Practical Piping Design

PIP201: Loads, Design Criteria, and Hoop Stress

Module 1: Introduction and Considerations
- Lesson 1: Introduction
- Lesson 2: Considerations

Module 2: Paragraph 301 Loads
- Lesson 3: Determining Design Pressure - Paragraph 301.2
- Lesson 4: Determining Design Temperature and Ambient effects - Paragraphs 301.3 & 301.4
- Lesson 5: Determining Dynamic Loads - Paragraph 301.5
- Lesson 6: Determining Weight - Paragraph 301.6
- Lesson 7: Determining Displacement and Thermal Expansion - Paragraphs 301.7 & 301.8
- Lesson 8: Determining Cyclic Effects - Paragraph 301.10
- Paragraph 301 Quiz

Module 3: Paragraph 302 Design Criteria (Safety Factors)
- Lesson 9: Pressure Temperature Rating of Listed Components - Paragraph 302.2.1
- Lesson 10: Listed Components Without Pressure Temperature Ratings - Paragraph 302.2.2
- Lesson 11: Allowances for P/T Variations - Paragraph 302.2.4
- Lesson 12: Allowable Stresses and Other Design Stresses - Paragraph 302.3.2
- Paragraph 302 Quiz

Module 4: Paragraph 304 - Hoop Stress
- Lesson 13: Straight Pipe Internal Pressure Paragraph 304.1 & 304.1.2
- Lesson 14: Straight Pipe External Pressure Paragraph 304.1.3
- Lesson 15: Pipe Bends Paragraph 304.2.1
- Lesson 16: Miter Bends Paragraph 304.2.3
- Lesson 17: Branch Connections - Paragraph 304.3
- Lesson 18: Flanges and Blanks Paragraph 304.5
• Lesson 19: Pressure Design of Unlisted Components - Paragraph 304.7.2
• Lesson 20: Paragraph 304 Quiz