

## Workshop on "Pressure Vessel Design and Construction (Based on ASME Section VIII and API - 510)" 3-Days Session

### About Us

We are the training providers and deals in Technical, HSEQ, Management and Soft Skills Training.

We have highly knowledgeable and experienced local & foreign subject matter experts. Our team is highly focused and provides the best support as per your requirements and needs.

We provide a platform from where you can add value in you teams. We are highly fascinated on the development of your Technical and Management Teams.

We can provide on-site and classroom training.

### About Trainer

Mr. Ahmad has graduated in Mechanical Engineering and Master of Computer Science. He is an API authorized / certified for Above Ground Storage Tanks (API-653), Pressure Vessels (API-510), Damage Mechanisms Affecting Fixed Equipment in the Refining Industry (API-571), Welding and Metallurgy (API- 577) and Risk Based Inspection (API-580). He has various NDT levels.

He has good knowledge of conventional and advance NDT techniques including intrusive and non-intrusive. He has earned more than 27 Years of experience in the field of Inspection, Metal fabrication & Erection and total Asset Integrity Management System.

He has sound knowledge of API, ASME, NACE, BS and international standards. He is an experienced technical auditor / trainer in the field of Asset Integrity Management System, RBI, Storage Tanks, Pressure Vessels, Plant Piping, Pipeline, Pressure Relieving devices, control valves and utility plant equipment including steam turbines etc.

He has conducted various in house and public courses abroad and within Pakistan for the companies like PETRONAS, ADCO, BP, PPL, Shell Pakistan, Shell Oman, Shell Dubai, PSO, Attock Refinery and etc. He is actively involved in the Internal audit, document review, technical procedures review and Inspection of steel fabrication, API 5L line pipe, piping, pipeline, Boilers, HRSG, Pressure Vessels, Heat Exchangers, Storage Tanks, Steel structure and equipment for cement plants, power plants and sugar mills etc. He has been conducting internal audits of the company. He is an approved Sector Expert by European Quality Certification Institute for the Engineering sector.

### Course Description:

According to the rules for pressure vessel design and construction, this three days course is a comprehensive introduction to the requirements of Section VIII, Division 1 of the Code and general introduction regarding pressure vessels. It covers the background, organization, design, materials, fabrication, inspection, testing and documentation of pressure vessels.

### Course Objective:

After completion of this practical discussion orientated course, participants will be able to evaluate the mechanical design of pressure vessels in accordance with the ASME Code Section VIII. They will also be able to develop a pressure vessel maintenance program based on API-510 and other industry practices and then apply these requirements to typical pressure vessel maintenance situations.

### Course Overview:

- Information on ASME and API standard requirements, procedures, materials and maintenance.
- Advanced technology survey of pressure vessels including inspection practices.

- Good practices for constructing and maintaining pressure vessels to meet operating standards and practices.

### Course Outline:

Day 1

- General Requirement
- Design Philosophy
- Stress Analysis
- Stress failures / theories
- ASME VIII Div 1 & Div 2 Minimum Allowable Wall Thickness calculation
- Failures in Pressure Vessels

Day 2

- Definitions of the terms related to pressure vessels.
- Miscellaneous pressure parts
- General requirement for all methods of construction and all materials
- Safety Requirements during Fabrication, Inspection and Testing

Day 3

- Inspection, Examination, and Pressure Testing Practices
- Inspection Plans
- Risk-Based Inspection (RBI) Preparation for Inspection
- Inspection for Different Types of Damage Mechanisms and Failure Modes
- Types of Inspection and Surveillance for Pressure Vessels



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