



Curriculum Overview

Boiler Inspection Techniques Seminar

Power Plant Fundamentals

- Types of steam generators
- Coal
- Boiler design
- Natural boiler circulation
- Forced boiler circulation
- Drum type boilers (sub critical)
- Super critical boilers
- Boiler heat transfer
- DNB (departure from nucleate boiling)
- Water attemperation
- Boiler auxiliary components

Repair strategies

- Shield repairs
- Wall thickness restorations
- Replacements

Application and use of boiler steels

- Carbon steels
- Chrome Moly steels
- Stainless steels

Outage preparation

- Planning
- Execution

Non destructive testing techniques

- UT
- PT
- MT
- RT

Inspection procedures

- Unit walk down
- Buck stays
- Piping and supports
- Lower Slope Horizontal Tubes & Ash Pit
- Furnace Water Walls
- Wall Blower & Observation Ports (non-pressure parts)
- Furnace Water Wall Access Door
- Upper Furnace Area
- Water Wall Hanger Tubes
- Water Wall Screen Tubes

- Front Steam Cooled Wall Hanger Tubes
- Back Pass Walls (HRA, SCW, Convection pass)
- Superheat / Reheat Pendants
- Convection Superheat / Reheat (primary superheat / reheat)
- Economizer
- Steam Drum

- Air heaters
- ID Fans
- FD Fans

Open Discussion (Q & A Session)