



Unfired Pressure Vessels

MODULE

About the Skill Module

This skill module explains the industry pressure vessel design and specifications, including the organizations that provide the applicable codes and standards.

[See example Mechanical eLearning module](#)

Target Audience

Facilities Engineers, Process Engineers, Senior Operations Personnel, Field Supervisors, Engineers who select, design, install, evaluate or operate gas processing plants and related facilities

You Will Learn

Participants will learn how to:

- Identify the purpose of the code
- Identify the sections of the Boilers and Pressure Vessels (B&PV) Code
- Learn the major components of Section VIII, Div. 1
- Differentiate between an ASME Section VIII, Div. 1 vessel and B31.3 piping
- List the bodies and regulations that govern pressure vessel design and operations
- Describe all design criteria items for pressure vessels
- Differentiate between design pressure, maximum allowable working pressure, and maximum allowable pressure
- Discuss design stress levels according to temperatures
- Differentiate between operating and design temperatures and pressures
- List the flange ratings and temperature
- Calculate wall thicknesses of shells, heads, and cones using the formulas from ASME Section VIII, Div. 1
- List corrosion allowances for process nozzles and minimum nozzle neck thicknesses
- State the differences in types of heat treatment
- Compare the results of each type of heat treatment
- Discuss requirements for Post Weld Heat Treatment, methods, and cooling procedures
- Explain the basics of corrosion including rust
- Determine corrosion allowance (CA) for general hydrocarbon use and natural gas service
- Identify the corrosive elements in hydrocarbon processing
- Discuss ways to combat corrosion

- Discuss the ramifications of vessel penetrations
- Identify the options available to remedy nozzle penetrations
- Examine the vacuum forces on pressure vessels
- Study the corrosion allowance chart in reference to nozzle sizes
- Discuss the rules for inspection openings and manways
- Identify the Records Retention requirements
- Examine the following vessel appurtenances: Vessel internals, externals, and supports; Openings (other than process nozzles); Externals; Vessel supports

Product Details

Categories: Midstream

Disciplines: Mechanical Engineering

Levels: Basic

Product Type: Individual Skill Module

Format: On-Demand

Duration: 3 hours (approx.)

\$395.00