CROWCON
Detecting Gas Saving Lives

Case Study

Alliance Steel and the Xgard Bright

Malaysia's largest steel company, Alliance Steel, has chosen Crowcon's Xgard Bright gas detection solution to help protect employees from the risks of carbon monoxide (CO) inhalation.

ALLIANCE STEEL

The Background

The steel industry must contend with many hazardous gases including carbon dioxide, ammonia, sulphur compounds, and benzene which are generated during processing. Others gas hazards are introduced during processing, such as pure oxygen, used in the basic oxygen steel process, and nitrogen or argon, which is used during secondary processing.

Due to the large amount of water and energy needed during processing, water treatment and power generation facilities are frequently part of steel facilities, posing gas hazards of their own. Hydrogen cross-reacts with the electrochemical carbon monoxide sensors, so hydrogen filtered CO sensors should always be standard at steel facilities.

The Requirement

Alliance Steel was built in 2014 and processes 3.5 million tonnes capacity per year. The company's existing detectors were not provided with any local service and maintenance support. This resulted in detectors being insufficiently maintained and the plant operation potentially being at risk of CO leak which might not be detected.

One of the greatest risks in a steel plant is the potential exposure to CO, which is formed in the blast furnaces during the smelting process. In low concentrations, CO is a natural part of the air we breathe, but in higher concentrations, inhaling CO can cause loss of consciousness and possible death.

With over 3000 workers on site, Alliance Steel made it a priority to address employee safety.

The Approach

Alliance decided to completely replace its CO detectors across the site with a key requirement to source a supplier that could deliver local servicing and maintenance aftercare support.

The combination of Crowcon's servicing, maintenance aftercare support, and the Xgard Bright provided Alliance with the solution. Xgard Bright provided the key functionality of the existing detectors, including an integral sounder and beacon with a local alarm which doesn't use a control panel, along with the ability to ensure zero downtime as CO leaks would be detected and resolved. This ultimately protects employees from exposure to high levels of CO.

Xgard Bright has a small footprint and so able to retrofit to existing installations, it includes an OLED display which allows users to view gas readings easily, especially when installed in hard to reach places and provides display and relay output.

The Outcome

Alliance Steel was delighted with the Xgard Bright solution and an order for 120 units was placed. In under six weeks all units were installed and in full operation. It has subsequently ordered an additional 25 units.

Downtime when detectors are under service was a critically important factor in the selection process for Alliance Steel. A plant cannot run safely without detectors in working condition.

In summary, a combination of functionality, reliability and excellent local after care service provided this customer with the ideal solution.

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