CROWCON
Detecting Gas Saving Lives

Case Study

Upstream oil and gas producer in the Middle East

A major upstream oil and gas company in the Middle East has chosen Crowcon's Gas-Pro PID portable gas monitors to help protect employees from the risks of volatile organic compounds (VOCs).

The Background

Upstream oil and gas operations must contend with many hazardous gases, which may be explosive, toxic, or both. Typical hazards include methane, hydrogen sulphide, carbon monoxide and even oxygen where it occurs at high concentrations.

Personal protection equipment therefore includes portable multi-gas meters that must be carried by everyone working in the affected areas.

Health and safety requirements are tightening up even further in some markets, with regulators increasingly calling for protection against a range of VOCs.

These may not be as common as the main hazardous gases, but they could be a hazard when they do escape. Checking for VOCs demands an upgrade in personal protection equipment.

The Requirement

Over 3,500 employees and 8,000 contractors work on the customer's refinery and they have each had to carry a personal gas detector for many years.

But a recent health and safety inspection identified an additional risk to personnel of exposure to VOCs, which were not included in the range of gases that the existing monitors were screening for. VOCs include a wide range of organic chemicals such as benzene, many of which can be harmful.

The customer realised that it needed an alternative monitoring solution and asked Crowcon's local distributor for help. The local firm had been supporting the customer successfully using Crowcon gas monitors for years.

In addition, the aim was to find a solution with similar usage characteristics so that personnel would not need significant retraining in order to switch to the new monitors. This made Crowcon monitors an obvious choice.

The Approach

The customer's previous favoured solution was the Crowcon Tetra 3 diffusion-based portable multi-gas monitor, which checks for methane, hydrogen sulphide, carbon monoxide and oxygen. The lightweight, compact and robust monitor features single-button operation and a top-mounted, easy-to-read backlit display.

The new solution is Crowcon's Gas-Pro PID monitor. Gas-Pro PID can use Photo Ionization Detection technology to detect hundreds of VOCs in addition to the other gases, so it is ideal for protecting people working in any environment that could expose them to solvents, glues or paints, as well as the VOCs that can be present around upstream oil and gas facilities.

With its dual-coloured display, the monitor alerts the user with a 95db audible alarm and dual-coloured visual alarm bars. It also features the same single-button operation and easy-to-read display as the previous monitors.

One important feature of the Gas-Pro PID in this application is the ability to download the gas reading at the end of each shift, enabling the process operator to create a record of exposure that can demonstrate to health and safety officers that any risk to personnel is being effectively managed.

The Outcome

The company opted to trial Crowcon's Gas-Pro PID monitors and initially bought four units. Six months later, it followed up with 30 more. These are being used by personnel acting as supervisors in the first instance, but the plan is eventually to roll out the upgraded technology to everyone.

In addition to the monitors, bump testing has been made easier for the customer by including a Q-Test for bump testing and verifying that the Gas-Pro PID monitors are working properly. The Q-test is selected because it requires no power and therefore suitable for remote users.

Using the Q-Test means that a bump test takes less than a minute to check that the sensors are responding correctly to a known value of gas before users enter a hazardous area.

In summary, a combination of versatile, easy-to-use technology and local continuity of service provided this customer with the ideal solution.

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