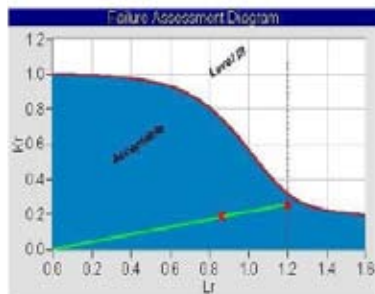




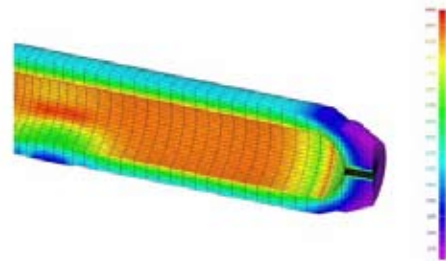
MISTRAS Services Division, a member of MISTRAS Group Inc., provides a wide array of engineering support to process facilities in order to aid in critical operating decisions. Historically MISTRAS has provided traditional and advanced NDT techniques to a variety of process facilities. We now offer the ability to formulate engineered inspection plans, gather data, evaluate the results and issue repair, replace or operational recommendations to plant personnel. These services determine the operating "health" of critical components and are based on regulatory, process or inherent operating risks.

### Fitness for Service

Our staff has experience in various damage mechanisms such as brittle fracture, general corrosion, localized corrosion, pitting, crack like defects, blisters, bulges, misalignment, creep and fire damage. Our ability to analyze these damage mechanisms using API RP 579 Fitness for Service Analysis allows our clients to determine the proper course of action regarding continued service or replacement of their asset. We utilize experimental strain gauging, fracture mechanics and finite element analysis in order to aid us in our Fitness for Service calculations.



Failure Assessment Diagram



Finite Element Analysis of Von Mises Stresses

### Fixed Equipment Mechanical Engineering

MISTRAS also provides fixed equipment mechanical engineering such as: pressure equipment rerates, engineering of alterations and repairs, surface replication assessments, failure analysis, fatigue analysis, heater tube remaining life assessments, Scanning Electron Microscopy, XRD analysis and engineering of non-pressurized equipment.

#### Inspection Planning

MISTRAS develops inspection programs based on regulatory, process or code compliance to aid in your plant's mechanical integrity. Our Risk Based Inspection program based on API RP 580 is a method for using risk as a basis for prioritizing and managing the efforts of an inspection program. RBI defines and measures risk, creating a powerful tool for managing many of the important elements of a mechanical integrity plan. It systematically reduces the likelihood of failures by making better use of inspection resources and identifies areas of high consequence that can be used for plant modifications to reduce risk.

Contact the experts at MISTRAS Group Inc. to customize an inspection program that helps save you money.

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