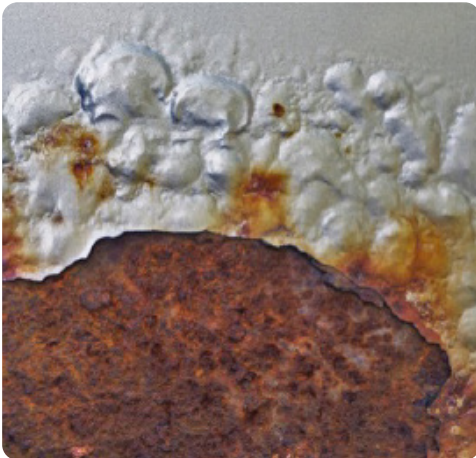




INTERNAL COATINGS AND LININGS ENGINEERING ASSESSMENT

ANALYTICAL SOLUTIONS TO REDUCE OR ELIMINATE INSPECTIONS



SI Offers a Full Suite of Operational Support Services

Chemistry

Radiation Management

Environmental

Emergency Preparedness

Equipment

Structural Integrity offers proven engineering strategies to support long-term asset reliability while reducing the burden of internal piping inspections. Internal coatings and linings are widely used in the nuclear industry to protect components from chemical attack, corrosion, and wear. Under current regulatory frameworks for license renewal, all in-scope piping must include evaluation of its internal coating or lining and the impacts on downstream components, regardless of their intended function. Structural Integrity has developed a robust analytical approach that considers system operation and design to reduce risk and system out-of-service time by minimizing or eliminating the need for costly internal visual inspections.

RISK & COST-BENEFIT ANALYSIS

SI has developed a technical approach to evaluate degradation mechanisms and potential downstream impacts from catastrophic failures of the internal linings of in-scope piping, piping components, heat exchangers, and tanks. SI can help clients by providing an analytical solution to avoid intrusive inspections in areas such as:

- Fireproofed or inaccessible systems
- High-radiation areas
- Safety-related systems

SYSTEMS WE EVALUATE

Structural Integrity has performed evaluations across a variety of systems, including:

- Component Cooling Water
- Service Water
- Emergency Diesel Generator Jacket Water
- Diesel Fuel Oil Tanks
- Liquid Radwaste

ENGINEERING & ANALYTICAL SERVICES

As a part of performing this technical assessment, the following are evaluated:

- Internal Coating/Lining Integrity
- Coating-Specific Degradation Mechanisms
- Site-specific Licensing Basis
- Downstream Impacts of Coating/Lining Failures
- System Modeling
 - Fluid Simulation Modeling
 - Corrosion Rate Calculations
 - Time-to-Failure Projections

REGULATORY SUPPORT

SI provides engineering documentation that aligns with License Renewal Interim Staff Guidance (LR-ISG-2013-01) as well as the XI.M42 Coating/Lining Aging Management Program, offering a technical basis to defer or eliminate internal visual inspections with a rigorous technical justification in support of license renewal applications.

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