

**LITERATURE SURVEY OF HAZARDOUS AREA MONITORING SYSTEM FOR INDUSTRIAL PLANT**

**PAPER TITLE:** Industry Protection System Using Node MCU and IoT

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**ABSTRACT:**

With the rapid elevation in the internetusers over the past decade has made internet a part oflife internet of things is the advanced internettechnology. Automatic systems are beginning adoptedover manual system because of their self-regulation behavior. The system consists of three sensorsinterfaced with NodeMCU. The sensors data is constantlyscanned to record values and checked. The scannedsensors data is sent to the ThingSpeak IOT platformusing the NodeMCU to the client webserver API. Thesensors used in this project are MQ-2 (gas sensor), LM35(temperature sensor), LDR (light sensor).

**PAPER TITLE:** Smart Industry Monitoring and Controlling System Using IoT

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**ABSTRACT:**

Air pollution in an ecosystem has proliferated industrial automation. This dissertation concentrates more on industrial automation and has design an embedded device with sensors to monitor and control the toxic gases in industries. This entire prototype is an excellent result for observing the toxic gases in industry and generates information by using data acquisition and transmission of data. “Internet of Things (IoT)” is a important technology behind this and it provide platform to bring together all the devices in the world to the internet. In this dissertation, the parameters monitored are temperature, humidity and gas leakages in industries. The sensor senses the parameters and uploads these data to the cloud with the help of NodeMCU. If observed gas level is above the threshold which is the safety limit of operation, the first alert is intimated from the Google cloud and the controlling action carried out (ie) automatically close gas leakage valves and then industry will take immediate step to control pollution. Or else, the second alert message is sent through Electronic mail (e-mail) to restore the safe limit, as government play role to power outage in the industries. Cloud is used to store the sensed data, which is then transmitted and processed.

**PAPER TITLE:** Using Internet of Things for Monitoring Industrial Hazards

**AUTHOR(s):** Ayush Dwivedi, Vanaparthi Venkata Sai, Ayush Chhangani

**PUBLISHED ON:** 2016-2017

**ABSTRACT:**

Internet of Things (IoT) represents a general concept for the ability of network devices to sense and collect data from the world around us, and then share that data across the Internet where it can be processed and utilized for various practical purposes in different aspects of life. The much of loT based systems in industrial areas is still limited, but it has large potential. In this project, we create an IoT had hand mistering system specifically suited to requirements of mining, refining and manufacturing. The system actively records, processes and analyzes the temperature of surroundings, which is a prime safety parameter in areas where molten metal processed, manufacturing is done or welds are made. Also, it keeps track of high levels of dangerous gases present in the environment (LPG/Natural Gas). If a parameter is violated, the system sends an immediate notification to a set of preset list of users on their smartphones, and continues logging and monitoring data for further analysis to suggest improvements in the safety regulations of the industry. The sensors used in this prototype model can be modified with industry requirements (for example more robust temperature sensor may be required in very harsh conditions) whenever the need arises

**PAPER TITLE:** IoT Based Industrial Monitoring System

**AUTHOR(s):** Hemalata Yadav, Naomi Oyiza, Sarfaraz Hassan, Dr. Suman Lata, K. Jaya Chitra

**PUBLISHED ON:** April 2022

**ABSTRACT:**

The Internet of Things (IoT) is a new sector that aims to connect "things," "people," and "machines" to the internet. Modernization and automation are sweeping the globe, with IoT-based industrial monitoring solutions at the forefront. The importance of assessing the state of the industry is vital to the safety and efficiency of the products. The goal of this study is to create an IoT-based industrial monitoring system with intelligent sensors. Because of the integration of big data, the Blynk app can be used to monitor status from anywhere on the planet. Data analysis has been streamlined, allowing for easier IoT monitoring. The proposed technology could be beneficial to manufacturing industries. Adding technology to any kind of manufacturing industry will assure the safety and well-being of the people as well as prevent accidents. Using automation technology reduces the chances of loss and accidents in the machinery world.

**PAPER TITLE:** Monitoring of Hazardous gases in process industries through IoT

**AUTHOR(s):** P.Ragavi, Dr.K.R.Valluvan

**PUBLISHED ON:** February 2016

**ABSTRACT:**

Monitoring is the first step for safety. In our day-to-day life there are many industries working with various hazardous chemical gases and the workers are often exposed to these gases. The unexpected accident cause a great impact to human lives and properties. To avoid these situations we need to develop an Automatic Toxic Gases Detection and Alerting System. The existing detection systems are available to sense only a particular gas and they use GSM technology to indicate the critical situations. The drawback is that the detection system can send a message to only one person. The proposed system is made up of monitoring and alerting system through Internet of Things (IoTs). In this the dangerous, toxic and flammable gases such as Hydrogen Sulfide gas, Carbon Monoxide gas, Ammonia gas, and Methane gas are sensed using individual gas sensors and an Arduino UNO controller. The concentration of all gases values are displayed in ppm using a Liquid Crystal display in the plant premises; when the value exceeds the limited range then an alarm is put on. The advancement in this project is the values are constantly uploaded to the internet by using Ethernet module with an Arduino controller. The Internet of Things (IoTs) provides a proper access to values by an authorized persons and governmental organization. A database is also maintained,this helps to know the status of an industry. The timely sensing of chemical toxic gases offers a quick response on an emergency situation and therefore leading faster diffusion of the critical situation.