VINS CHRISTIAN WOMENS COLLEGE OF ENGINEERING CHUNKANKADAI

IBM NALAIYA THIRAN

LITERATURE SURVEY

DOMAIN NAME: INTERNET OF THINGS

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LITERATURE SURVEY

Topic: "Automated Unified System for LPG using Load Sensor"

Reference: GokulaKaveeya S, Gomathi S,Kavipriya K, Kalai SelviAand SivakumarS-"Automated Unified System for LPG using Load Sensor". 2017 International Conference on Power and Embedded Drive Control (ICPEDC). 978-1-5090-4679-9/17/$31.00,copyright2017 IEEE459-462.

Abstract: In this approach Gas leakage detection and Gas refilling is done using the MQ5 sensor, GSM, Load sensor, Raspberry pi, Aurdino. MQ5 detects the LPG frequently whether the flow of gas is normal or abnormal, if it is abnormal,sends notification to user via GSM. If there is no response, the system automatically turns off. The problem in this is, Gas cannot be refilled without the intermediate (distributor).

Topic: "Development of Leakage Detection System"

Reference: Mr. Sahil Adsul, Mr. Ashok Kumar Sharma and Mr. R.G Mevekari-"Development of Leakage Detection System". 2016 International Conference on Automatic Control and Dynamic Optimization Techniques (ICACDOT) International Institute of Technology (IIIT), Pune. 978-5/16/$31.00, copyright2016IEEE673-677.

Abstract: "In this approach the data such as humidity, temperature, pressure, gas detection, sound detection is acquired by using sensors. The sensors used are DHT22/AM2302, TMP006, BMP180, MQ6, 20KHz microphone, 40KHz ultrasonic receiver, 40KHz ultrasonic module. ZigBee is a wireless communication technology used to create small personal area network. This idea is to detect leakage with different parameters and test on different type leaks was achieved. This system can be designed by using low power microcontroller board and using more high quality sensors to detect accurate values at the output.

Topic: "A LabVIEW Based Remote Monitoring and Controlling of Wireless Sensor Node for LPG Gas Leakage Detection"

Reference: L.P Deshmukh, T.H Mujawar, M.S Kasbe, S.S Mule, J.Akthar and N.N Maldar -"A LabVIEW Based Remote Monitoring and Controlling of Wireless Sensor Node for LPG Gas Leakage Detection". 2016 International Symposium on Electronics and Smart Devices (ISESD) November 29-30, 2016. 978-1-5090-3840- 4/16/$31.00, copyright2016 IEEE 115120.

Abstract: This approach gives a system for monitoring the LPG gas leaks in the presence of air. The methods used here are Wireless Sensor Network, Sensor Node, Remote monitoring and controlling, LabVIEW,VISA. In this paper gas leakage is detected and alerts the user via alarm, sending SMS on user mobile phone and turns off the gas regulator valve .

Topic: "The design of automatic detection processing device of gas leakage based on the MB95204K".

Reference: Jinhao Sun, Jinhao Sun Yezi Li Xiaojin Yan -"The design of automatic detection processing device of gas leakage based on the MB95204K". 978-1-4244- 81651/11/$26.00,copyright2011IEEE1807 1809.

Abstract: Gas leakage causes loss of energy, personal injury and property damage. To solve these problems paper designed a gas leakage automatic detection and processing device by using Fujitsu MB95204K. Gases such as methane and carbon monoxide will automatically detect and alarm. The chemical transducer MQ5 detects concentration of gas generated signals and then does A/D conversion.

Topic: "IoT based Energy and Gas Economic Home Automation System using Raspberry Pi3".

Reference: Ahmed Imteaj, Tanveer Rahman, Hosna Ara Begum, Mohammed Shamsul Alam- "IoT based Energy and Gas Economic Home Automation System using Raspberry Pi 3". Proceedings of the 2017 4th International Conference of on Advances in Electrical Engineering (ICAEE), 28-30 September, Dhaka, Bangladesh. 978-5386-08692/17/$31.00, copyright 2017IEEE647-652.

Abstract: When gas leakage is detected by Gas sensor it makes the WeMOS known about this, which transfers signal to Raspberry Pi and it apprises the user immediately through GSM module. PIR sensors (Passive Infrared) that automatically perceives whether there is any weight over the burner through the button module and if no then the system will turn off the stove using the relay module considering input of button module.

Topic: "Leakage Detection in a Gas Pipeline Using Artificial Neural Network Based on Wireless Sensor Network and Internet of Things".

Reference: MohsenRahmati, Honeyeh Yazdizadeh and Alizera Yazdizadeh- "Leakage Detection in a Gas Pipeline Using Artificial Neural Network Based on Wireless Sensor Network and Internet of Things". 978-1-5386-0837-1/17/$31.00,copyright2017IEEE659-664.

Abstract: This approach uses Leakage Detection, Artificial Neural Network(ANN), Wireless Sensor Network(WSN), Internet of Things(IoT) and Gas Pipeline. In this, a neural network method for leakage detection of a gas pipeline by using flow pattern is applied. The pipeline is divided in several segments and each segment is modelled by considering i/o pressure of the gas flow.

Topic: "Gas Leakage Detection and Smart Alerting and Prediction Using IoT".

Reference: Asmita Varma, Prabhakar S and Kayalvizhi Jayavel-"Gas Leakage Detection and Smart Alerting and Prediction Using IoT". 2017 Second International Conference On Computing and Communications Technologies (ICCCT'17).978-1-5090-6221-8/17/$31.00, copyright 2017IEEE327-333.

Abstract: This approach makes use of the IoT, Sensor,Alarm, Prediction, Data Analytics. IoT is a network which can be extended with the help of physical devices that are connected with different types of servers and with help of internet they will be exchanging the data. Here IoT is used for Gas Leakage Detection consisting of Smart Alerting techniques which involves calling, sending text message and email to the user and helps to predict hazardous situation so that people will be safe. A dedicated mobile application could be made for system

Topic: "IoT based Gas Leakage Detection System with Database Logging, Prediction and Smart Alerting Review".

Reference: Chaitali Bagwe, Vidya Ghadi, Vinayshri Naik,Neha Kunte –"IoT based Gas Leakage Detection System with Database Logging, Prediction and Smart Alerting Review".IOSR Journal of Engineering (IOSRJEN) ISSN(e):2250-3021,ISSN(p):2278-8719. Volume 1, pp 25-28. International Conference on Innovative and Advanced Technologies in Engineering (March-2018).

Abstract: This approach makes use of Data analysis, IoT, MQ5 gas sensor and Alarm. Gas leakages in any areas can cause danger. Therefore we are using IoT technology to solve the proposed problem and make predictions which will be helpful in current and future use

Topic: "Smart Gas Booking and LPG Leakage Detection System"

Reference: Halavva Patil, Shreedhar Niradi, Jyothi D .T, Seema J.S, Shwetha D.G -"Smart Gas Booking and LPG Leakage Detection System". IOSR Journal of Computer Engineering (IOSR- JCE). E ISSN:2278-0661,pISSN:2278-8727PP09-13. National Conference on Advances In Computational Biology, Communication, And Data Analytics(ACBCDA2017).

Abstract: This approach makes use of Gas sensorMQ06, GSM DC motor, microcontroller and load cell. Proposed system consists of gas leakage detection sensor which is interfaced with microcontroller. If leakage is detected microcontroller immediately starts the stepper motor to turn off the gas regulator and message will be displayed on the LCD display.

Topic: "IoT Based Gas Leakage Monitoring System"

Reference: Amatul Munnaza, Rupa Tejaswi, Tarun Kumar Reddy, Saranga Moahan "IoT Based Gas Leakage Monitoring System": Journal of Xi'an University of Architecture & Technology (JXUAT), Vol 12 ISSN No: 1006-7930, Issue 5, 2020.

Abstract: The foremost object of this work is to monitor gas leakage in any industries using gas sensor and Spartan 6 FPGA process. Structure a cloud-based monitoring system is very important to reduce the cost of preserve servers, to avoid data misplaces and to make the access easy with multiple internet linked devices (computer, tablet, mobile phone) at the similar time anywhere in the world. With Internet of Things (IOT), we can control any electronic equipment in homes.