

# € TRAINING

Ensuring Plant Equipment Reliability





# Ensuring Plant Equipment Reliability

## Introduction:

This conference provides participants with comprehensive knowledge and skills essential for ensuring the integrity and reliability of process plant equipment and connected piping systems. It empowers them to take proactive measures in safeguarding equipment integrity, thereby fostering a culture of safety and operational excellence within process plant environments.

## Conference Objectives:

At the end of this conference, participants will be able to:

- Understand the principles and techniques of equipment inspection and evaluation.
- Learn methods for assessing the condition and performance of process plant equipment and connected piping.
- Develop skills to identify defects, anomalies, and potential failure mechanisms.
- Gain proficiency in developing and executing repair and maintenance plans.
- Enhance safety and reliability in process plant operations through proactive inspection and repair practices.

## Targeted Audience:

- Plant Engineers.
- Maintenance Technicians.
- Inspection Personnel.
- Reliability Engineers.
- Process Safety Engineers.
- Plant Managers.

## Conference Outline:

### Unit 1:

#### Fundamentals of Process Plant Equipment Inspection:

- Overview of equipment inspection principles and methodologies.

- Regulatory requirements and industry standards for equipment inspection.
- Types of inspection techniques: visual, non-destructive testing NDT, and advanced methods.
- Importance of inspection intervals and schedules.
- Case studies on equipment inspection practices.

## Unit 2:

### Evaluation of Equipment Condition:

- Techniques for evaluating the condition and performance of process plant equipment.
- Interpretation of inspection data and results.
- Assessing corrosion, erosion, and degradation mechanisms.
- Predictive maintenance methods and condition monitoring technologies.
- Case studies on equipment condition evaluation.

## Unit 3:

### Inspection and Evaluation of Connected Piping Systems:

- Key considerations for inspecting and evaluating piping systems.
- Identifying common piping defects and failure modes.
- Assessing corrosion, erosion, and material degradation in piping.
- Techniques for inspecting welded joints and connections.
- Case studies on piping system inspection and evaluation.

## Unit 4:

### Defect Identification and Analysis:

- Methods for identifying defects, anomalies, and potential failure points.
- Root cause analysis techniques for equipment and piping failures.
- Risk assessment and prioritization of identified defects.
- Developing mitigation strategies and repair plans.
- Case studies on defect identification and analysis.

## Unit 5:

### Repair and Maintenance Strategies:

- Developing effective repair and maintenance plans based on inspection findings.
- Selection of repair methods and materials.
- Techniques for executing repairs while minimizing downtime.
- Quality assurance and control in repair processes.
- Case studies on repair and maintenance strategies.