

Application Case Study

Industry: Refining

Product: Vanguard Hydrogen Sulfide and Methane Detector

Application: Confined Space Protection (Gas detection within an analyzer building)

Process Material: Hydrogen Sulfide and Methane Gas

Company: Independent refiner of petroleum products



Customer

Customer owns and operates a modern, fully equipped refinery in North America. It is essential for the customer to know what flows through its network of pipes so that the refining process can be monitored and adjusted for optimum performance. Analyzer buildings house equipment that sample media flowing through these pipes. In cases where the media is hydrogen sulfide and methane, gas detectors within the analyzer building help to identify a leak before an accident happens.

Challenge

Operators in the refinery use personal gas monitors as a form of protection while working in the analyzer building. The customer wanted to install fixed point gas detectors in the building so that workers can be forewarned of the presence of gas before they entered the confined space. It is costly and inconvenient to add new wired gas detection points within the analyzer building as it is located far from the control center where data is managed.

Solution

Customer has a WirelessHART network installed in the facility. The gateway is approximately 100 feet away from the analyzer building. Rather than deploy wired gas detectors, which comes with the hassle and high cost of running conduit, the customer installed a WirelessHART-enabled Vanguard which provided an instant gas monitoring point in the building. As the data is transmitted back to the control center, operators can now check for presence of hazardous gases remotely before entering the building and not put themselves in harm's way.

Results

The Vanguard integrated very well with the WirelessHART mesh network and transmitted live data of H₂S and CH₄ concentrations back to the control center reliably and accurately. There were no tethering wires to restrict the deployment location of the Vanguard. As such, the detector was easily mounted as close to the pipe flanges as possible where the chances for leaks to occur was the greatest. That improved the efficacy of leak detection tremendously. With the Vanguard, the customer was able to augment their existing gas detection capability at a fraction of the total installation cost, compared to a wired detector. In addition, the customer could deploy a wirelesshart gas detection system in a day, compared to weeks since time intensive tasks associated with tethered systems (e.g. designing, approving, testing) can now be eliminated.

Contact Information

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