



# ASME Process Piping, Valve, Flanges Classes, Selection, Fittings & Layouts



## Introduction:

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Candidates shall learn the ASME Specification and have the use it. How to specify and select valves, flanges, pipes and use of P&ID's.

## Who Should Attend?

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Mechanical Development Engineering

## Methodology:

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**This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include:**

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

## Certificate:

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BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration.

## Course Outline:

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### Pipe code History and Basic Philosophy

- Instruction to Piping
- Piping codes and standards
- Scope of B 31.3
- Some important Definitions
- Diagram Illustrating Application of B31.3 Piping at Equipment
- Design
- Conditions and Criteria
- Thermal expansion and contraction effects etc.

### Design

- Pressure Design of piping components
- Thermal Insulation of Piping
- Piping Supports
- Piping Systems
- Fabrication and Installation of Piping
- Types of flanges and classes

### Piping Failure and their causes

- Reasons of Inspection
- Inspection for Deterioration in Piping
- Corrosion monitoring of process piping
- Inspection for specific types of corrosion and cracking
- Frequency and time inspection

## **History of valves**

- Definition of valves
- Common valve materials
- Components of valves
- Valve classifications
- Types of valves
- Purpose and function
- Application
- Valve pipe connections
- Variations on common valves
- Special valves
- Cryogenic Valves
- Valve Safety & Troubleshooting

## **Introduction of Pressure Relief Valves**

- Types of PR and Operation
- Valves selection & Specification Requirement
- References for codes and standards
- Inspection, Testing and Repair of Relief Valves
- Procedure for calibration of PRVs
- Identification of valves
- Noting of operating conditions

- Valve removed from the system
- Inspection of deposits in valves
- Shop test block
- Determination of as-received relieving Pressure
- Dismantling, servicing, repairing and re-assembling of valves
- Setting of valve to required pop pressure