



MAESTRO
CONSULTANTS

CALCULATE PIPING & PIPELINE SPECIFICATION



COURSE OUTLINE 2020

Contact Us On :

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TRAINING TITLE

CALCULATE PIPING & PIPELINE SPECIFICATION

VENUE

Dubai, UAE

DURATION

5 Days

DATES

01 - 05 March 2020

PRICE

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet daily.

TRAINING INTRODUCTION

This five-day course for engineers and piping system designers reviews the key areas associated with the design of piping systems for oil and gas facilities. The course is focused on four areas: codes and standards, pipe materials and manufacture, piping components, and piping layout and design. Applicable piping codes for oil and gas facilities (ISO, B31.3, B31.4, B31.8, etc.), piping sizing calculations, pipe installation, and materials selection are an integral part of the course. The emphasis is on proper material selection and specification of piping systems.

TRAINING OBJECTIVES

Upon completion of the course, the participants will be able to:

- Apply piping system codes and standards
- Determine lining sizing and layout of piping systems in various types of facilities
- Specify proper components for process and utility applications
- Compare alternative materials of construction
- Illustrate the process of steelmaking, pipe manufacturing and material specifications
- Use joining methods and inspection techniques
- Identify key considerations for flare and vent systems, including PSV sizing

TRAINING AUDIENCE

This course is intended for mechanical, facilities, plant or pipeline engineer and piping system designers who are involved in the design of in-plant piping systems for oil and gas facilities.

COURSE OUTLINE

- Pipeline thickness calculations for Internal Pressure application
- Pipeline thickness calculations for External Pressure application
- Pipe branch thickness / reinforcement pad calculations
- Mitre wall thickness calculations
- Flange / flanged fittings rating calculations as per ANSI B16.5
- Socket Welded / Threaded fittings rating selection
- Piping Bill of materials (BoM) / Material take-off (MTO) calculations

Concept of Cold Pull.

- Hot Pipe expansion calculations
 - Calculations of expansions of various piping configurations by methods of 'Rules of Expansion'
 - Hot pipe anchor load calculations
 - Calculations of Induced stress due to temperature
 - Calculations of Allowable stress for static thermal conditions
 - Pipe Operating weight calculations
 - Cold load, Hot load, Percentage variation,
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- Pipe support span calculation
 - Pipe support load calculation
 - Pipe Spring selection and variation calculation
- CEASAR II :
- Introduction to CAESAR II software
 - Inputs required carrying out Stress analysis in CAESAR II
 - Analysis of system using CAESAR II software

TRAINING CERTIFICATE

MAESTRO CONSULTANTS Certificate of Completion for delegates who attend and complete the training course

METHODOLOGY

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.