

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	1 NOV 2022
Team ID	PNT2022TMID41775
Project Name	Gas leakage monitoring and alerting system for industries
Maximum Marks	4 Marks

TEAM MEMBERS :M.AKSHAYA(TEAM LEADER)

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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?

Alarm can be placed MQ135 (Ozone), MQ3(CO), gas notification can a the workers to

passed to safely detecting the Instead of blind alarm, a speaker can be placed so that it indicates which gas is Instead of blind alarm, a speaker

Incase of higher When gas leaked, for alerting stationbeginven to the and notification ut can be used for through

toxic gases application Level of gas in the industry Sensor can be placed in the entrance for

Sensor can be For internal gas In voice message can entrance for m counting the turbines in the alerts by saying have been moved out in process manufacturing, case of fire we can place that it detects and extinguishers gates can An exhaust placed to spread air, so that the gas gets oxidized Automatically doors and windows should be

In addition to alarm, a voice notes which on the level of leakage can be designed The alerting message can also be from the alarm, a the management of the industrv leakage can be these sensors in the management of Sprinklers or fixed opened which helps in case of Windows and automatically through

3

Group Ideas

20 minutes

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

In case of higher gas leakage and fire accidents, a notification can be given 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

Automatically doors and windows should be closed if gas leaks

Safety

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

