

Fitness For Purpose Assessments, Corrosion Growth Analyses, and Remaining Life Assessments

Integrity Management

One of the key elements to an effective Integrity Management Program is reliable information about the current and likely future physical condition of the pipeline.

The range of assessments provided by Aellia are designed to fulfil this need while also fully complying with regulatory requirements.

Our flexible approach provides optimal solutions for different pipeline operators. Those without in-house specialists have easy access to the full service. We then include the results of the assessments and recommendations in a regulation-compliant form.

Those with in-house expertise can have the necessary independent work carried out by our experts in line with their own best practices.

Our extensive software capability makes it more efficient to cooperate.

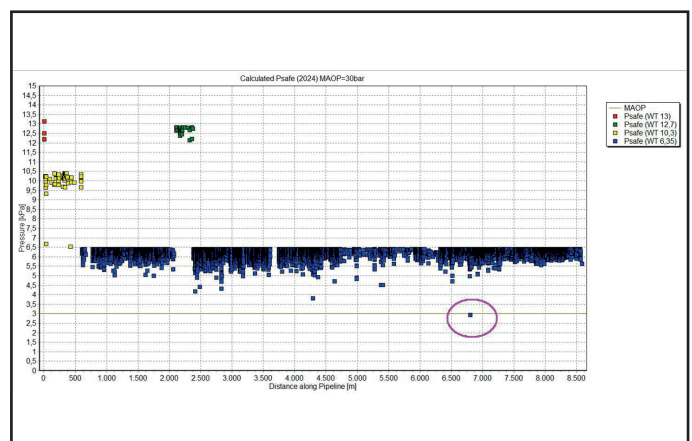
The assessments consist of a comprehensive report, highlighting both any current and likely future integrity concerns with specific recommendations for actions. Additionally, we deliver all the information produced as digital data.

Fitness for purpose assessments

Fitness for purpose (FFP) evaluates the pipeline for reliability at the current time and under current or desired operating conditions. FFP assesses defects, whether detected through ILI or other forms of investigation, using best practice methods. This results in the most reliable basis possible for maintaining the pipeline safely but without excessive costs.

We perform evaluations using the following methods and standards:

- API579
- British standard BS7910
- ASME B31G:2012
- DNV RP F101
- DVGW 473 [Dents]
- API1160



Corrosion of metal is a frequent and long-standing problem in steel pipelines.

Many challenges arise estimating a realistic corrosion growth rate.

[illegible]

MFL or UT run data sources are usable. The pipeline may have been repaired and/or re-routed between the inspections leading to a need for substantial adjustments in the data.

This software uses algorithms based on both defect position and size with flexible weightings. The upper limits determined are projected forward to produce potential worst case defect sizing in the future.

- Half life
- Comparison of 2 ILI datasets

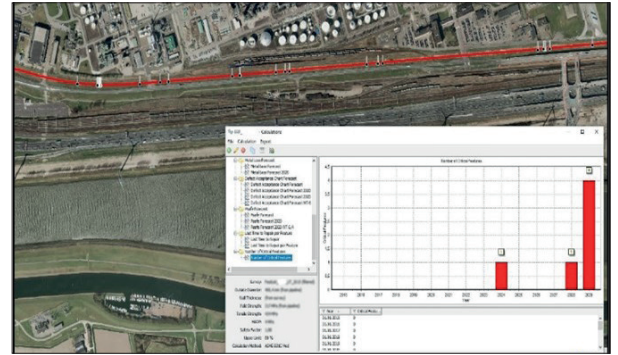
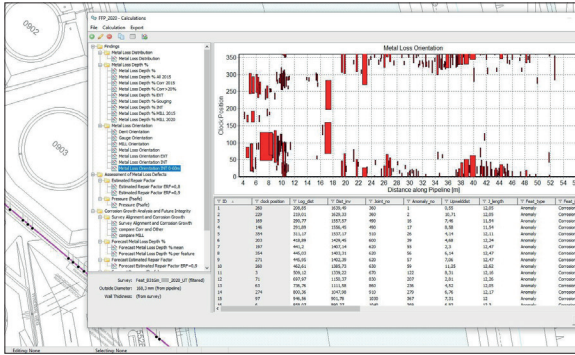
Remaining life assessment

A remaining life assessment applies corrosion growth rates over time to establish estimates of future condition that can be used with the same fitness for purpose methodologies to assess the future economic life of the pipe-line.



This provides a projected schedule of repairs, giving a greatly improved insight into likely overall repair costs and maximum economic life of the pipeline.

While individual defect projections (of repair date) cannot be relied upon due to the uncertainties in the data, they can be used to create a monitoring schedule in advance of the projected repair dates, using either a fixed time element or alternate criteria.



PRIMS is our software platform that supports all Integrity Management activities. It ensures straightforward and reliable exchange of data but also with the required tools to ensure an efficient and reliable project.

Beyond that, PRIMS also allows you, with or without our support, to carry out further assessments. For example to assess the impact of changing operating conditions on future reliability and costs.

Whether the need is for advanced analysis or simply to ensure easy integration of results in your own systems, PRIMS and our extensive software experience provide the best solution available.

Benefits of our assessments

- Reduced operational and maintenance costs
- Safe extension of pipeline life
- Planning for re-rating or operational changes
- Optimizing inspection intervals
- Demonstrating safe operation for regulators
- Improved delivery of digital results
- Support (PRIMS) for further analysis
- Support (PRIMS) for repair and maintenance program