



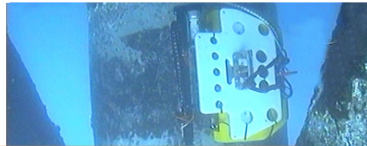
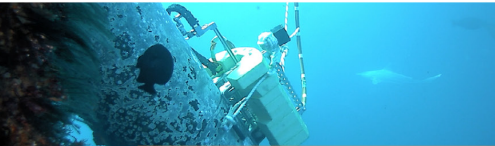
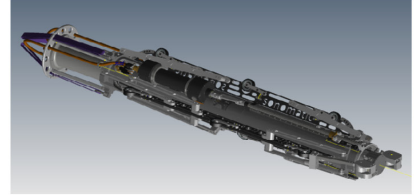
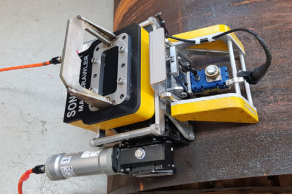
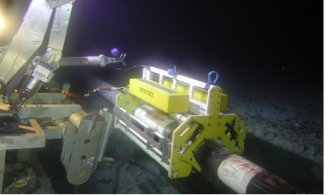
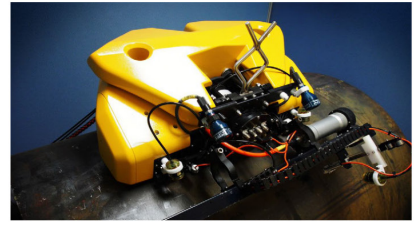
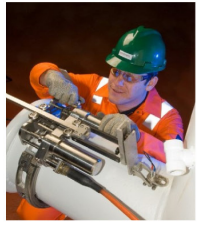
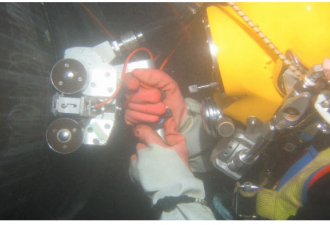
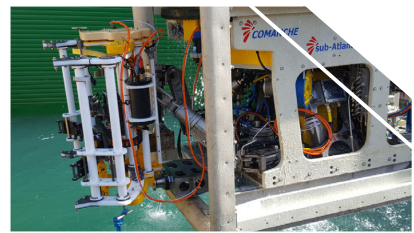
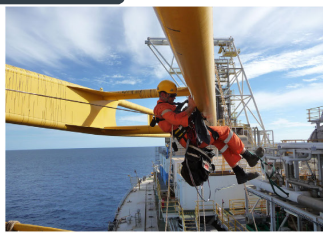
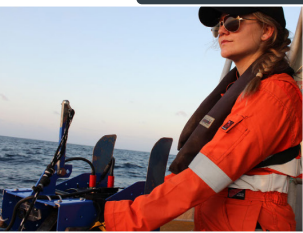
SONOMATIC

DATA SHEET

FITNESS FOR SERVICE ASSESSMENTS

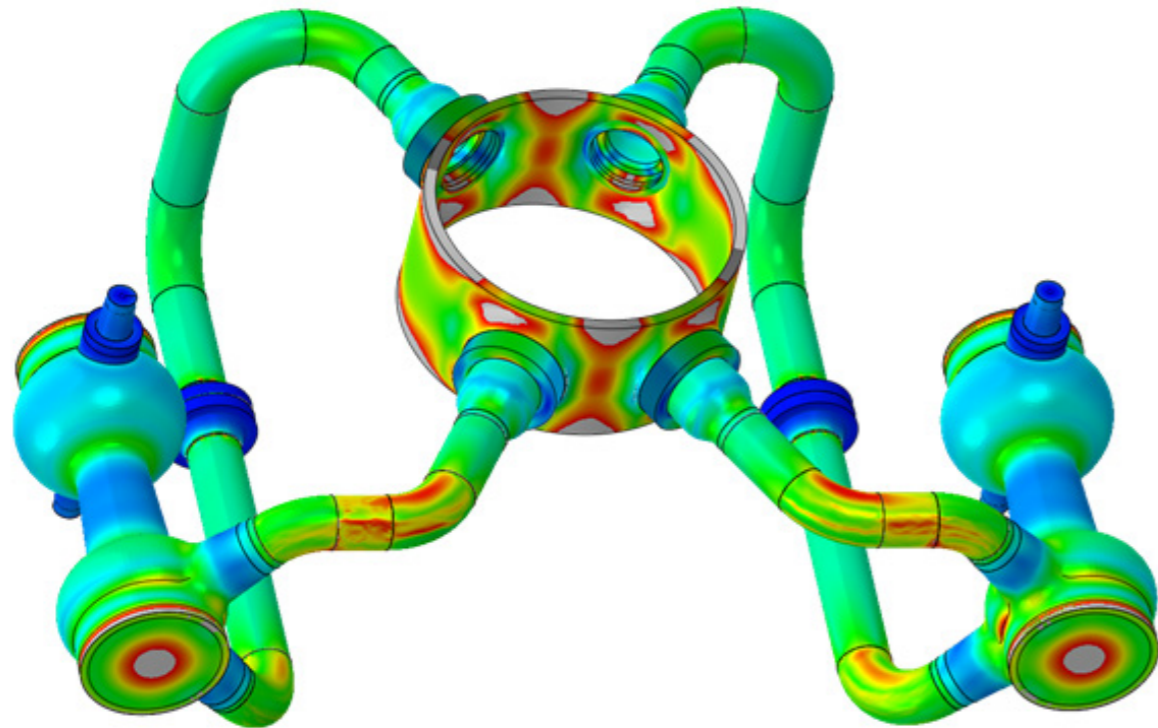
THE PURPOSE

This document is composed to assist our clients and the supply chain with a high-level understanding of the benefits and services associated with our Fitness for Service Assessments.



FITNESS FOR SERVICE ASSESSMENTS

Equipment in service may be subject to a variety of degradation mechanisms, for example, corrosion, pitting and fatigue cracking. It is possible that after some time in service, the condition of the equipment changes to the point where it no longer complies with the requirements of the original design code. This does not necessarily mean, however, that the equipment is no longer suitable for use. A detailed assessment, based on consideration of fitness for service following industry recognized guidelines, may be used to demonstrate that continued operation is justifiable. A fitness for service assessment considers in detail the condition of the equipment and allows robust decisions on continued operation to be made.



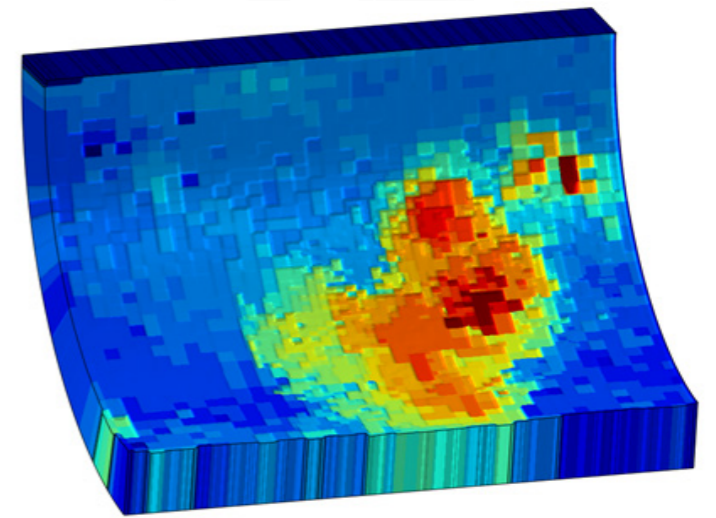
The first stage in any fitness for service assessment is identification of the condition that may be of concern, this relies on effective inspection. Sonomatic are world leaders in the application of various inspection methods to identify and quantify areas of degradation. Sonomatic also offer interpretation of inspection results completed by third parties to determine whether assessment is required.

Once the condition has been quantified, an assessment can be completed to determine whether the equipment can be considered fit for service. Sonomatic complete assessments in accordance with API 579, BS7910, B31G and R6 as appropriate. These codes cover most in-service defect types likely to be encountered in the Oil & Gas and process industries.

Finite element analysis is sometimes required in the assessment to demonstrate the integrity of equipment. Sonomatic can create finite element models, combining design information and inspection data. The models can be tested to determine whether the equipment can be considered fit for service.

In some cases, the assessment may conclude that a piece of equipment is not fit for service under the current operating conditions. Where appropriate, Sonomatic can offer advice on changes that can be made to the operating conditions (such as temperature and pressure) that would allow continued safe operation of a piece of equipment.

Following an assessment of the current condition of a piece of equipment, Sonomatic can provide estimates on limiting operational criteria. This, coupled with estimated degradation rates allow future inspection strategies to be defined, allowing the equipment to be successfully monitored and operated safely.



QA AND HS&E

Sonomatic operate under an integrated QHSE management system and are committed to the highest quality and safety of service provision.

ISO9001: 2015: 00007140

ISO17020: 2012: 4276

Achilles FPAL Verified: 076712

British Safety Council Member: S0388440



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