

# (ME#11) API 579 FITNESS-FOR-SERVICES

## COURSE OVERVIEW

Fitness for service engineering assessment is performed to review the reliability and the structural integrity of that process plant equipment, such as pressure vessels, piping, and tanks, with flaw damage will operate safely at a restricted time and the conditions determined from evaluation.

Attendees should have a working knowledge of the following equipment design codes and standards, and engineering stress calculations:

- ASME B&PV Code Sec. VIII Div. 1
- ASME B&PV Code Sec. VIII Div. 2
- ASME B&PV Code Section 1
- ASME Piping Codes (B31.3/B31.1)
- API 650 and API 653
- European codes and standards

## WHO SHOULD ATTEND

The course is intended for experienced personnel, as well as beginners. The course could be of benefit to inspectors, maintenance personnel, design engineers, stress analysts, and project personnel. Those involved with repairs/alterations of vessels and piping will also benefit.

## LEARNING APPROACH

A 3-days course which is designed to provide intensive instruction and guidance on understanding Code requirements. The instructor will be available following each day's session to provide participants with further opportunity for discussion and consideration of specific problems. Each session will be conducted in:

- Lecture
- Discussion
- Problem solving format

## INTERESTING TOPICS COVERED DURING THE COURSE

- Introduction
- Assessment Procedure
- Damage Mechanisms Overview
- Brittle Fracture
- Fatigue Analysis
- Finite Element Analysis
- General Metal Loss
- Local Metal Loss
- Pitting Corrosion
- Hydrogen Blisters, Damage, HIC and SOHIC
- Weld Misalignment and Shell Distortions
- Crack-Like flaws
- Creep
- Fire Damage
- Dents & Gouges
- Laminations