Gas Detection for Industrial Environments; Metal Refining, Hot Strip Mills, and Thermal Processing

Many industrial manufacturing facilities involved with the processing and fabrication of metals including: metal refining, hot strip mills, casting, forging, heat treating and other processes rely on gas detection for the protection of plant, equipment, and personnel. The risks requiring protection are wide and varied including: natural gas (methane) leaking from a faulty valve or flange, carbon monoxide leaking from a defective exhaust stack, hydrogen leaking from a heat treating furnace, or oxygen depletion occurring in a basement or confined space.

Until now the only options available have been fixed gas detection systems or portable handheld detectors. These approaches to gas detection have historically provided good protection but there has been and continues to be a dilemma between the desire to have optimum protection and the cost of the installed system as well as long-term operating costs.

Introducing VESDA ECO by Xtralis

Extending its world-renowned VESDA aspirating smoke detection (ASD) technology, Xtralis has introduced the industry's first multi-hole aspirated gas detection system by combining ASD with gas detection. VESDA ECO uses a VESDA pipe network to actively sample air for the presence of smoke as well as flammable and toxic gases as well as oxygen deprived or enriched environments.

This new approach to gas detection brings several unique characteristics into play that are simply not possible with conventional fixed or portable gas detection equipment. The most powerful characteristics include the ability to cover a piece of equipment or area with one detector as compared to having to use multiple fixed gas detectors.

VESDA ECO Benefits

1. The ability to sample multiple points in an area with one detector resulting in better equipment or area protection
2. Potential to reduce the number of gas detectors needed through the unique ASD pipe network and sampling system
3. Better coverage in changing environmental and ventilation air flow conditions
4. Eliminates the guess work as to where to place the gas detector
5. Lower initial installed cost because the detectors can be mounted away from the process area therefore reducing the amount of cabling or conduit that is required
6. Reduction in maintenance costs because there are fewer detector to replace and access is significantly easier
7. Ability to detect a wide range of flammable and toxic gases as well as oxygen depleted or enriched atmospheres
8. Ability to add additional gas detectors to the system without having to run field cabling or conduit
9. Added benefit of reliable very early warning smoke detection with the proven laser-based VESDA technology

All these benefits are delivered through the deployment of the unique VESDA ECO by Xtralis gas detection system

VESDA ECO™ by xtralis™

Aspirating Smoke Detection with Gas Detection

Time to Respond Because of Early Warning

- Active air sampling means earlier detection of smoke and gas threats through the use of the VESDA distributed sampling pipe network.
- Early detection provides time to react to emergencies while maintaining air quality for personnel.

Reliable Performance

- The delivery of an air/gas sample is guaranteed because each sampling pipe is individually monitored for air-flow fault through the VESDA smoke and VESDA ECO gas detectors.
- Absolute smoke measurement is provided with the industry's only optical clean air bleed to ensure detector performance and longevity.
- VESDA ECO is built on the world's No. 1 ASD system, which is backed by decades of successful operation in numerous applications and environments, including steel mills and other harsh industrial applications

Flexible System Integration

- Real-time smoke and gas data is provided for an appropriate and staged response, including local alarm annunciation, alarm notification, and demand controlled ventilation for energy cost savings.
- Gas detector information can be easily integrated into a wide range of 3rd party systems, including: FACP, PLCs, BMS, or HVAC systems.
- On-board alarm and fault relays, analog 4-20 mA, and Modus outputs.
- Full compatibility with Xtralis VSC system configuration and VSM4 system management software.

Industry's Lowest Cost of Ownership

- A VESDA ECO detector can be added easily to an existing VESDA pipe network without complex system redesign or rewiring.
- A VESDA ECO detector can house up to two gas sensors, and more detectors can be added if the detection of additional gases is required.
- VESDA ECO is easily calibrated and comes with built-in user adjustable "calibration due" notification.

How Can VESDA ECO Benefit Your Business?

- 24/7 dual active sampling early warning gas and smoke detection
- Better area coverage and protection through multi-hole air sampling
- Elimination of "guess work" regarding sensor location.
- Lower initial installed cost.
- Lower long term operating costs.
- Simplified installation, maintenance and service

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