GAS LEAKAGE MONITORING AND ALERTING SYSTEM

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Project Name	Gas Leakage Monitoring and Alerting System
Domain Name	Internet of Things (IoT)

LITERATURE SURVEY

1)

TITLE: Gas Leakage Detection and Alert System using IoT

AUTHOR: Sayali Joshi, Shitai Munjal, Uma Karanji

The Internet of things (IoT) is the system of gadgets, vehicles, and home machines that contain hardware, programming, actuators, and network which enables these things to interface, collaborate and trade information. IoT includes broadening Internet network past standard device, for example, work areas, workstations, cell phones and tablets, to any scope of generally stupid or non-web

empowered physical device and ordinary articles. Installed with innovation, these gadgets can convey and connect over the Internet, and they can be remotely observed and controlled [1]. The meaning of the Internet of things has advanced because of union of numerous innovations, ongoing examination, AI, ware sensors, and implanted frameworks. Conventional fields of installed frameworks, remote sensor systems, control frameworks computerization (counting home and building mechanization), and others all add to empowering the Internet of things. A gas spill alludes to a hole of petroleum gas or different vaporous item from a pipeline or other regulation into any territory where the gas ought not be available. Since a little hole may steadily develop a hazardous convergence of gas, spills are perilous. Notwithstanding causing flame and blast dangers, holes can slaughter vegetation, including huge trees, and may discharge amazing ozone harming substances to the environment.

2)

TITLE: LPG Gas Leakage Detection and Alert System

AUTHOR: E. Jebamalar Leavline, D. Asir Antony Gnana Singh, B. Abinaya H. Deepika

Home fires have been taking place frequently and the threat to human lives and properties is growing in recent years. Liquid petroleum gas (LPG) is highly inflammable and can burn even at some distance from the source of leakage. Most fire accidents are caused because of a poor-quality rubber tube or the regulator is not turned off when not in use. Therefore, developing the gas leakage alert system is very essential. Hence, this paper presents a gas leakage alert system to detect the gas leakage and to alarm the people onboard. The LPG or propane is a flammable mixture

of hydrocarbon gases used as fuel in many applications like homes, hostels, industries, automobiles, vehicles because of its desirable properties which include high calorific value, less smoke, less soot, and meager harm to the environment. Natural gas is another widely used fuel in homes. Both gases burns to produce energy, however there is a 1096 E. Jebamalar Leavline. et al serious problem of their leakage. Being heavier than air, these gases do not disperse easily. It may lead to suffocation when inhaled and may lead to explosion.

3)

TITLE: Gas Leakage Detection and Smart Alerting and prediction using IoT

AUTHOR: Asmita Varma, Prabhakar, Kayalvizhi Jayavel

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, they are able to exchange data. Through IoT, internet has now extended its roots to almost every possible thing present around us and is no more limited to our personal computers and mobile phones. Safety, the elementary concern of any project, has not been left untouched by IoT. 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.

4)

TITLE: Detecting LPG Leakage and Automatic Turn off using Arduino Connected with PIR Sensor

AUTHOR: R Vaishu Priya and G Kowsalaya

In today's world, every home is provided with separate LPG connection for cooking. Nowadays, due to the advancement in technology human beings are getting upgraded day by day. In today's world, every home is provided with separate LPG connection for cooking. It increases the efficiency and decreases the time consumed. Even though it is much better, there are certain critical conditions are to be considered when leakage occurs. While operating with LPG, risks are considered and a reliable technique is to be adapted in the kitchen.Many techniques are available to provide constant monitoring and control of gas leakage in residencies. This paper describes one such method of utilizing LPG in home safely and automatic turning off of the valves at the time of leakage. In this paper, I have used Arduino UNO to carry out the desired task. Arduino is connected to gas sensor (MQ-2) and temperature sensor (LM-35). Gas sensor is used to detect leakage of gas and temperature sensor is used to detect temperature constantly. In addition to that, I have used a PIR sensor for detecting the presence of human in the kitchen. If no human is detected over a period of time, an alarm is on and automatically the valve of the LPG cylinder goes off.