



## **PD395: API 579-1/ASME FFS-1- Fitness-for Service (3 Days)**

### **Day 1**

- Introduction - lecture and discussion
- Fitness-for-service Engineering Evaluation Procedure (General Roadmap for Parts 3 through 13 of the API/ASME Standard) - lecture and discussion
- Assessment of Equipment for Brittle Fracture -lecture, discussion, and examples
- Assessment of General Metal Loss - lecture, discussion, and examples
- Assessment of Local Metal Loss - lecture, discussion, and examples

### **Day 2**

- Assessment of Pitting Corrosion - lecture, discussion, and examples.
- Assessment of Hydrogen Blisters and Hydrogen Damage Associated with HIC and SOHIC – lecture and discussion.
- Assessment of Weld Misalignment and Shell Distortions – lecture and discussion.
- Level 1 Assessment of Crack-Like Flaws - lecture, discussion, and examples.
- In-class problem solving: general metal loss, local metal loss, and Level 1 crack assessment.

### **Day 3**

- Introduction to Fracture Mechanics; Level 2 Assessment of Crack-Like Flaws – lecture, discussion, and examples.
- Assessment of Components Operating in the Creep Regime – lecture and discussion.
- Assessment of Fire Damage – lecture and discussion.
- Assessment of Dents, Gouges and Dent-Gouge Combinations – lecture and discussion.
- Assessment of Laminations – lecture and discussion.
- General Discussion and Course Wrap-up