

Course Overview

The course will cover the basic design practices and requirements of Piping Arrangement, Pipe Support, Pipe Stress and Piping Material Design. A general overview of piping arrangement & support, piping material, pipe stress requirements on compressor, pump, heat exchanger, air-cooler, vessel, flare system piping will be included in this course. Application of this course contents include practical case studies on offshore piping layout, piping material selection, MTO review and general Piping Fitness-For-Service study as per ASME B31.3 requirements.

What you will learn

- Pipe Routing & Arrangement Design Concepts & Requirements
- Pipe Support Design Concept and Pipe Span Requirements
- P&ID & PFD for Piping Arrangement Design
- Piping Stress Isometric & Stress Analysis Report for Pipe Support & Pipe Stress Design
- General Pipe Flexibility and Pipe Stress Requirements
- General Piping Material Requirements

Who Should Attend

Piping Engineer, Senior Piping Designer, Piping Designer, Plant Supervisors & Operator, Piping Inspectors and party involved in process piping in Oil & Gas, Chemical Plant, Power Industries, etc. This piping course is recommended and beneficial to participants with direct piping experience of 5 years or less.

Instructor



Mr. Sam Wei Yeow is a member of ASME B31.3 Code Review Committee, and a registered professional engineer with Board of Engineers Malaysia (BEM). He has 18 years of piping design and project management experiences, and has been extensively involved in piping design & construction of many offshore and power plant projects with

emphasis on piping equipment layout, piping arrangement & pipe support design and pipe stress analysis. He has also conducted numerous technical talks at Institute of Engineer Malaysia (IEM) and Offshore Technical Conference on engineering topics related to Piping Design.

Content

DAY ONE - Piping Material

- General Piping Material
- Piping Standard & Introduction to ASME B31.3
- Pipes Fittings & Components
- Flange Design & Selection
- Piping Class & Piping Material Specification
- Pipe Thickness Calculation
- Valves – Concept, Selection & Data Sheet
- Piping MTO
- Piping System – Fitness-For-Service
- Case Studies

DAY TWO – Pipe Stress Analysis

- Fundamental Theory & Concept of Pipe Stress Analysis
- Pipe Flexibilities & Calculation
- Piping Force & Moment, Friction, Stress Intensification Factor, Elbow Flexibilities
- Pipe Expansion Loop
- Pipe Failure Theory & Requirements
- Load Cases – Sustain, Operation, Thermal, Occasional
- Spring Design & Selection
- Stress Isometric Interpretation
- Stress Analysis Inputs Parameters & Stress Analysis Report Interpretation (Code Compliance/Restraint Summary/Load Interpretation)
- Case Studies

DAY THREE – Piping Equipment Layout & Arrangement

- PFD & P&ID considerations in Piping Design
- Piping Design & Arrangement Requirement
- Standard & Special Pipe Support
- Piping Equipment Layout & Arrangement (piping for Compressor / Pump / Heat exchanger / Air-cooler / Vertical & horizontal vessel)
- Piping Interfaces: Process / Structure / Mechanical / Electrical
- Piping Drawings, Piping GA, Pipe Support Location Plan, Isometric, etc.

Duration

3-days

For more details, kindly contact:

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