APPLICATION CASE STUDY

Industry:	Refining
Product:	Vanguard Hydrogen Sulphide and Methane Detector
Application:	Confined Space Protection (Gas detection within an analyser building)
Process Material:	Hydrogen Sulphide and Methane Gas
Company:	Independent refiner of petroleum products

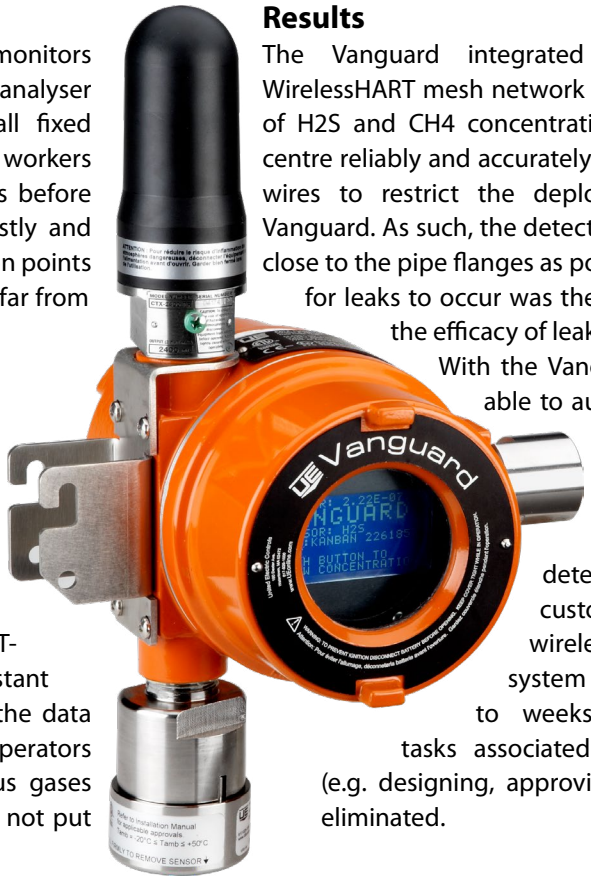
The customer owns and operates a modern, fully equipped refinery in North America. It is essential for the customer to know what flows through its network of pipes so that the refining process can be monitored and adjusted for optimum performance. Analyser buildings house equipment that sample media flowing through these pipes. In cases where the media is hydrogen sulphide (H2S) and methane (CH4), gas detectors within the analyser building help to identify a leak before an accident happens.

The Challenge

Operators in the refinery use personal gas monitors as a form of protection while working in the analyser 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 analyser building as it is located far from the control centre where data is managed.

The Solution

Customer has a WirelessHART network installed in the facility. The gateway is approximately 100 feet away from the analyser 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 centre, 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 centre 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.

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