**INDUSTRIAL ENVIRONMENT MONITORING**

**ABSTRACT**

Safety of employees, in any industry, especially at the factory level is one of the most important aspects to be considered by business. This is of paramount importance, both for the wellbeing of the employees and that of the corporation as a whole. Clean fresh air is vital for human well-being and good health. However in India, an increase in air pollution level has been observed over the past few years due to industrialization and urbanization in the country whereby maintaining a good ambient air quality has become a challenge. Moreover drastic changes in the population production and consumption behavior as well as continuous economic development have contributed to the rise of air pollution in Cities. The release of hazardous gas Ammine is not only harmful to the health of the population but are also causing irreversible impact to the environment. In factories where working conditions are harsh and employees need to take great caution while going about their work, it is common for mishaps to occur. As a solution to this problem, we propose a monitoring system to be installed in factories. With this system, we will be able to monitor critical safety parameters of the working environment in these factories so that we are well-aware of the safety situation and the possibility of occurrence of any mishap. Based on the monitoring system, quick actions can be undertaken, corrective pollution control strategies may be implemented from the trend of events, the impact of regulatory actions may be assessed and scientific researches may be carried out.

**BLOCK DIAGRAM:**

**LCD**

**MICROCONTROLLER**

**DHT11 SENSOR**

**WIFI MODULE**

**MQ135 GAS SENSOR**

**NOISE SENSOR**

**BUZZER**

**DUST SENSOR**

**POWER SUPPLY**

**ONLINE MONITORING**

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**HARDWARE REQUIREMENTS:**

* ESP 32
* SENSORS:

DHT11 SENSOR

DUST SENSOR

MQ135 SENSOR

NOISE SENSOR

* LCD WITH I2C MODULE
* POWER SUPPLY

**SOFTWARE & LANGUAGE REQUIREMENTS:**

* ARDUINO IDE - PROGRAMMING
* PROTEUS IDE – CIRCUIT DESIGN
* EMBEDDED C – MICROCONTROLLER PROGRAMMING LANGUAGE
* PHP – WEB SITE FRONT END LANGUAGE
* HTML - WEB SITE FRONT END LANGUAGE
* MYSQL – DATABASE – BACKEND LANGUAGE