



Choose certainty.
Add value.

Risk-based inspection and maintenance

Achieve safe and cost-efficient operation of your industrial plants.

Your challenges

The pressure of competition is forcing industrial plant stakeholders to find new ways to minimise the capital, operation and maintenance costs of their facilities without sacrificing safety, reliability and productivity. Plants need to reduce downtime to meet rising availability requirements. Ageing plants in particular must adopt new and innovative inspection strategies to help prolong operations.

What is risk-based inspection?

Risk-based inspection (RBI) is crucial for optimising the operation and maintenance of industrial plants in various industries. TÜV-RoIM (risk-oriented inspection and maintenance) is TÜV SÜD's strategy for developing optimised, cost-effective inspection and maintenance programmes within an asset- and risk-management context. This is achieved by considering probability and consequence of failures as a result of degradation.

Why is RBI important for your business?

RBI helps you to meet the financial, reliability and regulatory needs of the industry by improving your plant's performance, availability and safety. It extends the lifetime of your plant by establishing a long-term testing and inspection procedure.

How can we help you?

TÜV SÜD's plant engineering experts help your plant achieve an evergreen status in risk-oriented inspection and maintenance. The TÜV-RoIM strategy combines reliability and risk assessments with information extracted from expert judgement, physical models, and plant-specific and generic data. With this assessment based on the identified risk, critical components can be differentiated from non-critical components, helping you determine where special maintenance measures need to be taken. We base our qualitative and quantitative techniques on internationally accepted standards and guidelines, and then individually tailor the solutions to your specific concerns.

SIX STEPS FOR THE TÜV-ROIM PROCESS

Consultancy regarding all questions concerning the introduction of an RBI inspection and maintenance system.

Assessment of status and history, remaining life and fitness for service, operational events, component reliability, spare parts, resources and personnel.

Determination of specific measures and flexible, adequate inspection intervals, considering financial and regulatory criteria.

Development of optimised inspection and maintenance programmes in line with internationally accepted standards.

Implementation of industry-specific and customised solutions (including software applications) for risk-oriented lifetime management of systems and components.

Training for your staff to implement and operate the RBI system.



Your business benefits

- **Manage risk** – with our assessment based on identifying the probability and consequences of failure or malfunction at an early stage, minimising costly rework.
- **Optimise plant availability** – by avoiding unscheduled downtime due to unidentified risks and by reducing intrusive inspections.
- **Extend your plant's lifetime** – with risk-oriented lifetime management of systems and components, using Fitness for Service techniques.
- **Reduce operating costs** – with an approach that differentiates high-risk systems and critical components, thus ensuring cost-efficient allocation of resources during operation and maintenance.
- **Benefit from customised solutions** – with our inspection strategy, which is tailored to your specific needs. We establish the most useful inspection procedures for identified degradation mechanisms in each case.

Why choose TÜV SÜD?

TÜV SÜD is widely known as an independent third-party solutions provider that offers impartial and unbiased inspection and assessment services that our clients can base decisions on. Our international

presence allows us to work globally on our clients' behalf, delivering services locally while maintaining a consistent level of premium TÜV SÜD quality. We also have in-depth familiarity with internationally accepted standards and guidelines.

Having successfully implemented RBI projects since 1999, our world-class plant engineering experts respond with maximum flexibility to our clients' needs. Our sophisticated inspection strategy can be tailored precisely to the needs of your business. As a participant in the Risk-Based Inspection and Maintenance Procedures for European Industries (RIMAP) project, we helped to develop the fundamentals for a European RBI guideline for various industries. We have the interdisciplinary knowledge to provide you with independent advice and sound solutions.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- Asset integrity management
- Failure analysis
- Lifetime assessment and extension
- HAZOP procedure