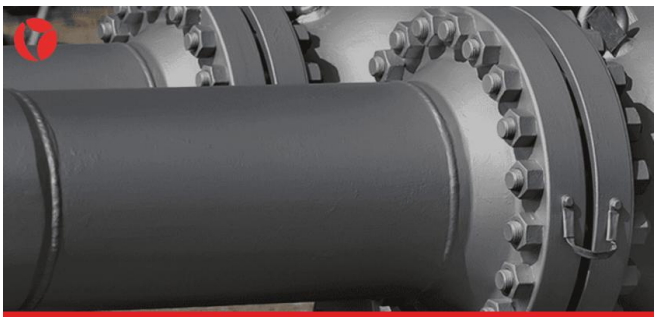
FACT SHEET

Introduction to Flanged Joints | ASME PCC-1



Introduction to ASME PCC-1, Components of a Flanged Joint, Assembly Preparation, Joint Tightening per ASME PCC-1, Inspection and Leak-Tightness Control.

Who Should Attend?

Students, technicians, operators, inspectors, and engineering professionals involved in the assembly, maintenance, quality control, safety, and operation of piping systems and equipment in industrial processes who need to master safe bolting and assembly guidelines.

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

Training Objectives

The main objective of this course is to provide participants with the theoretical foundations and practical knowledge required to understand the proper assembly and inspection of flanged joints in accordance with the ASME PCC-1 standard.

At the end of the course, participants will have a clear understanding of the introductory requirements of this standard.

What to Expect?

By the end of the course, participants will be able to describe the organization, scope, and fundamental sections of the standard, understand industry best practices, and define the necessary requirements for flanged joints:

- Flanged joints according to ASME PCC-1
- Parameter verification to achieve proper flanged joint alignment and mating
- Bolt tightening and bolting sequences
- Torque determination and pressure testing

Course Duration

Full Course: 10 hs; to be completed in 60 days.

Methodology

At your own pace

Self-guided, Hands-On Course

Available 24/7, Self-paced course

“Learn by doing” concept

No scheduled sessions

Included in the course

Study Notes

Summary Videos

Conceptual Questions

Contents

L1. Introduction to ASME PCC-1

Objectives and scope of PCC-1

Basic principles of leak tightness

Risks associated with leaks

L2. Components of a Flanged Joint

Flanges, studs and nuts

Gaskets

Gasket contact surface flatness and defects

L3. Assembly Preparation

Component inspection

Cleaning and preparation

Lubrication

Flange alignment

Stud and bolt installation

L4. Joint Tightening per ASME PCC-1

Principles of controlled tightening

Tightening sequences

Tightening methods

Common assembly mistakes

L5. Leak-Tightness Inspection and Control

Assembly verification and leak checking

Common causes of loss of leak tightness

Good maintenance practices

Instructor

Senior Mechanical Engineer and master's in business administration (MBA). **More than 25 years of experience in design, calculation and fabrication of pressure vessels, heat exchangers, storage tanks, piping systems and structures in general.**

Duties of the above-mentioned positions cover the entire cycle of an equipment, from the very conception, drawings, design and calculation, technical specifications, technical requisitions, vendor drawings, to the manufacturing phase and installation assistance.

Among the developed projects, clients such as SHELL, EXXON, REPSOL, CHEVRON, GALP, CEPSA, TUPRAS and SAUDI ARAMCO can be found.

Vast experience providing specific training sessions in both classroom and online methodologies. More than 75 training courses carried out in different institutions and in-company, courses oriented to graduates, designers, engineers and experienced professionals.

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.