

API 580 Risk Based Inspection

Course general description:

This is a 5-days training course to provide a comprehensive understanding on the concepts of Risk-Based Inspection (RBI) based on API 580 principles. RBI is a risk management tool focusing on mechanical integrity of pressure equipment items so as to mitigate the risk of loss of containment due to degradation. The training aims to provide the oil, gas and petrochemical industries with the assurance that the individuals have been trained under this internationally recognized program to have the required specialization and proficiency in this very important field.

Audience:

This course is intended for:

1. Inspection and engineering personnel
2. Operation engineers, managers
3. Maintenance engineers and personnel responsible for the mechanical integrity and operability of equipment such as pressure vessels, piping, storage tanks and pressure-relief devices

Course objectives:

Upon completion of this course the participants familiar with:

- 1. Knowledge of API 580 publication
- 2. Knowledge in the principles and concepts of RBI;
- 3. Information of API Individual Certification Program and API 580 certification process;
- 4. Practical test that simulate the API 580 exam;
- 5. Competence and confidence to finally achieve API 580 certification.

Course duration:

5 days

Course location:

Dubai

Course contents:

Day-1

- Introduction and Course Outline
- Purpose, Scope, Roles and Responsibilities
- Risk Assessment Concepts
- Types of RBI Assessment
- Planning the Assessment
- Data Requirements and Collection

Day-2

- Damage Mechanisms and Failure Modes
- Probability of Failure (POF) Analysis
- Consequence of Failure (COF) Analysis

Day-3

- Risk Determination and Analysis
- Inspection Planning
- Risk Mitigation

- RBI Re-assessment
- Documentation and Records

Day-4

- API 580 Practice Exam
- Final test

Methodology:

- 50% lectures & concepts
- 10% Videos
- 10% Case studies
- 10% Exercises
- 10% Discussions
- 10% Software (if applicable or examples)

Course code: (TEME026)