### Gas Leakage Monitoring and Alerting System

**TEAM ID: PNT2022TMID04339**

**LITERATURE SURVEY**

| **S.NO** | **PAPER** | **AUTHOR** | **YEAR** | **METHOD AND ALGORITHM/SOFTWARE** | **SHORT ABSTRACT** | **FUTURE WORK** |
| --- | --- | --- | --- | --- | --- | --- |
| 1. | IOT Based Industrial Plant Safety Gas Leakage | Ravi Kishore Kodali,Greeshma, R.N.V,Kusuma Priya Nimmanapalli,Yatish Krishna Yogi Borra | 2018 | IFTTT web service | leakage detector which sends the warning to the concerned people through SMS . This detector senses the presence of harmful gases particularly, LPG, Methane and Benzene. LPG and Methane gases catch fire easily resulting in blasts | similar kind of approaches can be proposed in cities of the future, where a gas detection and confinement system can help in addressing the problems of leaks in gas pipelines, while preserving extensibility and usability, our framework has design simplicity |
| 2. | Gas Leakage with Auto Ventilation and Smart Management System Using IoT | Afsana Mim Anika, Ms. Nasrin Akte, Md. Niamul Hasan, Jannatul Ferdous Shoma, Abdus Satta | 2021 | Arduino IDE adaptation 1.8.13 | Spillage of gas increases the risk of fire accident, suffocation or a blast.ystem can detect fire, gas leakage and it also has  the ability to take further steps and decrease gas concentration. | adding real time camera sensor to provide the situations of the infrastructure. |
| 3. | Gas Leakage and Fire Detection using Raspberry Pi | Sourabh Jamadagni, Priyanka Sankpal, Shwetali Patil, Nikita Chougule, Shailesh Gurav | 2019 | MQ-2 and fire sensor | . In gas sensor system, Ras pberry pi plays an important role such that all the components are interfaced to it. This avails the observer to notice the changes from anywhere in the world. The requirement of a gas detection system is to monitor the surroundings continuously. When gas and smoke is detected then system will send short message service (S MS) to the user | advanced controller for environmental conditions and controller collects the data from sensors and those updated sensors values are written by python coding in particular file. |
| 4. | Gas Leakage Detection Based on IOTbased Convolution Neural Network | Suma V, Ramya R Shekar, Akshay Kumar A | 2019 | MQ-5,Arduino | load cell has been used to monitor the weight of the LPG gas regularly through wifi. The values are next fed to the  microcontroller. If the gas in the cylinder indicates a  value where the remaining percentage level is crossed  below the threshold levelset for gas to be indicated as  getting emptied, then a notification will be delivered  to gas enterprise automatically to book the new  cylinder. The values are next fed to the  microcontroller. If the gas in the cylinder indicates a  value where the remaining percentage level is crossed  below the threshold levelset for gas to be indicated as  getting emptied, then a notification will be delivered  to gas enterprise automatically to book the new  cylinder. | LPG gas is monitered regularly and the values are stored in a file for the future use |
| 5. | Pipeline gas leakage detection and location identification system | M. Panjany | 2021 | GSM Module makes use of AT commands | A new approach to gas leakage detection in high pressure distribution networks is proposed, where two leakage detectors are modelled as a Linear Parameter Varying (LPV) system whose scheduling signals are, respectively, intake and offtake pressures. Running the two detectors simultaneously allows for leakage location. First, the pipeline is identified from operational data, supplied by REN-Gasodutos and using an LPV systems identification algorithm proposed.Therefore it works as a reference. The second one uses a measured scheduling signal and the augmented state is compared with the reference value. Whenever there is a significant difference, a leakage is detected | Now the gas leakage is notified but in future the gas flow will be automatically stopped if gas leakage is identified. |