**Industrial Pollution Monitoring**

**Abstract**

Internet of Things (IoT) is rapidly increasing technology. IoT is the network of physical objects or things embedded with electronics, software, sensors, and network connectivity, which enables these objects to collect and exchange data. In this paper, we are developing a system which will automatically monitor the industrial applications and update the pollution information continually on cloud so one can monitor it from anywhere. Using concept of IoT. IoT has given us a promising way to build powerful industrial systems and applications by using wireless devices, P.C, and sensors. A main contribution of this review paper is that it summarizes uses of IoT in industries with Artificial Intelligence to monitor and control the Industry.

**Introduction**

Due to recent technological advances, the construction material for small and low cost sensors became technically and economically feasible. Even though, Industrialization increase the degree of automation at the same time it increases the pollution by releasing the unwanted parameters in environment especially in industrial areas. So there should be a system to monitor and assess the industrial pollution. Particular attention is given to factors which may affect human health and the health of the natural system itself. Industrial monitoring is the collection of information at different locations of industries and at regular intervals of time in order to provide the data which may be used to define current conditions. Due to the complexity of parameters large variations are found between different industries.

**Work done earlier**

1. Evaluating air pollution parameters using Zigbee

2. Effective environmental management system reduces greenhouse gas emissions

**Objectives**

To build a robust system that can measure the industrial pollution and help to reduce it and to decrease human interference in monitoring the industrial pollution to reduce pollution and provide a healthy environment for the workers to work in. To make the industrial pollution monitoring a wireless system. To protect the environment from industrial pollution. To build a robust system that evaluates the industrial pollution continuously and indicates when there is an increase in the emissions and takes action to control it using wireless technology that is IOT. These improvements can be used to develop and implement its environmental policy and manage its environmental aspects. Furthermore, it is necessary for Nepalese industries to develop and implement those as the increase in CO2concentration in the atmosphere thickens the greenhouse blanket, adding to climate change with much of the heat being trapped in the earth’s atmosphere.

**Block Diagram**

Cloud

Android Application

ARDUINO

Microcontroller

CO2 Sensor

PC

Fire Sensor

TemperatureSensor

4 Channel Relay Board

O/P Device 1

O/P Device 2

Gas Sensor

O/P Device 3

O/P Device 4

**Components Used**

**Hardware**

* Microcontroller
* Fire sensor
* Temperature sensor
* Gas sensor
* 4-channel Relay Board
* Motors
* PC with Wi-Fi
* Android Smart phone

**Software**

* Embedded C
* Keil Software
* Blynk

**Role of IOT**

The sensors outputs are interfaced with internet of things. A web page is created which contains the readings or observations of sensors. The output of sensors is continuously updated and can be seen in web page. The webpage is hosted online and a link is provided through which we can access the webpage and view the sensors output.

**References**

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