Ideation Phase
Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID47486
Project Name	Gas leakage monitoring and alerting system for industries
Maximum Marks	4 Marks

Brainstorm & idea prioritization

TEAM ID   : PNT2022TMID47483
PROJECT NAME: Gas leakage monitoring and alerting system for industries

🕐 **10 minutes** to prepare
⏳ **1 hour** to collaborate
👤 **2-8 people** recommended

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Define your problem statement

How to overcome the gas leakage in industries by controlling and monitoring?

🕐 **5 minutes**

PROBLEM

Gas leakage monitoring and alerting system for industries?

Pooja Lakshmi T A
(910019106030)

Alarm can be placed for alerting the workers to move out safely	Sensors like MQ3(CO), MQ131(Ozone), MQ137(NH4), MQ136(Sulphide gas) and MQ9 can be used for detecting the toxic gases
Sensors like MQ3(Alcohol), MQ5(Hydrogen, LPG, Methane) can be used for detecting the gas leakage	Instead of blind alarm, a speaker can be placed so that it indicates which gas is leaking

Sheeba Lourdes Angeline H
(910019106038)

Incase of higher gas leakage and fire accidents, a notification can be given to the fire station and hospital through software application	When gas gets leaked, a notification can be passed to hospital
Level of gas in the industry can be informed through speakers periodically	Sensor can be placed in the entrance for counting the workers who have been moved out in case of emergency

Thirunavukarasu M
(910019106046)

Sensor can be placed in the entrance for counting the workers who have been moved out in case of fire accidents	For internal gas leakages from the machines or turbines in the process manufacturing, we can place these sensors in the machines so that it detects and alerts the workers
An exhaust fan can be placed to spread air, so that the gas gets oxidized and causes less damages	Automatically doors and windows should be closed if gas leaks

Venkatesh T
(910019106301)

In addition to alarm, a voice notes which alerts by saying the level of leakage can be designed	The alerting message can also be forwarded to the management of the industry
Sprinklers or extinguishers can be fixed which helps in case of inflammation by the leakage	Windows and gates can be opened automatically through sensors placed on that

Flammable Gases

Detection
Sensors like MQ3(Alcohol), MQ5(Hydrogen, LPG, Methane) can be used for detecting the gas leakage

Alert
Instead of blind alarm, a speaker can be placed so that it indicates which gas is leaking

In addition to alarm, a voice notes which alerts by saying the level of leakage can be designed

The alerting message can also be forwarded to the management of the industry

Remedy
Incase of higher gas leakage and fire accidents, a notification can begiven to the fire station and hospital through software application

Sprinklers or extinguishers can be fixed which helps in case of inflammation by the leakage

Windows and gates can be opened automatically through sensors placed on that

Safety
Level of gas in the industry can be informed through speakers periodically

Sensor can be placed in the entrance for counting the workers who have been moved out in case of fire accidents

Poisonous Gases

Detection
Sensors like MQ3(CO), MQ131(Ozone), MQ137(NH4), MQ136(Sulphide gas) and MQ9 can be used for detecting the toxic gases

For internal gas leakages from the machines or turbines in the process manufacturing, we can place these sensors in the machines so that it detects and alerts the workers

Alert
Alarm can be placed for alerting the workers to move out safely

Remedy
When gas gets leaked, a notification can be passed to hospital

An exhaust fan can be placed to spread air, so that the gas gets oxidized and causes less damages

Safety
Sensor can be placed in the entrance for counting the workers who have been moved out in case of emergency

Automatically doors and windows should be closed if gas leaks

Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)

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The alerting message can also be forwarded to the management of the industry

In case of higher gas leakage and fire accidents, a notification can begiven to the fire station and hospital through software

An exhaust fan can be placed to spread air, so that the gas gets oxidized and causes less damages

Windows and gates can be opened automatically through sensors placed on that

Instead of blind alarm, a speaker can be placed so that it indicates which gas is leaking

Automatically doors and windows should be closed if gas leaks

Sprinklers or extinguishers can be fixed which helps in case of inflammation by the leakage of gas

Sensor can be placed in the entrance for counting the workers who have been moved out in case of fire accidents

Sensor can be placed in the entrance for counting the workers who have been moved out in case of emergency

Alarm can be placed for alerting the workers to move out safely

For internal gas leakages from the machines or turbines in the process manufacturing, we can place these sensors in the machines so that it detects and alerts the workers

In addition to alarm, a voice notes which alerts by saying the level of leakage can be designed

Level of gas in the industry can be informed through speakers periodically

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