



The South African Institute of Mechanical Engineering

Introduction to Oil and Gas Piping

Duration - 1 Days : Time - 08h30 – 16h30 (Registration at 08h00)

Manual, teas and lunch provided

CPD Validation Number: SAIMEchE-1016-12/19

This workshop will earn delegates 1 credits in Category 1

This workshop is suitable for SAIMEchE Groups 0, 1, 2, 3a and 3b

This workshop is developed and presented by:

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SAIMEchE Group Classification

0 = Non-technical,
e.g., HR, Finance

1 = Candidate (including
GCC) with < 5 years
experience

2 = Professional
(including GCC) with <
15 years experience

3a =Professional and
Appointment with > 15
years experience with
specialist interest

3b = Senior
Management with >
15 years experience

OVERVIEW

- Introduction and history of Pipeline Design, Codes and Standards
- Organizations associated with Pipeline Standards
- ASME B31 Codes and API Piping Standards
- Strength of Materials
- Bases for Design, Pressure Design
- Pipeline Sizing and Rating
- Branch Connections
- Selection of Fittings, Flanges, Gaskets, Valves, Bolts,
- Welding and Fabrication
- Corrosion, Cracking, Fatigue Cracking, Hydrogen and H2S Effects
- Layout, Support Types and Spacing, Piperacks
- Mitigation of Vibration
- Hydrotesting, Pneumatic and Leak Testing
- Inspection and NDE Techniques
- Repair Techniques. ASME PCC2
- Grinding, Weld Repairs, Sleeves, Patches and Clamps
- Liners and Coatings

CONTENTS

- Codes and Design
- Strength of Materials
- Pipeline sizing and rating
- Pipeline Fittings
- Fabrication
- Installation and Layout
- Degradation Mechanisms
- Testing and Inspection
- Repair Techniques

WORKSHOP OBJECTIVES AND LEARNING OUTCOMES

Delegates will gain knowledge and understanding in the following;

- The principles of pipeline and piping design, operation, maintenance and repair
- Material specifications for pipelines and piping
- Design pressure and failure margins of pipes and learn how to establish the system design pressure
- Pipe fitting, including valves, flanges, gaskets
- Corrosion and degradation mechanisms
- Temperature effects on the lay-out, expansion and contraction of pipes and pipelines as well as the analysis for flexibility and failure margins
- Pressure and leak testing techniques
- Testing and inspection techniques
- Repair and rehabilitation of pipes and pipelines

WHO SHOULD ATTEND

- Engineers
- Foremen and Supervisors
- Technicians
- Planners

[DELEGATES' COMMENTS](#)