GAS SENSOR FOR ENVIRONMENTAL MONITORING

INTRODUCTION

Industries manufacturing fertilizers, pesticides, chemicals, petrochemicals, etc. are the major sources for releasing dangerous gaseous elements. Due to gas leakage in Industrial and Domestic environment, there is need to employ Gas Sensors extensively to get early gas leakage alarms. Ammonia, Carbon monoxide, Nitrogen oxides and Volatile organic compounds are the cause for many lung disorders which may lead to diseases like cancer and eventually death. MEMS based gas sensors being miniaturized have various advantages as of low power consumption, robust and stable electrical properties. These gas sensors have three main components i.e. Sensor chip, Electronic circuit and power supply. Power requirements of the gas sensor chip decides the over-all power consumption of the gas sensor. The gas sensors have excellent transient performance which is a key feature for the gas sensor response. The system developed will be cost effective compared to available systems.

APPLICATIONS

- This reliable gas sensor technology can be a boon to many areas like pollution monitoring, explosive detection, alcohol breath tests, food quality check, and disease detection from breath etc...

SALIENT FEATURES

- It targets the wide range of detection of gases like Ammonia, CO, H2S, NOx, Alcohol, Benzene, etc.
- Miniaturized sensor chip size (2.5 x 2.5 mm) and power requirement: < 1 watt.
- Fast response time.....
- Integrated with portable electronics.

SCALE OF DEVELOPMENT: Technology commercialised.

