

Scandinavian Academy Training Center

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Riyadh - Al Khaleej District - Sheikh Abdul Aziz Bin Abdul Rahman Bin Bishr Street - 13223 - Office No. 5 | P.O.BOX : 13224

# Course: ASME B31.3 PROCESS PIPING

| Code | City | hotel | Start | End | price | Language - Hours |
|---|---|---|---|---|---|---|
| OG-813SA | Abha | Hotel Meeting Room | 2027-01-24 | 2027-01-28 | 12950 SR | En - 25 |

## PROGRAMME SUMMARY

This course provides an introduction to the ASME B31.3 Process Piping Code. It covers the requirements of B31.3 for design, analysis, materials, fabrication, testing and inspection of process piping systems.

It explores the rules for various components including fittings, connections, bends, valves and specialty components. Other topics include dimensions and ratings of components, fluid service requirements for joints, piping flexibility and support, welding, heat treatment, bending and forming, brazing and soldering, assembly, erection, examination and inspection.

## OBJECTIVE

- The aim of this comprehensive training course is to provide the delegates with enough knowledge and skills about process piping related ASME B31.3
- Identify the design of piping flanges and blanket
- Welding and Brazing Qualification, procedures Specifications
- Explain the Fabrication, Assembly, and Erection and identify the required inspection and testing Define hydrostatic pressure and hydrostatic-pneumatic tests
- Receive the enough information about the Fluid Service Requirements for Materials
- Explain of nonmetallic piping design, Fluid Service Requirements, inspection and testing
- Employ pre and post weld heat treatment and identify the Charpy impact testing

# WHO SHOULD ATTEND

- QA/QC inspectors
- Maintenance Engineers
- Inspection & testing professionals
- Fabrication Engineers
- QA/QC reliability professionals for oil and gas (Petrochemical and Refining) operations
- Fresh graduates, piping engineers and designers

# Outline

### 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, Ec and Weld Joint Quality Factor, Ej
- Pressure design of components
- Branch Connections
- Pressure Design of Flanges and Blanks
- Fluid service requirements for piping components and piping joints

### 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
- 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

## 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

## Chapter IX High Pressure Piping:-

- Chapter X High Purity Piping
- Review codes appendix

- Review of codes tables

**The Scandinavian Academy for Training Center** adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

**Program Timings:  9:00 AM to 2:00 PM**

**The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.
- **Note: All prices are exclusive of 15% Value Added Tax (VAT).**

# Our Success Partners

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