

Project Design Phase-I
Proposed Solution

Date	16 NOV 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"> • Create an effective system and application that can watch over and notify users (workers). • The industries benefit from this project's assistance in tracking hazardous gas emissions. • The gas sensors will be integrated in a number of locations to track gas leaks. • The administration will be contacted and given the location if a gas leak is found in any region. • Admins can view the sensor parameters on the web application.
2.	Idea / Solution description	<ul style="list-style-type: none"> • Using an insect-like robot that moves to find gas leaks in pipeline joints. • Visualizing CO2 Gas Using FLIR Gas Detection Cameras. • Calculate the amount of gas used. • Workers at factories are informed of gas leaks via smart bracelets. • Long Wave Gas Detection Thermal cameras that rotate 360 degrees can see gas leaks and find them. • Thermochromic inks or dyes can be used in industrial applications using tubes that change their colour with temperature changes. • By using the offline messaging alert feature, anyone without internet within a 100-meter radius can be warned.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> • Using an insect-like robot that moves to find gas leaks in pipeline joints. • Long Wave Gas Detection Thermal cameras that rotate 360 degrees can see gas leaks and find them.

		<ul style="list-style-type: none"> • Fastest alerts to the workers • User friendly
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> • Receive instant notifications regarding the presence of gases 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 • Measure oxygen level accuracy • Get immediate gas leak alerts • Cost efficient • Easy installation and provide efficient results • Can work with irrespective of fear
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> • The industries and the personnel of the industries are satisfied. • The product is heavily promoted across all mediums. Due to its affordability, it even protects small-scale companies against disasters. • As the product usage can be understood by everyone, it is easy for them to use it properly for their safest organization
6.	Scalability of the Solution	<ul style="list-style-type: none"> • It can detect, warn, and control gas leaks automatically by sucking the gas away with an exhaust fan. • Since the product is cost efficient, it can be placed in many places in the industries. • Even when there is a greater gas leak, the product detects precise readings and successfully warns the workers.