



# Mechanical Integrity Services

## ENSURE THE INTEGRITY & MAINTAINABILITY OF YOUR ASSETS

Ensuring the integrity of your plant's processes requires a comprehensive program that lets you determine the safety of the processes, schedule maintenance, and determine the remaining service life of operation. TÜV Rheinland experts provide Mechanical Integrity (MI) services in supporting Asset Integrity Management (AIM) to a broad spectrum of industrial clients, including but not limited to the petroleum (upstream and downstream), chemical process, power generation, and pharmaceutical industries. Our on-site inspections provide a full range of non-destructive testing (NDT) methods and complete API inspection services. We have the capability to provide support throughout a facility's life-cycle based on a thorough knowledge of regulatory documents, including OSHA, ASME, API and CCPC guidelines for MI. Implementing the MI & AIM elements of process safety management (PSM) are the focus of delivering quality services under an AIM portfolio.

## BENEFITS OF TÜV RHEINLAND MECHANICAL INTEGRITY PROCESS

With TÜV Rheinland mechanical integrity services, you enjoy long-term cost savings by:

- Optimizing the return on investment in assets
- Increased production at lower or no extra operating cost
- Reduction in planned system downtime (increased availability)
- Reduced inspection scope and more effective inspection techniques
- Reduced HSE exposure and fewer incidents
- Demonstrating compliance with regulation
- Improving proactive risk management and governance
- Sustainability commitment

TÜV Rheinland's mechanical integrity experts focus their attention on:



Increased safety & reduced risk



Regulatory compliance verification



Improve asset performance and life expectancy

## APPROACH

- 1 Identify and list all covered equipment and process piping circuits
- 2 Complete equipment data sheets
- 3 Establish field-verified and red-lined piping and instrumentation diagrams (P&IDs)
- 4 Systematic piping circuits in line with process streams
- 5 Complete a corrosion study to establish failure mechanisms
- 6 Document visual inspections
- 7 Establish inspection and test plans based on equipment type and applicable corrosion mechanics
- 8 Produce reports identifying nonconformities and deficiencies
- 9 Make recommendations to correct identified deficiencies
- 10 Assist in updating equipment plans by identifying future inspection requirements

Our experienced and fully dedicated personnel are available to provide the additional resources required to design and implement a mechanical integrity program.

TÜV Rheinland's professional engineers and operations staff (Inspection & Testing) are MI experts with inside-knowledge of customer expectations and industry operations. Our experienced, certified employees are fully qualified to evaluate your mechanical integrity process, to determine the optimal program, and to provide you the guidance and support staff needed implementing your program.

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## ABOUT TÜV RHEINLAND

TÜV Rheinland is a global leader in inspection, testing and certification services, with testing laboratories in Aliquippa, PA, Grand Rapids, MI, and Woodstock, AL. Our expertise and comprehensive service portfolio adds value by minimizing risks and helping you to grow your business. TÜV Rheinland's field and laboratory testing and inspection services are ISO 17025 accredited, and we offer all NDT methods, QC/QA functions, and material testing. With over 145 years of industrial expertise, we utilize our in-depth knowledge to offer you the solutions for your specific requirements.

