



## **PD642**

### **B31.1 Power Piping**

#### **Day 1**

- Introduction/ overview
- Scope and definitions
- Design conditions and criteria
- Pressure design of piping components
- Case Study 1 – Pipe Wall Thickness
- Case Study 2 – Branch Connections and Closures

#### **Day 2**

- Selection and limitations and standards for piping components
- Selection and limitations of piping joints
- Flexibility and support
- Metallic bellows expansion joints
- Case Study 3 – Flange Pressure Ratings
- Case Study 4 – Piping Flexibility
- Case Study 5 – Specification of Spring Support
- Quizzes

#### **Day 3**

- Design-Systems
- Materials
- Fabrication, Assembly, and Erection
- Inspection, Examination and Testing
- Case Study 6 – Developing Piping Specification

#### **Day 4**

- Inspection, Examination and Testing
- Operations and Maintenance
- Non-metallic Piping
- Nonmandatory Appendix II Rules for the Design of Safety Valve Installations
- Non-metallic Piping
- Case Study 7 – Safety Relief Valve Piping
- Case Study 8 – Pressure Testing
- Quiz
- Design decisions and course summary