



## Case Study

**Project:** Pipeline Integrity Assessment

**Scope:** Detailed statistical analysis following inspection by corrosion mapping to validate and quantify original MFL intelligent pig runs.

**Equipment:** Export pipeline transporting produced fluids.

### Solution:

Verification of MFL Intelligent Pigging Inspection data utilising corrosion mapping. Nineteen topsides locations identified by the MFL inspection were inspected by ultrasonic corrosion mapping. The minimum remaining wall thickness for the locations identified were correlated highlighting significant differences in the data collected.

The differences were found to exceed the levels associated with the MFL tool tolerance and indicated that the MFL results were likely to overestimate the depth of defects throughout the pig run.

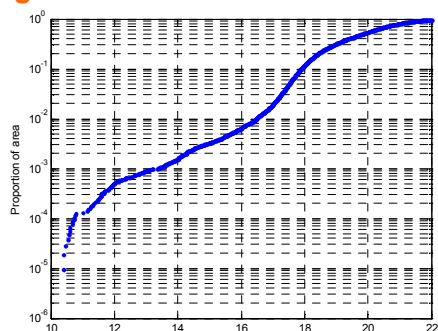
The results of the corrosion mapping indicated the nature of the degradation was such that the accuracy of the MFL tools may be systematically affected. It was therefore recommended that the line be inspected by an ultrasonic pigging tool which would provide accurate information for a representative FFP assessment.

### Benefits:

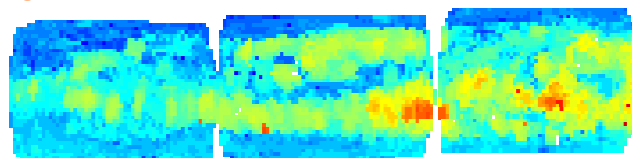
The Sonomatic inspection and analysis indicated that the existing view on FFP and remaining life was pessimistic due to limited accuracy of the MFL data. The statistical analysis of the corrosion mapping data indicated that inspection by ultrasonic intelligent pigging of sections of line, i.e. incomplete coverage, would allow good estimates of overall condition.

The follow up inspection with an ultrasonic pigging tool allowed an updated remaining life assessment that provided confidence in ongoing operation without the need for expensive replacement of the line.

**Figure 2:**



**Figure 1:**



**Figure 3:**

