FACT SHEET

Piping Stress Analysis: Fundamentals

Basics of Strength of Materials, Piping Design Codes, Piping Loads and Piping Stresses, Flexibility Analysis & Stress Limits Code Requirements and Pipe Supports.

Who Should Attend?

This course is intended for engineering graduates, piping designers, technicians and engineers involved in design, selection, manufacturing, safety, and maintenance of piping systems in industrial processes.

Previous knowledge of this subject is not required to attend to the course.

Training Objectives

The main objective of this course is to **transfer to** participants the theoretical and practical skills required to understand the basics of piping stress analysis.

Methodology

Instructor-led training course in adult learning format with discussions, individual exercises and simplified case studies, providing practical knowledge to implement in the field.

Duration

The duration of this training course is **12 hours**, divided into several sessions to facilitate the learning process.

What to Expect?

Get familiar with the ASME B31 Piping Codes.

Learn about ASME Piping Code Stress Limits.

Acquire basics of Flexibility Analysis and Pipe Supports.

Learn the fundamentals of Strength of Materials and Loads and Stresses in Piping Systems.

Master the terminology and key concepts of piping stress analysis.

Become familiar with the types of calculations involved in pipe stress analysis.

Contents

Instructor

Senior Mechanical Engineer with a **broad consulting experience in oil and gas, mining, and power generation industries.** Since 2005 has been providing consulting engineering services for leading North American energy industry clients such as Mosaic, Nutrien, SaskPower Enbridge, Suncor, Shell Canada and TransAlta.

Proficiency in piping design and industrial ducting systems design, hydraulic and thermal analysis, piping stress analysis (metallic and non-metallic piping), finite element analysis (FEA), spring hanger design, equipment data sheet specifications, pumping systems, heat exchangers, bins/hoppers, and storage tanks design.

Working knowledge of **CSA Z662, ASME B31.1, ASME B31.3, ASME Section VIII Div. 1, ASME BPVC Code Case 886, ASME BPVC Code Case 755-4, API 610 and API 650 codes and standards.**

Conversant with a wide variety of software such as AutoPipe (Bentley), CAESAR II, AFT Fathom, AFT Arrow, Autodesk Simulation Mechanical, NavisWorks, AutoCAD and Microsoft Office applications.

Tailored Training

The most effective training is one that satisfies the needs of each company's business focus and deliverables. **We adapt our training programs to each specific requirement, offering bespoke solutions for each need.** The result, 100% tailored programs, developed to maximize the time investment and deliver tangible and intangible returns to the work teams.

After assessment phase, a tailored training plan is designed jointly with the client. This plan is specifically tailored to meet the client's needs, focusing on effectively enhancing the capabilities of the work team. **We provide practical, dynamic, and hands-on training,** making available the best instructors in each subject.

Arveng Training

Arveng Training has developed effective and practical solutions for today's industrial challenges by delivering specific, high-quality engineering courses utilizing three different approaches: classroom, online, and tailored training. We are proud to have imparted more than 250 classroom courses, 1200 online courses, and over 65 in-company sessions. Our training activities have benefitted over 4500 professionals, our greatest accomplishment of all.

We consider our students' time to be of utmost importance. For this reason, all our courses have been designed with the main objective of quickly improving the professional skills of the participants through our expert instructors in different disciplines. **We stimulate creativity, innovation, and initiative to make the participants inquisitive, bringing good engineering practices and lessons learned to the field, that benefits their professional lives in the long term.**

Our Company

Arveng Training & Engineering SL is a leading company providing Training and Engineering services based in Madrid, Spain. Our mission and vision are to be a leading training and engineering services company, providing our clients with the best in the sector. We are a team of highly motivated, talented, highly qualified professionals with over 20 years of experience. We aim to exceed expectations by offering efficient, innovative, cost-effective, and transparent services.

Established in July 2010, mainly oriented to the industrial sector, from the very beginning Arveng has always worked with closeness, responsibility, and commitment in all areas of activity.

Through experience gained by partaking in multidisciplinary engineering projects in sectors such as Petrochemical, Energy Generation, and Industrial, we provide answers and solutions to concrete requirements, making the effort to build long-lasting and mutually beneficial relationships.