CROWCON
Detecting Gas Saving Lives

Fig 1: Crowcon Gasmonitor control panel integrates into fire and gas detection systems

Case Study

Omega Integration

Fire and gas detection and control systems in the oil and gas industry: cost versus value. Do higher costs always mean higher specifications?

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Requirement

Budgets have to have limits, but there is one area in which cutting cost could mean cutting back on the protection provided for employees.

In fire and gas detection, exposing employees to risk can be life-threatening but, as Crowcon was able to demonstrate to OMEGA Integration, it is not necessarily the most expensive detection systems that provide the highest specifications or levels of protection.

A leading integrator of end-to-end systems, OMEGA Integration assembles and installs fire and gas detection and telecommunications systems in both off-shore and on-shore production sites. For OMEGA's customers throughout Asia, quality and dependability are just as important as cost. "When we put our name to a system, we have to ensure that every element within it goes further than simply meeting the relevant class regulations.

Each part must also meet the highest specification and build quality," explains Gener Gonzalo Valencia, Manager, Projects & System Design from OMEGA Integration. "Previously, OMEGA has used equipment from some of the world's largest manufacturers of fire and gas detection equipment, but high cost does not necessarily mean the highest specifications.

This was particularly true of the equipment's ability to operate in high-temperature applications. Our goal was to find a supplier who could match our knowledge of the Oil and Gas industry and provide fire and gas detection equipment with the highest specifications at a competitive price."

Approach

With Crowcon's expertise in detection equipment combined with over 40 years of experience in the oil and gas sector, their products offered distinct advantages for OMEGA. Whilst the basic function and operation of gas detection equipment is the same across all manufacturers, Crowcon's products offered the highest specifications and levels of class compliance, with the added commercial benefits of a competitive price and a short delivery lead-time.

These strong technological and commercial benefits meant that OMEGA decided to work exclusively with Crowcon as their supplier of gas detection equipment, sampling units and control panels. OMEGA now integrates Crowcon's specialist gas detection equipment, with other third-party components such as smoke detectors and alarm systems, to provide customers with complete, turn-key fire and gas detection systems (Fig 1).

The main control panel in OMEGA's fire and gas detection system is Crowcon's Gasmonitor.

The signals from all of the detectors for gas, smoke and toxic gas hazards are sent to this control panel.

In a typical installation, the control panel may receive signals from over 200 smoke detectors and over 80 manual call points, as well as from gas detectors located in various locations throughout the site.

Outcome and Benefits

The control panel also provides the operator with the flexibility to set alarm points and other status indicators according to each application. Gas detector alarm points can, for example, be set for the Lower Explosive Limit (LEL) of flammable gases such as methane (CH_4), and in parts per million (ppm) for toxic gases like, hydrogen sulphide (H_2S).

The Crowcon Xgard gas detectors are used as they meet class compliance across a range of applications. OMEGA also specified Crowcon's Air Sampling Units (ASU), which are typically placed in the intake ducts to the heating, ventilation and air-conditioning (HVAC) system, to provide early detection of the presence of both toxic and flammable gas.

As the operation of Crowcon's Gasmonitor control panel and Xgard detectors were already familiar to OMEGA's service personnel, the drawings and documentation were already included in the working design, providing a seamless installation and training of personnel on site.

In addition to the high specification and competitive cost, OMEGA also needed products which were easy to specify and backed by comprehensive technical documentation. According to Gener, "I don't want my engineers working through complex ordering guides every time they need to specify a product.

Our response times are also improved when our engineers don't have to chase suppliers for documents and drawings before they can be included in our submissions to customers. Crowcon's standardised product selection process and easy access to technical documentation helps to improve both the productivity of my engineering teams and our customer service."

The combination of Crowcon's high specifications and competitive pricing enables OMEGA to provide customers with equipment which combines the highest specifications with the highest value for money, as well as enabling installation on short lead-times.

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