IDEATION

SABURA ASLINA S:

Considering it is now 2018, commercial and industrial industries are under more rules and regulations than ever before. When it comes to safety in the workplace, there are numerous governing bodies regulating the way jobs are performed, ensuring that best practices are enforced, and promoting the completion of jobs and tasks in the safest way possible. One of the things these governing bodies, such as OSHA, have specific regulations for is gas detection. Gas detectors are required by industry best practices and regulations and are the only way that workplaces can identify gas leaks and potential threats within the workplace. They are extremely important and are a critical piece of safety equipment that can be used to detect explosive atmospheres, oxygen deficiency, and toxic gases that may have leaked into the air. Without gas detectors being used to detect threats, workers are exposed to potentially damaging gases that can cause harm to their minds and bodies, or even result in death.

MATHI VARTHINI K:

Gas detectors are great for detecting gases that would not otherwise be smelled by humans in the workplace. However, due to the harsh and rigorous conditions of some jobsites and workplaces, gas detectors can be affected and could suffer damages to physically or through their sensors. Damage to the sensors can be caused by poisons in the air or concentrations of poisons that exceed the gas detector's detectable limit. Dirt and debris can also obstruct the sensor ports of gas

detectors, which would prevent the movement of gas into the detector. Due to all of these possible complications with gas detectors, it is important to have a method of verifying whether or not your gas detectors are working correctly and are reacting to target gases.

PAVITHRA S:

In recent years, combustible gas leak detection has grown in importance because of increased safety concerns, performances of products/systems, liability concerns, health concerns, and warranties.Gas leak detection is a way of nondestructive testing of dangerous combustible gases from sealed components or systems. Leaks can easily result from poor seals and connections, as well as from inadequate welds. Slow gas leaks from small defects or vibrations can be dangerous, expensive, frustrating, time consuming, and a potential for sickness, death or explosions.For years, contractors and other personnel used the OLD soap and water method which has been proven to be ineffective in detecting the precise location of particularly small gas leaks. Recently, gas leak detectors and gas sniffers have become much more popular and useful.

POOJA M:

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. In order to have a control over such conditions this paper proposes a system that uses an MQ-2 sensor which is

capable of detecting gases such as H2, LPG,CH4, CO, Alcohol, Smoke and Propane. This system is not only capable of detecting the leakages and hence presence of excess amounts of harmful gases and alerting through audible alarms but also, with the help of IoT, alerting the concerned authority about the condition before any mishap takesplace through a personal call and message using GSM module, an e-mail about the details of the area using an Ethernet Shield. The system cuts off the main power supply of the house or building when the concentration of gas is about to reach its Lower Explosion Limit (LEL) which is done with the help of relays. The Gas Leakage Detector System also sends the sensor reading to cloud so that analytics could be carried out on the readings for increasing the precision of the system.