GAS LEAKAGE MONITORING & ALERTING SYSTEMS FOR INDUSTRIES

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PROBLEM STATEMENT

Industrial processes increasingly involve the use or manufacture of highly dangerous substances, particularly toxic and combustible gases. Inevitably, occasional escapes of gas occur, which create a potential hazard to the industrial plant, its employees and people living nearby. Worldwide incidents involving asphyxiation, explosions and loss of life are a constant reminder of this problem.

While life safety is a major benefit of gas detection, don't forget that gas monitors also contribute to worker health, property protection and operational productivity, all of which impact the bottom line.The industrial hygienist, as a proactive safety leader of the workplace, needs timely, accurate warnings of a gas leak so that building occupants can be evacuated in time, if necessary, to a safe place, and so that gas leaks can be mitigated quickly to prevent the overtaking or destruction of property.

EFFECTS OF THE PROBLEM:

The leakage of poisonous gas from a storage tank of LG Polymers Ltd, a South Korean company on the outskirts of the city of Visakhapatnam, in Andhra Pradesh , killed 12 people while nearly 500 were hospitalised – villagers settled near the plant continue to live in a state of fear. The GAS LEAK incident at Visakhapatnam was not the only industrial accident in the country that day. In the evening, two boilers exploded at NLC India Limited’s thermal power station at Neyveli, Tamil Nadu, injuring eight people.

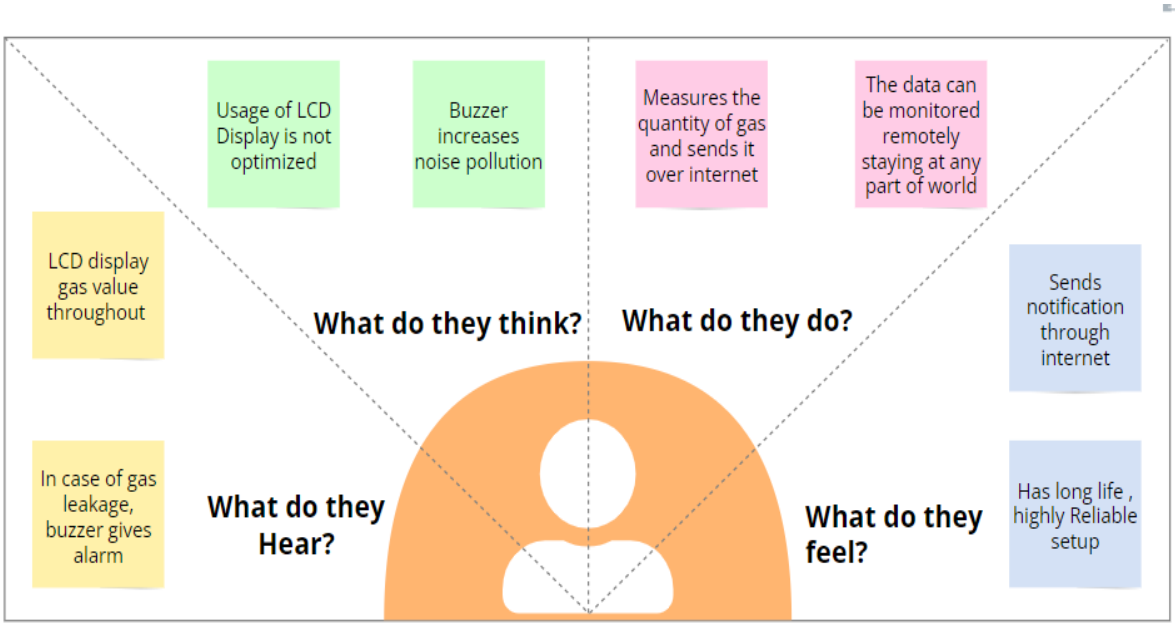
So inorder to tackle the problem, we have come up with a solution which can be justifiable to a level.

LITERATURE SURVEY

Sr. No	Paper title	Author Name	Published Year	Result
1.	Internet of Things (IOT) Based Gas Leakage Monitoring and Alerting System with MQ-2 Sensor	Rohan Chandra Pandey, Manish Verma, Lumesh Kumar Sahu	2017	This paper choice of using a real time gas leakage monitoring and Sensing the output levels of gas has been clearly observed by the help of this system.
2.	Gas Leakage Detection and Smart Alerting and Prediction Using IoT	IoT Asmita Varma, Prabhakar S, Kayalvizhi Jayavel	2017	The proposed gas leakage detector is promising in the Field of safety.
3.	IOT Based Gas Leakage Detection System with Database Logging, Prediction and Smart Alerting	Chaitali Bagwe, Vidya Ghadi, Vinayshri Naik, Neha Kunte	2018	The system provides constant monitoring and detection of gas leakage along with storage of data in database for predictions and analysis. The IOT components used helps in making the system much more cost effective in comparison with traditional Gas detector systems.

4.	Internet of Things (IoT) Based Gas Leakage Monitoring and Alerting System with Mq-6 Sensor smarter	Rohan Chandra Pandey, Manish Verma, Lumesh Kumar Sahu, Saurabh Deshmukh	2018	A discussion on how the aims and objectives are met is presented. An overall conclusion IOT based toxic gas detector is it has become more efficient, more applicable to today's applications and
5.	Gas Leakage Detection and Smart Alerting System Using	Shital Imade, Priyanka Rajmanes, Aishwarya Gavali	2018	IoT In this paper we use IOT technology for enhancing the existing safety standards. While making this prototype has been to bring a revolution in the field of safety against the leakage of harmful and toxic gases

EMPATHY-MAP CANVAS



PAIN	GAIN
Industrial processes increasingly involve the use or manufacture of highly dangerous substances Toxic and combustible gases, occasionalLY escapes, which create a potential hazard to its employees and people living nearby	But also Property protection and operational productivity Gas monitors also contribute to worker health Life safety is a major benefit of gas detection