Curbing the Risks in Fertilizer Plants

Keeping an eye on your safety

In fertilizer plants, flammable gases like methane and hydrogen are essential building blocks in the production of ammonia, which is used to produce ammonium nitrate fertilizers that release nitrogen, an essential nutrient for growing plants. However, ammonia is a highly toxic substance that can cause eye, nose and throat irritation, wheezing and chest pain, pulmonary edema, skin burns and other harmful health conditions. Monitoring leaks of these gases is a must to detect dangerous accumulations, which may ignite and cause fires.

Challenges

Hazardous gases in fertilizer plants can cause extensive damage or data loss and can harm both personnel and the facility. The following are some of the most challenging areas where early detection is crucial:

- Bulk storage of hazardous materials ingredients
- Processing areas, including reaction vessels and mixers
- Dosage and monitoring devices
- Separation and coating processes
- Loading and shipping facility
- Warehouse (retailers and end-users)

Solutions

Flame-detection systems must be able to swiftly detect fire in a fertilizer plant before it spreads and causes extensive damage or data loss. Gas detection systems must be installed for both flammable hydrocarbon and toxic gas detection.

Spectrex offers innovative monitoring solutions that detect these hazardous substances before they reach dangerous concentrations:

The Next Generation of SharpEye™ Quad-Sense™ 40/40 Flame Detectors - field -proven, reliable detectors that provide the fastest, longest detection of hydrocarbon -based fuel and gas fires.

Quasar 900 - open-path detection system that provides innovative continuous IR technology monitoring for combustible hydrocarbon gases at very low concentrations, ensuring reliable and accurate protection.

SafEye Quasar 960 open-path NH_3 gas detector for monitoring ammonia escapes, which is pervasive in fertilizer plants.

SafEye Quasar 950 open-path H_2S gas detectors - open-path gas detectors for hydrogen sulfide.

With these solutions in place, you can rest assured that your personnel and facility are safe.

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