

Statoil Gullfaks C - Offshore Platform Norway

The benefits of wireless gas detection systems for offshore platforms in terms of safety, flexibility and cost were clearly demonstrated on this North Sea platform.



- *Harsh North Sea climate*
- *Good radio coverage across the whole platform*
- *Performance at least as good as benchmark*

INTRODUCTION

Norwegian oil company Statoil is one of the first to deploy the GS01 gas detector from GasSecure offshore on an oil and gas production platform, namely Gullfaks C.

Gullfaks is an oil and gas field in the North Sea operated by Statoil and consists of three platforms, Gullfaks A, B, and C. The Gullfaks C platform was selected as the test site for two main reasons. The platform is an old installation having had many add-ons over its lifetime. It has therefore many obstructions from heavy steel decks and machinery that could put the detectors' radio communication system to the test. Gullfaks C is also situated in an area of the North Sea prone to harsh weather, another test for the GasSecure system.

The 20 wireless gas detectors were installed in three fire areas that are most exposed to weather. The installation included one gateway (radio access point) per area. The gateways communicate with a ProfiSafe to one ABB fire and gas node presenting the alarms and failure status to the operators in the central control room. The installation phase was closely followed by Jens Erik Tømte, Senior Engineer Automation at Statoil with goods results.

INSTALLATION DETAILS

END USER

Statoil

LOCATION

North Sea

COMPLETION DATE

January 2013

TYPE OF INSTALLATION

Offshore oil production platform

INSTALLATION DETAILS

20 pc GS01 detectors
3 pc GasSecure gateway
ABB 800xA control system

COMMUNICATION

ProfiSAFE on ISA100.Wireless
SIL2-rated



“We estimate that installation time will amount to only 5 – 10% of the time required for a conventional wired detection system”, said Tømte.

Moreover, the radio signal coverage was a positive experience. Additional tests showed that only one gateway could cover most of the platform, although several detectors were placed in challenging locations.

Ten of the detectors at Gullfaks C have been installed shoulder-to-shoulder with Statoil’s legacy wired gas detector to compare responses. The tests showed that the response time is essentially equal for both detectors; however, the digital design of the GS01 gas detector gives a quicker reading on the correct level of gas (LEL reading).

After nearly one year of operation, Jens Erik Tømte sums up Statoil’s experience with the GasSecure installation: “We are very happy with the results so far. We see opportunities for large savings of time and cost combined with better flexibility during installation and operation. We achieve all this without compromising safety.”

“With the GS01 we see opportunities for large savings without compromising safety”

Jens Erik Tømte,
Senior Engineer, Statoil

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