

(ME#26) INTRODUCTION TO API 570 – PIPING INSPECTION CODE: IN-SERVICE INSPECTION, RATING, REPAIR, AND ALTERATION OF PIPING SYSTEMS

COURSE OVERVIEW

The objective of this course is to introduce and allow students to become familiar with the requirements of the API-570 Piping Inspection Code. *Piping delivers many different types of fluid, some of which are environmentally sensitive and others highly volatile. Pipelines which may look good from the outside could have active erosion or corrosion wearing away the pressure containment capability of the system.* This course will cover the entire API code book, but will take time to discuss what is important to the participants. The course is designed to be an introductory course to enhance a student's knowledge regarding the inspection of piping systems and the code regulations which guides these inspections.

WHO SHOULD ATTEND

Individuals involved in inspections, including engineers, senior designers, maintenance, quality assurance, and manufacturing personnel who work with process piping (e.g., in the chemical, petroleum, plastic processing, pulp and paper fields). Most anyone involved with the repair of piping systems will find this course to be a valuable introduction to inspection requirements.

LEARNING APPROACH

The course will review the basic requirements of the API 570 – Piping Inspection Code. Each session will be conducted in a lecture/discussion/format designed to provide instruction and guidance on understanding the code requirements. The instructor will be available following each day's session to provide participants with further opportunity for discussion and consideration of specific inspection problems/concerns.

INTERESTING TOPICS COVERED DURING THE COURSE

- Interaction and Introduction to API-570
- Scope, References and Definition
- Owner/User Inspection Organization
- Inspection and Testing Practices
 - Risk Based Inspection
 - Preparation
 - Inspection for Specific Types of Corrosion and Cracking
 - Types of Inspection and Surveillance
 - Thickness Measurement Locations
 - Thickness Measurement Methods
 - Pressure Testing of Piping Systems
 - Material Verification and Traceability
 - Inspection of Valves
 - Inspection of Welds In-Service
 - Inspection of Flanged Joints
- Frequency and Extent of Inspection
 - General
 - Piping Service Classes
 - Inspection Intervals
 - Extent of Visual External and CUI Inspection
 - Extent of Thickness Measurement Inspection
 - Extent of Small-Bore Auxiliary Piping and Threaded-Connections Inspections
- Inspection Data Evaluation, Analysis, and Recording
 - Corrosion Rate Determination
 - Maximum Allowable Working Pressure Determination
 - Retirement Thickness Determination
 - Assessment of Inspection Findings
 - Piping Stress Analysis
 - Reporting and Records for Piping System Inspection
- Repairs, Alterations, and Rerating of Piping Systems
 - Repair and Alterations
 - Welding and Hot Tapping
 - Rerating
- Inspection of Buried Piping
 - Types and Methods of Inspection
 - Frequency and Extent of Inspection
 - Repairs to Buried Piping
 - Records
- Coverage of Appendixes
- Questions and Answers