



## Case Study

**Project:** Pipeline Integrity Assessment

**Scope:** Subsea inspection for ILI verification and detailed analysis of results

**Equipment:** Subsea pipelines transporting produced fluids.

### Solution:

An ultrasonic intelligent pig inspection identified significant corrosion damage in a subsea pipeline. The initial FFP indicated the need for repair of one of the areas and a potentially short remaining life for other features. This was in part driven by uncertainty in the FFP defect definitions based on the UT pigging and uncertainty in the corrosion rate estimates. Subsea automated ultrasonic inspection (corrosion mapping and TOFD) was carried out by Sonomatic on identified features to provide an accurate definition of geometry for FFP and a baseline for more reliable corrosion growth estimates.

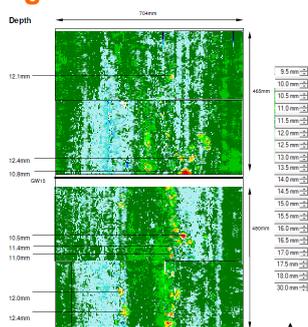
The inspection provided a detailed definition of geometry that allowed revision of the FFP. The results also allowed an assessment of overall reliability of the ILI data set. The corrosion mapping data was used to identify accurate statistical distributions of damage and the results show that these will form a basis for very accurate growth rate estimates following repeat inspection.

### Benefits:

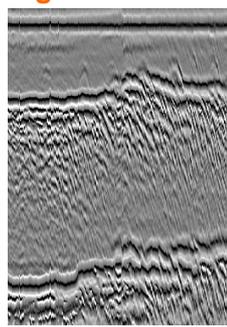
The Sonomatic inspection results formed the basis for more accurate defect definition for FFP and allowed justification of an increased operating life compared to the initial assessment. The operator benefited through a significant saving of Capex as replacement was shown to be unnecessary in the short term. The impact on lost production was also minimised.

The accurate inspection results provide a basis for reliable FFP using a realistic representation of the degradation state. The corrosion mapping data obtained provides a basis for application of Sonomatic's accurate corrosion growth assessment methods following the repeat inspection. The use of more reliable growth values will make for more realistic remaining life assessments with benefit to continued operation.

**Figure 1:**



**Figure 2:**



**Figure 3:**

