

DESIGNING A SOLUTION FOR TOUGH CONDITIONS IN ENGINE R&D

CASE STUDY

Crowcon designed a customised solution for a global engineering consultancy that combined a bespoke sampling system, with point detection and a safety integrity level (SIL) rated control system, to ensure reliable gas monitoring throughout this tough location.



THE CLIENT WAS AWARE OF SEVERAL PROBLEMS, INCLUDING A LACK OF REMOTE ALARM CAPABILITY AND ITS OUTDATED GAS SHUT-OFF SYSTEM.

The Need - Requirements

The client, a global engineering consultancy and manufacturer, had a new facility for engine research and development (R&D) and needed to monitor hydrogen on the site. However, this was not a straightforward job – due to the nature of its work, the site had a range of environments, including high velocity ducts with turbulent flows and high temperature gas streams, which were very difficult to monitor and beyond the scope of ‘off the shelf’ options. Crowcon’s EFS team solved the problem by designing a customised solution that combined a bespoke sampling system with point detection and a safety integrity level (SIL) rated control system, to ensure reliable gas monitoring throughout this tough location.

SITE VISITS, TEAM MEETINGS AND ONGOING CHATS, ALLOWED US TO UNDERSTAND NOT ONLY WHAT THE CUSTOMER NEEDED BUT ALSO WHAT THEY WERE FAMILIAR WITH.

Conversations with the customer

The EFS team likes to work closely with each customer to make sure that all needs, factors and preferences are understood, and that approach really paid off in this case. Communication was maintained at every point of the process, from initial scoping to final build, through a mixture of site visits, team meetings and ongoing chats. ‘

This allowed us to understand not only what the customer needed, but also what they were familiar with and preferred,’ explains Jackie Marsh, Business Development Engineer on the EFS team. ‘In this case, for example, we incorporated an SIL-rated control system into our customised solution, because the customer was familiar with that.’

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Find out how we can help 

The challenges of monitoring gas levels in turbulent flows and at high temperatures lay at the heart of this project. 'We brought in some specialist team members to address the technical challenges,' says Jackie Marsh, Business Development Engineer on the EFS team, 'which gave us deep insight into the issues involved, and added expertise.'

The EFS team designed a customised sampling system that could monitor hydrogen in all areas where the conditions were very challenging. This sampling approach was combined with the use of point detectors in the less difficult parts of the site, and a control system that brought the two together, to give a wide-ranging solution suitable for all areas.

The new system integrates perfectly with the customer's other safety system, providing assurance that is second to none. Despite the challenges, the EFS team is proud of the outcome and looks forward to putting the expertise gained from this project to good use in similar sites elsewhere.

If your site would benefit from customised gas monitoring, please complete the contact form. We'll get right back to you, for a chat about your requirements and the potential solutions.

[Click HERE to access the form.](#)

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