Project Design Phase-I

Proposed Solution

|  |  |
| --- | --- |
| Date | 05 October 2022 |
| Team Members | NITHISH KUMAR V R  SANDEEP P B  BEGAN BABU P  KISHORE B L |
| Project Name | **GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES** |

Proposed Solution:

|  |  |  |
| --- | --- | --- |
| **S.NO** | **Parameter** | **Description** |
| **1** | **Problem Statement (Problem to be solved)** | * Leaks are considered very dangerous since they can build into an explosive concentration So the proposed solution is used for the development for an efficient system & an application that can monitor and alert the workers in INDUSTRIES. |
| **2** | **Idea / Solution description** | * In several areas, the gas sensors will be integrated to monitor the gas leakage   users about the LPG leakage and a buzzer is provided for alerting the neighbors in case of the absence of the users about the LPG leakage   * The main advantage of this system over the manual method is that, it does all the process automatically and has a quick response time. * The proposed system takes an automatic control action after the detection of 0.001% of LPG leakage. * This automatic control action provides a mechanical handle driven by stepper motor for closing the valve * We are increasing the security for human by using the combination of a relay and the stepper motor which will shut down the electric power of the house. Also, by using a GSM module, we are sending an alert message by SMS (Short messaging services) to warn the |
| **3** | **Novelty / Uniqueness** | * Pioneering study of natural gas detection with CCD in visa * The field of view of this new generation of LED displays improves visual economics for technicians who are often working under challenging plant conditions, range. * In this project in case server will loss, it makes call to user or main worker under challenging condition. It notifies the emergency call. |
| **4** | **Social Impact / Customer Satisfaction** | * Cost efficient * Easy installation and provide efficient results. * User friendly |
| **5** | **Scalability of the Solution** | * Establishing fast communication equipment with the nearest fire station and other relief station to have the fastest response in case of an accident. * Even when the gas leakage is more, the product sense the accurate values and alerts the workers   effectively |
| **6** | **Business Model (Revenue Model**) | * With widespread deployment of the urban natural gas industry, the energy security is now becoming one of the priorities in practice. * The gas leakage model was applied to analyses the pressure, temperature and flow rate of gas leakage over time under both the steady-state and dynamic conditions. * As the product usage can be understood by everyone, it is easy for them to use it properly for them   safest organization. |