

CASE STUDY



Versalis UK – Risk-based Integrity Management for FHAs

CUSTOMER

Versalis UK

LOCATION

Grangemouth

CUSTOMER REQUIREMENT

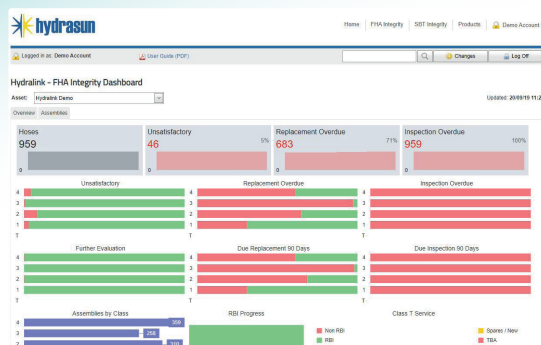
Due to an onsite injury caused by the failure of a FHA Hydrasun was asked to implement Risk-based Inspection (RBI) approach to FHA management focused on reducing the potential for leaks from hose assemblies deemed to be high risk to operations and the overall business. Unknown amount of FHAs on site.

HYDRASUN SOLUTION

Provision of Hose Management Services including the supply of replacement Hose Assemblies.

BENEFITS

- Demonstrate formal processes and controls are in place to maintain FHA integrity
- Ensure compliance with legislative requirements and industry / own in-house guidelines
- Reduce potential loss of containment and improve asset performance
- Sustainable improvement in safety and environmental performance
- Reduce overall life cycle maintenance costs



BACKGROUND

The Italian chemical producer Versalis, which is owned entirely by Italy-based ENI SpA, currently operates the Grangemouth site. The Scottish-site currently produces synthetic elastomers and lattices, servicing the automotive tyre industry.

As industry focus continues to increase on the need to reduce hydrocarbon leaks, operators need to have the necessary processes, procedures and controls in place to effectively manage the technical integrity and reliability of their assets.

Flexible Hose Assembly (FHA) failure is considered to be among the largest contributors to unplanned hydrocarbon releases in the oil and gas industry. In line with the above, industry regulators (DECC and HSE) are applying increasing pressure on operators to demonstrate that they have formal processes and controls in place to maintain the integrity of hoses on their assets and any equipment packages of contractors working on their assets.

CUSTOMER REQUIREMENT

Specific emphasis was on the implementation of a Risk Based Inspection (RBI) approach to FHA management, which focused on reducing the potential for leaks from hoses deemed to be high risk to Versalis operations. Versalis provided details of 120 FHAs that the believed to have on site.

HYDRASUN SOLUTION

Through their involvement in the development of the Energy Industry Guidelines for the management of FHAs, Hydrasun was ideally placed to implement both a fully compliant and effective RBI programme focused on the criticality of the equipment package or system the FHAs were part of on the specific asset as well as the



consequence of failure and factors that would influence the life of the assembly.

All Versalis FHA's have now been inspected and tagged by Hydrasun OPITO accredited engineers and input into the Hydrasun Integrity Management System (HIMS) which provides effective management of data gathered from inspection surveys carried out. Initial estimate by Versalis of 120 FHAs on site transformed to over 700 actually located on site. Of the 700 located, over 30% were deemed unsatisfactory due to incompatible fittings and kinking of FHAs. Due to this amount, it was agreed that Hydrasun would provide an onsite workshop to manufacture and replace all unsatisfactory FHAs. Additional manpower was supplied at short notice to complete this task. The original survey time frame was 8 man days, to date over 100 man days work has been completed on site, with more to follow as certain areas can only be accessed during site shut downs.

Informed decisions can be made on the implementation of future inspections and maintenance strategies through controlling HIMS data collection, performing analysis of individual or multiple sites, generating status reports and cross installation comparisons along with performing failure trends and historical analysis.

Upon review and analysis of this information, Hydrasun was able to develop an RBI programme focused on safety critical and production of critical Hose Assemblies, ensuring that associated maintenance and replacement requirements were prioritised. It also enabled existing specifications for these critical hose assemblies to be reviewed against past performance and where necessary improvement recommendations made. Not completed to date.

Versalis was provided with secure access to this information via the Hydrasun web based customer interface tool – Hydralink.

THE RESULT

Through a focus on customer needs, Hydrasun delivered a fully compliant and effective Hose Integrity Management programme across Versalis Grangemouth facility that has significantly reduced the potential for loss of containment from FHA's that were high risk to Versalis's operations and business generally.

By implementing a strategy clearly focused on Versalis's business needs, Hydrasun was able to provide enhanced value for money delivering improvements in operational reliability and overall lifecycle maintenance costs whilst reducing Versalis's potential exposure in the areas of production downtime, Health, Safety and Environment and business reputation with the agreed project design and within overall project timescales.

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