

Project Design Phase-I
Proposed Solution

Date	19 September 2022
Project Name	Project – Gas Leakage Monitoring and Alerting System
Maximum Marks	2 Marks

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none"> ➤ This project helps the industries in monitoring the emission of harmful gases. ➤ In several areas, the gas sensors will be integrated to Monitor the gas leakage. ➤ 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.
2.	Idea / Solution description	<ul style="list-style-type: none"> ➤ Using a moving insect robot to detect gas leaks in a pipeline joint. ➤ Using a FLIR Gas Detection Cameras to Visualize CO2 Gas. ➤ Calculate the amount of gas used. ➤ Smart bands are used to alert workers of gas leaks in factories. ➤ Using 360 degree rotating The Long Wave Gas Detection Thermal cameras detect gas leaks by visualizing them. ➤ Thermochromic inks or dyes can be used in industrial applications using tubes that change their colour with temperature changes. ➤ Using offline messaging alert facility alerting people without internet in range of upto 100 meters.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> ➤ Using a moving insect robot to detect gas leaks in a pipeline joint. ➤ Using 360 degree rotating The Long Wave Gas Detection Thermal cameras detect gas leaks by visualizing them.
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> ➤ Get real-time alerts about the gaseous presence in the atmosphere ➤ Prevent fire hazards and explosions ➤ Supervise gas concentration levels ➤ Ensure worker's health ➤ Real-time updates about leakages ➤ Cost-effective installation ➤ Data analytics for improved decisions

		<ul style="list-style-type: none"> ➤ Measure oxygen level accuracy ➤ Get immediate gas leak alerts
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> ➤ It is satisfy to the industries and the industries employees.
6.	Scalability of the Solution	<ul style="list-style-type: none"> ➤ It can automatically detect ,alarm and control gas leakage using an exhaust fan to suck the gas away