Project Design Phase-I
Proposed Solution

Team ID	PNT2022TMID45922
Project Name	Gas leakage monitoring and alerting system for industries
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To ensure the safety of workers in the industries, we develop an efficient system & an application to monitor the gas pipelines continuously and detect early if there is any gas leakage in thesurroundings. Generally in gas industries there aresome places that are too noisy. So, in those areas workers can't hear the siren sound when the gasleakage alerting system alerts.
2.	Idea / Solution description	➢ If there is any gas leakage occurs inside the industry, the knob of the gas pipeline will automatically closed. ➢ The gas leakage level will be indicated by the LED lights: • Red – Critical • Yellow – Warning • Green - Normal ➢ If the gas leakage is in critical level, the surrounding people will be notified through a siren ➢ To detect the different harmful gases like methane, hydrogen sulphide, LPG, carbon monoxide etc., by using the required sensors. ➢ If in any area gas leakage is detected the admins will be notified along with the location. ➢ In the web application, admins can view the sensor parameters.
3.	Novelty / Uniqueness	➢ Our solution not only notify the industry person but also notify the fire fighters ➢ Low latency ➢ The use of stepper motor helps to close the knob ➢ immediately if gas leakage is sensed

		➢ The position of the LED displays is placed on the conspicuous part ➢ It has the ability to detect various type of gases, not just of single type. Hence the system makes more efficient.
4.	Social Impact / Customer Satisfaction	Our solution will be very helpful for the workers and the society which is associated or located nearby the industries. Our solution will prevent great disasters like Bhopal Gas Tragedy so that so many lives can be saved. Through this project the workers mental pressure will be reduced so that they can concentrate on other works or by relaxing them.
5.	Business Model (Revenue Model)	➢ The main target of our solution is Industries so we have planned to visit industries and explain them about the benefits of our products. ➢ They can't just installed and left they needed to get serviced. We can make profit by servicing ,upgrading, installing devices. ➢ No one wants to destroy their factory . so it's assured that our product will be sold and installed in every gas industries
6.	Scalability of the Solution	Alerting system over this methods offers quick response time and sends alert to people in short period of time. So that people can evacuate as fast as they can and also the workers in the industries can fix before the explosion as fast as they can. Even when the gas leakage is more, the product sense the accurate values and alerts the workers effectively