

Residual Life Assessment and Non Destructive Technique

Remaining Life Assessment (RLA) and Non-Destructive Technique (NDT) of these equipment like boilers, turbines, process piping, tank vessels, heaters & reactors of process power plants become necessary due to structural & microstructural damage through thermomechanical, electrical & chemical interaction. ERDA, recognised by the Central Boiler Board (CBB) as a well-known Remaining Life Assessment organisation under the Indian Boiler Regulation (IBR), 1950 provides various offline and online RLA and NDT services for mechanical equipments.

Facilities Available

- Visual Inspection
- Liquid Penetration Test
- Magnetic Particle Inspection -Yoke and Coil Method
- Ultrasonic Flaw Detection, TOFD, PAUT or Phased Array UT
- Ultrasonic Thickness Measurement
- Videoscopy Inspection
- Eddy Current Testing
- In-situ Metallography (IMG) Replica Test
- In-situ Hardness Measurement
- In-situ Chemical Analysis
- In-situ Vibration Analysis
- Infrared Thermography

Facilities Available

- Full-fledged Metallurgical Test facilities analysis of Microstructure/ Scanning Electron Microscope (SEM)/Energy Dispersive X-Ray Analysis (EDS or EDAX) /Spectrograph
- Mechanical Laboratory for UTS/YS/EL/Bending/ Flaring/Flatting/Impact
- Full-fledged Root Cause Analysis Facilities
- Stress Analysis and Analytical Residual Life Prediction Service of Power Plant Components using Finite Element Analysis (FEA) by Finite Element Method (FEM) and Computational Fluid Dynamic (CFD)
- Vibration Analysis of Rotating Components

Equipment Covered

- Boiler
- Process Piping
- Turbine
- Tank/Vessel
- Heater
- Reactor

Experience Base

- 350 Boilers - RLA & NDT
- 220 Turbines - RLA & NDT
- 700 HT Motor Vibration Analysis



**Magnetic Particle Inspection
of Boiler Drum**



**Ultrasonic Testing
of De SuperHeater Pipe**



**Visual Inspection
of LP Casing**