TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000126

MECH007 - Pressure Vessels and Heat Exchangers

This course for facility engineers and project engineers reviews the key areas associated with the mechanical design of pressure vessels and heat exchangers for oil and gas facilities.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

This course for facility engineers and project engineers reviews the key areas associated with the mechanical design of pressure vessels and heat exchangers for oil and gas facilities. The course is focused on vessels, heat exchangers built in accordance to ASME (American Society of Mechanical Engineers), considering material selection, key design calculations, and manufacturing processes.

The course is delivered from the perspective of a vessel fabricator to better understand the dos and don'ts of ideal mechanical specification of pressurized equipment by owner/operators, in order to optimize material utilization and minimize construction costs.

Who it is for and how it helps

Mechanical, facilities, construction, or project engineers and plant piping/vessel designers who are involved in the specification and purchasing of pressure vessels, heat exchangers, and other pressure-containing equipment for oil and gas facilities.

What you will learn

- Apply ASME B&PV code and the commonly used sections relevant to oil and gas equipment
- Specify correct and commonly used materials according to ASME II
- Design vessel shells, heads, nozzles, and heat exchanger details
- Provide accurate equipment specification documents and review documentation for code compliance
- Apply key fabrication processes used in the workshop and how to simplify construction through correct vessel specification
- Explain welding processes and inspection requirements per ASME IX

Curriculum

Modules 01–06

01 Vessel codes and standards (ASME B&PV Code, TEMA, API)

02 Vessel material selection, corrosion mechanisms, heat treatment, and basic metallurgy

03 Essential design calculations for vessels and heat exchangers

04 Welding process overview and inspection requirements

05 Constructability and operability considerations

06 Vessel integrity, evaluation, and re-purposing of pressure-containing equipment according to API (American Petroleum Institute) & ASME

Joining the programme

Contact the Academy and quote course code 000126 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

Learn from the Best in the Business!