



**BUREAU
VERITAS**

Bureau Veritas Services

BOILER SPECIALIST SERVICES

Reducing unplanned shutdowns and effectively managing the integrity of boiler components.

SERVICES

- Asset integrity engineering – managing boiler component failure mechanisms
- Asset integrity management – software development and implementation
- Risk based reporting of boiler health
- Boiler maintenance philosophy management
- Inspection data management
- Validation of inspection data quality
- Issue inspection scope of work
- Issue repair scope of work
- Real time tracking of progress of scope of work.

BUSINESS CHALLENGE

Clients operating coal or gas fired power plants are facing ever increasing demands to become safer, more efficient and reliable. There is a constant drive to reduce unplanned shutdowns, especially due to boiler tube leaks. Utilities are pushing for shutdowns to be quicker and more effective. The management of asset inspection and repair is a complex task and produces huge amounts of data, making quick analysis and clear scoping of work essential for cost effectiveness and maximised asset reliability.



SOLUTIONS

What are boiler specialist services?

Boiler specialist services are services that are offered by a dedicated engineering team, utilising good engineering practice and specialised inspection software to systematically reduce tube leaks and assure integrity, specifically of the pressure parts, high pressure piping and thick wall components in boilers.

The service consists of the following: An engineering team that implements and executes the work by capturing and analysing specifications and inspection data with the help of the software. The welding module, as part of the service, enables the issuing of scope of work for repairs and then tracks the repairs from issue to close-out stages, virtually in real time.

What are the key benefits?

Specialist boiler services uses a structured approach to manage the integrity of boiler components to mitigate the financial and safety risks associated with plant failures. Some of the key benefits of these services include:

- The software provides advanced storage and analysis tools that are instrumental in achieving a significant reduction in tube leaks;
- Sustainability and continuity: A detailed history of all engineering decisions, inspections and failure data is stored for the life of each component in a central database;
- Budget control: A budget scope of work is provided for outages with up to 95% accuracy; and
- Execution control: The client has full control and visibility of the execution of inspection and repair

scope. Inspection data is captured and uploaded electronically and visual interfaces of the system allow the engineers to quickly determine the condition of components and to take appropriate actions. The welding module provides real-time tracking of progress of the inspections and repair (with electronic signatures and an audit path).

Our approach

Boiler pressure parts, high pressure piping and thickwall components:

From full involvement with the client, to complete service outsourcing, the solution can be applied to a pilot or a full scale project. In both cases, the process can be similar:

- Assess existing information and facilitate the creation of the master test and inspection philosophy.
- Analyse and prioritise the failure mechanisms with the most impact.
- Setup the software modules with OEM specifications and parameters required for analysis.
- Create inspection and repair scope-of-work reports for contractors.
- Create and manage the inspection templates for data capturing.
- Analyse inspection data to produce scope of work for repairs.
- Capture all relevant information to manage future scope of work and resources required.
- Track the scope of work from issue to final close-out for complete visibility and control.



Components affected by FAC (Flow accelerated corrosion)

The damage caused by FAC on plant components can cause leakages, ruptures, failures, fatalities and lost production due to unplanned outages. For a company to effectively manage these risks, it requires reliable, accurate, timeous inspection and repair data. This Bureau Veritas asset integrity module supports a company's planned inspection philosophy by helping to track inspection results of individual components, issue repair instructions and subsequent activities relating to FAC. The database management system uses 3D visualisation enabling efficient, real-time representation and exploration of plant conditions.

RELATED SERVICES

- Remaining life assessments
- Piping elevation surveys
- Definition of boiler inspection plans and audits
- Non-destructive testing
- Risk-based inspection (RBI)
- Design reviews

INDUSTRIES

- Engineering
- Industrial plants
- Mining
- Oil and gas
- Power generation

WHY BUREAU VERITAS

Established in 1828, Bureau Veritas is a global leader in testing, inspection and certification (TIC), delivering high quality services to help clients meet the growing challenges of quality, safety, environmental protection and social responsibility. As a trusted partner, Bureau Veritas offers innovative solutions that go beyond simple compliance with regulations and standards, reducing risk, improving performance and promoting sustainable development.

Bureau Veritas core values include integrity and ethics, impartial counsel and validation, client focus and safety at work. The company is recognised and accredited by major national and international organisations.

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