

Android based Gas Detection, Deflection and Localization Robot

Abstract

This project presents the development of a prototype of an android based gas detection and localization robot, which can be used for gas leakages in large industrial facilities. There are many possibilities of gas leakage start in an industrial areas. In oil and gas industries or power plants working on gas fuel, where a gas leakage can lead to huge damage. Also it is a worst-case scenario, causing heavy losses not only financially but also destroying areas surrounding it and human life. Robotics is the emerging solution to protect human lives and their wealth and surroundings. The attempt here is to develop an intelligent multi sensors “**Android based Gas detection and localization Robot**” . We design the gas detection system using different sensors

and program the gas detection sensor using Arduino. The Robot is equipped with two Ultrasonic sensors, one Camera, one Buzzer and one Gas sensor that continuously searching for traces of gas while avoiding any obstacles in its way. The Robot is also capable of given live video streaming



whereas the movement of Robot can be control by using Android cell phone by which we can easily localized the point of leakage. If it detects any traces of gas leakage the buzzer will start alarming and can be hear to the operator, monitoring the robot. So this innovation of tracing gas leakage and monitoring processes improved in the reliability, efficiency and cost effectiveness of inspections.