

# PRESSURE VESSELS: CODES, INSPECTIONS & FAILURES

|             |                           |              |            |
|-------------|---------------------------|--------------|------------|
| Start Date: | 08/03/2027                | End Date:    | 12/03/2027 |
| Categories: | Engineering & Maintenance | Venues:      | Barcelona  |
| Formats:    | In Person                 | Instructors: |            |

## OVERVIEW

This course covers the design codes, inspection techniques, and failure analysis of pressure vessels in oil & gas, focusing on compliance with ASME Section VIII and API 510.

## OBJECTIVES

By the end of this course, participants will be able to:

- Interpret ASME and API code requirements for pressure vessels.
- Conduct inspection and testing per API 510 standards.
- Recognize failure modes such as cracking, corrosion, and fatigue.
- Evaluate repair techniques and inspection intervals.
- Improve vessel reliability and code compliance across facilities.

## COURSE OUTLINE

1. Pressure Vessel Design Codes and Compliance 2. Failure Modes and Case Studies 3. API 510 Inspection Planning and Intervals 4. NDT Applications and Evaluation Techniques 5. Repairs, Documentation, and Recertification

## TARGET AUDIENCE

Mechanical engineers, inspection coordinators, QA/QC specialists, and asset integrity managers working with pressure vessels.

## METHODOLOGY

ASME/API code analysis, field inspection practices, case-based problem solving, and hands-on assessment tools.

## CONCLUSION

Participants will gain confidence in maintaining code-compliant and safe operations for pressure vessel systems in demanding environments.

## DAILY AGENDA

### **Day 1: Code Compliance Fundamentals**

Overview of ASME Sec VIII and API 510 scope and requirements.

### **Day 2: Failure Analysis in Pressure Vessels**

Corrosion, stress cracking, overpressure and fatigue failures.

### **Day 3: Inspection and Testing Techniques**

Internal/external inspections, UT, RT, MT, and pressure testing.

### **Day 4: Repair and Alteration Practices**

Repair criteria, welding, inspection after repair, and reports.

### **Day 5: Reliability and Documentation**

Maintaining records, scheduling inspections, and audit prep.

*For more information, please contact us:*

*Email: [info@gatewayconsulting.com](mailto:info@gatewayconsulting.com) | Phone: +96522968641*

*<https://gatewayconsulting.com>*