

API 580

Risk Based Inspections

Certification Preparation Course

For Inspectors & Engineers



Applicable Sectors: Petro-Chemical & Energy, Utilities.
Expertise: Beginner/ Intermediate.
Training Setup: Class.

An API accreditation gains you the required competence and global industry confidence that inspections are conducted professionally and attest to one's competence and knowledge of the applicable industry codes, standards and recommended practices. The course is designed to develop the knowledge base of the attendees with special emphasis on exam preparation methods to aid a one-time success in the certification examinations.

Course Structure

The Training provides participants with:

1. Knowledge of API publications and other accompanying standards which include:
 - ≡ API RP 580 Risk-Based Inspection, 3rd Edition 2016.
 - ≡ API RP 581 Risk-Based Inspection Methodology, Third Edition, Includes Addendum.
 - ≡ API RP 571 Damage Mechanisms Affecting Fixed Equipment in the Refining Industry.
2. RBI based Inspection Data Management systems and functionalities overview.
3. Information of API Individual Certification Program and API 580 Inspector certification process.
4. Practical tests simulating the API 580 ICP exam;
5. Competence and confidence to finally achieve API 580 ICP qualification.

Who should attend?

The course is a 3 days training designed for plant personnel who are engaged in the design, inspection, maintenance and repair of process piping equipment. This course is particularly targeted for preparations of the API 580 certification examination. The structure entails the exam body of knowledge. Plant personnel would typically include experienced: Unit inspectors, Plant engineers, Asset integrity specialists and engineers, Operations engineers, Maintenance engineers, Welding engineers and allied personnel, Asset Managers.

Certificate & Credits

Upon completion of this course, a certification of completion will be issued. This earns the attendee at the end of the course 50 professional development hours (PDHs).

Topics Covered

Day 1

- ≡ Introduction, Publications, Course Outline & Body of Knowledge.
- ≡ Overview of Risk Assessment Concepts.
- ≡ Types of RBI Assessment
- ≡ Planning the Assessment
- ≡ Data Requirements and Collection. Critical variables.

Day 2

- ≡ Damage Mechanisms and Failure Modes of pressure equipment's.
- ≡ Inspection planning for risk assessments.
- ≡ Baseline inspections and condition monitoring concepts.
- ≡ Calculating failure modes based on equipment pressure design.
- ≡ Probability of Failure (POF) Analysis & Consequence of Failure (COF) Analysis.

Day 3

- ≡ Risk Determination and Analysis.
- ≡ Risk Matrix and mapping based on various philosophies and industry best practice.
- ≡ Risk Mitigation (Reactive and preventive methods).
- ≡ RBI Re-assessment Documentation and Records.

500 example questions for practice to be reviewed during the training and open/close book exams at various stages.



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