

Application Note – Fence line Monitoring of Toxic Gases

Optical Open Path Gas Detection Benefits

- Most projects require several types of gas detection
- Each technology has advantages and limitations and plays a valuable role in a comprehensive strategy for protection
- Gas detection technologies, such as point or laser detectors, ultrasonic and cloud imaging can be a complementary product to the open path detector which makes the gas detection system more effective

Open path detection technology gives added value, making detection more effective!

- ✓ Fence line monitoring
- ✓ Withstands harsh and extreme environments
- ✓ Reliable and fast detection
- ✓ Easy alignment & commissioning
- ✓ Detection of a cloud of gas at very low concentrations
- ✓ Long distance detection
- ✓ No poisoning effects
- ✓ Less maintenance
- ✓ Fewer units needed
- ✓ Detects gas up to 95% obscuration

Hydrogen Sulphide (H₂S) Applications

- Detection of H₂S in desulfurization processes at refineries, oil platforms, pipelines, refueling stations, and fuel storage facilities
- Petrochemical, pharmaceutical, and other chemical storage and production areas and processes of aromatic hydrocarbons, such as Benzene, Toluene, Xylene, etc.
- Toxic chemical storage sites
- Transportation depots and shipping warehouses of solvents (aromatic and polymers origin), degreasing and cleaning solvents
- Pulp and paper industry, where H₂S is a by-product of wood breaking down into pulp
- Construction industry
- H₂S could be released during excavation work in swamps or old landfills
- Sewers, sewage treatment plants, manure tanks, and other places where organic material breaks down without oxygen
- Iron smelters, coke ovens, and other places where H₂S may be a by-product
- Mines and tunnels where mineral rock may contain H₂S



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Ammonia (NH₃) Applications

- Main use is in the agriculture industry –ammonium nitrate fertilizer acts as a plant fertilizer
- Food and Beverage: Used as a refrigerant gas and to eliminate microbial contamination in beef
- Ammonium hydroxide “household ammonia” a key ingredient in many household cleaning products
- Rubber industry-stabilization of natural and synthetic latex to prevent premature coagulation
- Selective Catalytic Reduction (SCR) technology neutralizes NO_x pollutants from diesel engines using a Vanadia based catalyst
- Water and wastewater treatment –for pH control and as an oxygen scavenger in boiler water treatment
- Pulp and paper industry –pulping wood and as a casein dispersant in the coating of paper



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