Project Design Phase-I
Proposed Solution

Date	01 oct 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)	• Develop an efficient system & an application that can monitor and alert the users(workers) • 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	• Using a moving insect robot to detect gas leaks in a pipeline joint. • Using a FLIR Gas Detection Cameras to Visualize CO_2 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	• 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.
		• Fastest alerts to the workers
		• User friendly
4.	Social Impact / Customer Satisfaction	• 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
		• 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)	• It is satisfy to the industries and the industries employees.
		• The product is advertised all over the platforms. Since it is economical, even helps small scale industries from 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	• It can automatically detect ,alarm and control gas leakage using an exhaust fan to suck the gas away
		• Since the product is cost efficient, it can be placed in many places in the industries.
		• Even when the gas leakage is more, the product sense the accurate values and alerts the workers effectively