

## 1. Problem Statement

- A Northern North Sea asset had to replace a 2" stainless steel fuel gas system which ran through both hazardous and non-hazardous areas.
- The system therefore had to be 'fully welded'.
- The only way they could do this under traditional methods was to weld the pipe on the platform.
- This was not possible due to the spacing restrictions in this instance.

## 2. Aims

- To replace the system as a fully welded one so the non-hazardous areas could remain this way, without actually welding on site.

## 3. Method

- The operator had used Lokring before on fuel gas, but was not sure if it could be used on a fully welded system in a non-hazardous area without reclassifying the area as hazardous, as would have to be done when installing a flange.
- To get confirmation, the operator contracted Xodus to carry out a study on whether a Lokring coupling could be used in this situation while maintaining the non-hazardous area classification.

## 4. Impact

- The findings of the report confirm that;
- *'There is strong, well-supported justification for the use of LOKRING fittings in place of welded connections on the fuel gas system located in a non-hazardous area. The work completed for this study is judged to have suitably justified weld-equivalence for LOKRING fittings in non-hazardous areas, which by inference facilitates the support of their use in hazardous areas also.'*

### *How does this relate to the Oil and Gas industry?*

- Traditionally, when installing fully welded pipework, the only option in non hazardous areas of a platform have been to weld on site.
- This takes time, involves hot work permits, welders, habitats, fire watch and there is always the safety risk welding on site
- This study has now provided another option to welding fully welded systems, while at the same time being quicker, safer and more cost effective.