ENGINEERING TRAINER

Why Expansion Joints?

This expansion-joint course explains when thermal movement or settlement may justify an expansion joint in an industrial piping system. It helps engineers compare an expansion joint with other flexibility options and recognize the loads, support conditions and failure risks that require review. This self-paced online course includes video lectures and a completion certificate with PDH credits.

Buy This Course

Request a Quote or Invoice

ONLINE	SELF-PACED	1-YEAR ACCESS
1 MODULE	0.5 PDH	0.6 HOURS

TRUSTED BY ENGINEERING TEAMS WORLDWIDE

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What you'll learn

Expansion joints are frequently used in industrial piping systems to manage movement caused by thermal expansion, pressure effects or differential settlement. While they can be an effective solution for reducing stresses and equipment nozzle loads, they must be selected and applied correctly. Poorly specified or incorrectly supported expansion joints have historically caused reliability and safety problems in many facilities.

In this 35-minute training course, produced together with Zdravko Ivancic of Numikon you will be introduced to how and when expansion joints are commonly used to resolve piping flexibility issues identified during pipe stress analysis. The course introduces the different types of expansion joints—including axial, lateral and hinged configurations—and explains how each accommodates specific types of movement in a piping system.

Skills you'll gain

- ✓ understand the role of expansion joints in solving piping flexibility problems identified during pipe stress analysis
- ✓ are familiar with the main types of expansion joints and the movements they are designed to accommodate (axial, lateral and angular)
- ✓ are able to recognise situations where expansion joints are preferable to expansion loops due to space or equipment load limitations
- ✓ understand the basic components of expansion joints such as bellows, convolutions, plies and tie rods

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About the instructor

Zdravko Ivancic, M.Eng.

Zdravko Ivančić is a stress-analysis engineer with more than 20 years of experience in pipe stress and flexibility analysis, pipe-support design and FEA for process and power-plant systems. He is an expert in ASME B31.1, ASME B31.3, EN 13480 and ASME BPVC Section VIII, Division 2.

Who this course is for

- ✓ Pipe stress engineers performing piping-flexibility analyses
- ✓ Piping designers considering expansion-joint locations
- ✓ Mechanical engineers responsible for thermal-expansion problems
- ✓ Technical reviewers assessing expansion-joint proposals
- ✓ Maintenance engineers investigating expansion-joint service problems

Why Expansion Joints?

Course content

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- Introduction to Expansion Joints
- Types of Expansion Joints
- Two Contradictory Demands