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| SL.NO | TITLE | AUTHORS | CONTENT COVERED |
| 1. | A Hazardous Area Personal Monitoring System for Operators  in Gas Depots and Storage Tanks | Elia Landi, Lorenzo Parri, Ada Fort, Marco Mugnaini, Valerio Vignoli, Dinesh  Tamang, Marco Tani | * This paper describes a smart monitoring system for the detection of poisonous gas residues, reduced oxygen concentrations, and flammable gas residues. * The suggested method intends to increase worker safety by decreasing the risk of fires and explosions when they are doing maintenance on or inspecting gas storage facilities. * The monitoring system is built on small battery-operated wearable sensor nodes that have sensors for oxygen, hazardous gases, and flammable LPG compounds. * By including an intrusion detection system, which forbids unauthorized entry to safety-critical locations to prevent mishaps, the proposed system can help boost plant safety. * The sensor nodes use a BLE to identify users and grant access to restricted areas while transmitting data to a remote server over a LoRa low power radio channel. |
| 2. | Embedded IoT-based Monitoring Utility for Safety  Management and Access Control | Ugwechi Wejie-Okachi  , Tamuno-Omie Joyce Alalibo  and Emmanuel Chinweikpe Obuah | * The monitoring tool determines an employee's blood alcohol content before they enter the building. * Additionally, it continuously scans the area for Liquefied Petroleum Gas (LPG) leaks and potential fire outbreaks before sending real-time alert/alarm notifications to the industry's website, the fire office, security units, and other authorised employees via a dedicated GSM line. * Alcohol, LPG, and fire sensors in the system's sensor modules measure the parameters and provide the pertinent data to the microcontrollers for processing. * By delivering the processed data to the ThingSpeak platform, SMS, and website, where it can be accessed by authorised personnel, the NodeMCU initiates the IoT-based alert mode. In addition to issuing the alarm, the system turns on the sprinklers in the fire suppression system. |
| 3. | Monitoring of Hazardous Gases in Process  Industries Through Internet | Ragavi P, Dr. K.R. Valluvan | * The first step toward safety is monitoring. There are numerous industries that use hazardous chemical gases in daily life, and their employees are frequently exposed to these gases. * Such gases have an unanticipated and a significant influence on properties and human life. To keep these things from happening, an automated system for detecting and alerting toxic gases is built. * The suggested method consists of a monitoring and notification system powered by the Internet of Things (IoTs). Gases like hydrogen sulphide, which is poisonous and combustible, are present in this. |