The whole function of an asset is to produce, and so the integrity of the pressure systems stands at the core of the asset's ability to give the desired returns.

Our integrated services cover all aspects of pressure systems integrity management throughout an asset’s lifecycle. We develop cost-optimised strategies and plans to fit our customer’s operational models, while providing direct support for current fitness for service and remaining life.

Accordingly we prioritise, plan and execute inspection where it is needed, advise on what is required to extend the life of the system components and provide experienced anomaly management and close-out support.

Increase confidence, reduce uncertainty, optimise

Aker Solutions has an established portfolio of pressure system integrity management services offered through our AIM group. These cover risk assessment, inspection engineering and planning, fitness for service, reliability and maintenance and life extension studies. Our knowledge and experience enable us to support the management of pressure equipment throughout the lifecycle of any asset on or offshore, across the entire value chain.

We cover:
- Oil and Gas
- Energy generation and distribution
- Petrochemical
- Chemical
- Pharmaceutical
- Utilities network
System development
- Pressure System Integrity Management (PSIM) Strategy, Procedure and Work Instruction development
- Risk Based Inspection (RBI) procedure and program development utilising API RP581 / DNVGL RP-G 101 and Company methods

Data Management
- Integrity Management data-builds to plan, execute and report on corrosion related inspection activities
- Coabis™ deployment and management

Inspection engineering and execution
- Scope of work and work pack development
- Inspection management and execution
- API 510, 570, 653 inspections
- Non-Intrusive Inspection (NII) planning & management

Materials and corrosion
- Materials, welding and corrosion engineering consultancy and support
- Corrosion Under Insulation (CUI) support support
- Fabric maintenance management and support including coatings, insulation, fire protection and like for like replacement

Fitness for Service
- Pressurised systems Fitness for Service (FFS) engineering criticality assessments for corrosion, erosion and crack like defects utilising analysis piping and FEA tools for Level 1, 2 and 3 assessments, based on the API 579/ASME FFS 1 and BS7910 procedures
- Fitness for Service (FFS) of pressurised systems using the Integri-Tech™ system to conduct integrity Level 1,2 and 3 assessments for defects, fatigue and fracture assessment capabilities to provide plant inspection priorities and remaining life assessments

Design and analysis
- Design Verification of Pressurised Systems with Systems Health Checks
- Process piping design peer reviews
- Pressurised Systems piping and vessel analysis for ASME and EN standards utilising Caesar 2, PSA5, PVE5 and Finglow analysis software
- Pressurised systems piping and vessel analysis capability using Integri-Tech™ design analysis and assessment tool
- Pressurised Systems Component Analysis using FEA procedures and Integri-Tech™ design tool
- Structural Skid Analysis to AISC design standards

Life extension
- Complete range of remaining life and life extension studies and analysis
- Integrity change engineering and management

Vibration management
- Pressurised Plant Vibration Risk Assessments (VRA) based on industry standard Energy Institute (EI) Guidelines
- Vibration measurements, monitoring and plant assessments
- Vibration mitigation using analysis tools; finite element analysis (FEA), computational fluid dynamics (CFD) and piping analysis
- Vibration mitigation using Integri-Tech vibration analysis assessment and monitoring system
The Benefits
Holistic approach to pressure system integrity management, giving:

- Fit for purpose, optimised solutions and strategies
- Elimination of waste within the AIM process
- Direct link to our inspection and data management offerings

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