Standards, Specifications, and Codes for General Mechanical

Guidelines ensuring mechanical system safety.

Introduction

The goal of this training programme is to provide learners with a thorough understanding of codes and standards, with a focus on the appropriate strategy and methodology for applying the codes. It facilitates the participants' understanding of the stated and implicit requirements, as well as the goals and intents of the code (i.e., the letter and spirit of the code). It is beneficial for the participants to be aware of the required, suggested, and optional provisions of the code.

An overview of the numerous codes and standards used in the process industries for design, construction, inspection, and in-service inspection is also covered in the training course. The majority of the code principles will be explained in this training course in a way that makes use of both the code statements and pertinent examples. The following topics are also covered in the training course: the distinction between standards and codes, what constitutes a code, choosing the right standards and code for the intended use, allowing for code modifications, etc. The training programme is moreover structured so that individuals with prior experience utilising codes can comprehend the most efficient and scientific application of codes for their intended usage, while novices will comprehend the appropriate methodology and use of the codes.

Training for Standards, Specifications, and Codes for General Mechanical (Course N Carry) will include:

- The key ideas and jargon used in Engineering Code
- An overview of the terms "standardisation" and "coding"
- The primary distinction between standard and code
- The fundamental scientific and technical understanding of codes and standards
- A summary of widely used guidelines and standards during the procedure industries with a focus on the petroleum and oil and gas sectors
- How to choose the right code for construction, material selection, inspection, and design

Objectives

After completing this training programme, you will be qualified to:

- Recognise the definitions of the many technical terminology and ideas found in engineering standards and codes.
- Make certain technical calculations and select the appropriate engineering code for the specified application.
- Be able to comprehend the restrictions placed on the materials used for pressure component construction by different regulations.
- Recognise the fundamentals of mechanical construction, inspection, and testing for pressure-related components.
- Choose the relevant standard parts.

Training Methodology

The amount and quality of information and knowledge transfer will be maximised through the management of a highly interactive lecture and discussion format. The most pertinent questions will be raised at the beginning of the sessions to inspire everyone to find the correct answers. Additionally, the attendees will be invited to ask their own questions and contribute to the formulation of the appropriate responses by drawing on their own knowledge and expertise. Every day, multiple-choice tests will be made accessible to assess how well the training programme is being delivered.

Organizational impacts

The organization's process systems and standard operating procedures will be enhanced by this training programme. It will be simple for the company to obtain technical and quality certifications as well as approval from several different businesses and organisations.

Personal Imapct

Boost one's own comprehension of local and global standards, specifications, and mechanical codes while carrying out tasks in accordance with references. Additionally, they will be able to better their work processes, comprehend planning and scheduling, and expand and refresh their knowledge in reference to the best and most recent standards.

Who should attend?

A wide number of professions can benefit from this Course N Carry Standards, Specifications, and Codes for General Mechanical training course, but the following will be especially beneficial:

- Engineers for design
- Engineers with mechanical expertise
- Plant managers who have or have not applied codes and standards before

- Experts in Inspection
- Technicians and engineers for maintenance
- Every specialist engaged in inspecting and debugging running plants

Course Outline

Day 1

The idea of standards and codes

- Code: What Is It?
- Standard: What Is It?
- Good Engineering Practice: What Is It?
- Adopting Codes: Why Do It?
- An overview of the many common engineering codes
- The purposes of standards and codes
- What is the philosophy of Code?
- Standards and Codes' Assumptions
- Details supplied by codes and standards Details not supplied by codes and standards
- The function of engineering judgement
- Code Requirements, Suggestions, and Available Choices
- What will SHALL, SHOULD, and MAY imply in code grammar?
- Singular and plural codes
- Contents of the Codes: Explicit and implicit provisions

Day 2

Numerous internationally recognised design and construction codes

- Pressure vessel codes
- Codes for installations involving pipes
- Tank Codes
- Additional Engineering Codes/Other Codes

Day 3

Different in-service Codes for inspection

- Codes for pressure vessel inspection
- Inspection codes for piping installations
- Codes for Tank Inspection
- Construction codes and in-service inspection codes differ from one another

- Knowledge of different codes
- A succinct summary of pressure vessel codes
- A succinct summary of the codes used for pipe installations
- An summary of Tank Codes in brief
- A succinct summary of the materials, welding qualification, and inspection codes

Day 4

Knowledge of Different In-Service Inspection Codes

- A synopsis of the Pressure Vessel Inspection Codes (API510)
- A succinct synopsis of the API 570 codes for piping installation inspection
- A succinct summary of the Tank Inspection Codes (API 653)
- Standardisation: What is it?
- Why establish guidelines?
- The idea of standardisation
- The principles behind standards' usefulness
- An overview of the different commonly used norms

Day 5

Introduction to Various Standards

- Introduction to ASME B 16.5
- Introduction to ASME B 16.34
- Introduction to ASME B 36.10, 36.19
- Introduction to API 600 & 610
- ASTM material standards