

# ASME B31.3 Process Piping Design Code Training

*COURSE CONTENT*

## GET IN TOUCH



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## About Multisoft

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## About Course

The ASME B31.3 Process Piping Design Code training offered by Multisoft Systems is a specialized course designed for engineers, designers, and project managers in the process piping industry. This course thoroughly covers the key aspects of the ASME B31.3 Code, which sets the standard for the design, construction, and inspection of process piping systems in chemical, petroleum plants, and similar industrial facilities.

## Module 1: Introduction and history of ASME codes

- ✓ Scope and Definitions
- ✓ Content, Coverage and Exclusions
- ✓ Design include Design Pressure, Design Temperature
- ✓ Listed Components Unlisted Components
- ✓ Allowances for Pressure and Temperature Variations
- ✓ Allowable Stresses and Other Stress Limits
- ✓ Bases for Design Stresses
- ✓ Casting Quality Factor,  $E_c$  and Weld Joint Quality Factor,  $E_j$
- ✓ Pressure design of components
- ✓ Branch Connections
- ✓ Pressure Design of Flanges and Blanks
- ✓ Fluid service requirements for piping components and piping joints

## Module 2: Flexibility and support

- ✓ Chapter iii materials
- ✓ Listed Materials, Unlisted Materials. Unknown Materials. Reclaimed Materials.
- ✓ Lower Temperature Limits
- ✓ Impact Testing Methods and Acceptance Criteria
- ✓ Fluid Service Requirements for Materials
- ✓ Chapter IV Standards for Piping Components
- ✓ Chapter V Fabrication, Assembly, and Erection
- ✓ Welding and Brazing Qualification, procedures Specifications.
- ✓ Preheating
- ✓ Heat treatment requirements
- ✓ Bending and forming
- ✓ Assembly and erection

## **Module 3: Chapter VI Inspection, Examination, and Testing**

- ✓ Responsibility and qualifications for Inspection and examination
- ✓ Extent of Required Examination
- ✓ Radiographic and Ultrasonic Examination
- ✓ Testing Required Leak Test
- ✓ Hydrostatic Leak Test
- ✓ Pneumatic Leak Test
- ✓ Hydrostatic-Pneumatic Leak Test

## **Module 4: Chapter VII Nonmetallic Piping and Piping Lined with Nonmetals**

- ✓ Pressure design of piping components
- ✓ Fluid service requirements for nonmetallic materials
- ✓ Materials general requirements
- ✓ Fabrication, assembly, and erection
- ✓ Inspection, examination, and testing
- ✓ Chapter viii piping for category M Fluid Service

## **Module 5: Chapter IX High Pressure Piping**

- ✓ Chapter X High Purity Piping
- ✓ Review codes appendix
- ✓ Review of codes tables