GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

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ABSTRACT:

Safety has always been an important criterion while designing home, buildings, industries as well as cities. The increased concentration of certain gases in the atmosphere can prove to be extremely dangerous. These gases might be flammable at certain temperature and humidity conditions, toxic after exceeding the specified concentrations limits or even a contributing factor in the air pollution of an area leading to problems such as smog and reduced visibility which can in turn cause severe accidents and also have adverse effect on the health of people. Hazards due to gas leakage are a constant part of industries where storage and transportation facilities of flammable and toxic gases are involved. These include the oil and gas industries, petro-chemical industries and even plants which have toxic and flammable by-products. These leakages can cause serious losses to life and transportation in plants. A gas leakage monitoring system consisting of a rover which moves outside the pipeline to measure leaked gases and continuously send the monitored data to a local server using an IoT platform. This allows continuous monitoring of the plant conditions and provides a quick alert when situations go out of hand.Liquid Petroleum Gas (LPG) is a highly flammable chemical that consists of mixture of propane and butane. LPG is used for cooking at home, restaurant, and certain use for industry. They have certain weaknesses that make the gas leakage occur. The leakage of gases only can be detected by human nearby and if there are no human nearby, it cannot be detected. But sometimes it cannot be detected by human that has a low sense of smell. Thus, this system will help to detect the presence of gas leakage