr.Sivaprasad Lebaka & 2022	Research in Applied Science and Engineering Technology	The leakage of the gas causes destructible impact to the lives and as well as to the heritage of the people. So, the system consists of Alarm unit which is Buzzer gives an audible sign of the presence of LPG volume.
LPG gas lekage detection using IOT	Dr. Chetana Tukkoji, Mr. Sanjeev Kumar A. N & 2020	International Journal of Electronics Engineering Research.	Gas escape could result in severe accidents which ends in material losses and human injuries.

Problem Identification

- This technique has been tested by leak of gas almost about sensors, LPG gas sensor sends the signal to the Arduino UNO after detecting the gas leakage.
- In practice, results for are noticed by the people surrounding by the area are displayed in the LCD and buzzer sound indicate the danger to the people by making beep sound.
- A sensor node senses gas like CO2, oxygen, propane. The estimated range of transmission and consumption of power is obtained.
- The simple procedures and Arduino UNO Micro controller area used to build the sensor.

Block Diagram



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Questions & Discussion

THANK YOU