



2KG TRAINING

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ASME B31.1: POWER PIPING

Presenter: Bob Wilson

ABOUT THE PRESENTER: BOB WILSON



Bob Wilson is a practicing piping design engineer. For more than 40 years he has been involved with the drafting, design, stress analysis, layout, support and construction of piping systems, working with petrochemical, power, steel, mining & processing companies in North America, Australia, Europe, Middle East and South East Asia. Mr. Wilson is a member of the ASME B31.1 Power Piping Code Sub Group on Design.

He is a former engineering professor at Sheridan College in Canada and currently teaches piping design and engineering courses for ASME including 'ASME B31.1 Power Piping Code' and 'Detail Engineering of Piping Systems'.

He is Author of a piping design book 'Detail Engineering and Layout of Piping Systems'.

Number of days: 4

Cost: \$2950

CPD Points: 4

WHAT WILL YOU LEARN

Worldwide competitiveness is forcing the need to construct more effective piping systems, possible only if existing piping codes and standards are understood and intentions realised.

This intensive 4 day course brings you updated information on current Power Piping Code requirements and provides insight into how these requirements have evolved and what future changes in the Code may be expected. This course explores the background, rules and trends in piping design, analysis, and fabrication - vital elements of power, industrial and institutional plant construction and maintenance - within the context of meeting the requirements and intent of ASME B31.1 and its appendices.

Upon completion of this course, participants will have an understanding of:

- Why the Code is intentionally simplified and how to deal with special and complex piping problems
- The principal failure modes of piping components and structural design
- The difference between pressure component design and structural design
- Layout and simplified analysis techniques
- How to qualify non-standard fittings and joints
- How to develop stress intensification factors

The course will also include an overview of materials selection and limitations, fabrication rules and their bases, welding qualification requirements, and inspection, examination, and testing requirements.

WHO SHOULD ATTEND

- Engineers entering the piping design and analysis field
- Practicing piping engineers requiring background on Code compliance and trends in piping design, analysis and fabrication
- QA/QC personnel

SPECIAL REQUIREMENTS

Attendees are required to bring a scientific calculator. The latest edition of the ASME B31.1 Power Piping Codebook is also required for this course. If your organisation already has a copy, please bring it along.

COURSE OUTLINE

History of codes

ASME B31.1 Operations and scope

Piping failure modes

Piping design conditions

Piping design criteria

Pressure Design and Straight Pipe

Pressure Design of Piping Components

Guarding against pipe collapse

Providing adequate piping flexibility

Cold spring

Stress intensification factors

Simplified Piping Analysis and Layout

Simplified Piping Analysis and Layout

Requirements for Specific Piping Systems