



PV Elite & Tank – Pressure Vessel & Tank Analysis(IGT-PVT)

Course Length: 2 Days

Attendees are encouraged to bring their vessel design problems to the seminar. This course is designed for Engineers and designers representing Manufacturers, Consultants, and Inspectors involved with designing, shop fabrication, maintenance, repair, and inspection of pressure vessels and heat exchangers and fresh graduate mechanical engineers who want to become a pressure Vessel / Heat exchanger designers and those who would like to pursue their career in Plant design industry specifically as a static equipment engineer. The course also covers design of Storage tanks as per API 650 and 653 standards.

Prerequisites:

- Drafting, design, or engineering experience is required.
- Basic Plant design/ engineering knowledge is required.
- Working knowledge of AutoCAD.
- It is also recommended that you have a working knowledge of Microsoft® Windows® XP, Microsoft® Windows® 2000, or Windows NT® 4.0.

Curriculum

DAY 1

Basic Vessel Components & Analysis

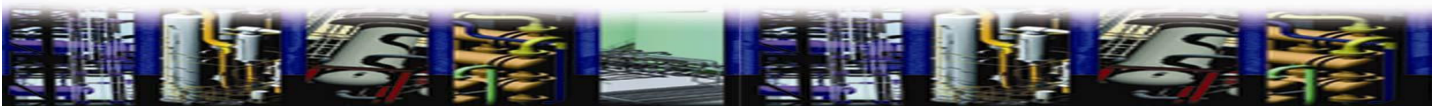
- ❖ Internal and External pressure on cylinders and heads
- ❖ Nozzle reinforcement and weld strength
- ❖ Cones and Conical sections , Spherically dished covers

Additional Vessel Components & Analysis

- ❖ Weld neck, slip-on, ring flanges, Blind flanges and flat heads
- ❖ Heat Exchanger designs to ASME, TEMA and PD 5500 and the differing requirements
- ❖ Tube sheets, including the TEMA fixed tube sheet requirements
- ❖ Cones and conical sections, Rectangular vessels
- ❖ Flanged and flued and metal bellows expansion joints
- ❖ Stresses in shells due to loads on attachments

Tall Vertical Vessels & Vessel Supports

- ❖ Wind and earthquake loads
- ❖ Load combinations
- ❖ Skirt and base ring design
- ❖ Legs and support lugs
- ❖ Stresses in shells due to loads on attachments
- ❖ Horizontal vessels on saddle supports
- ❖ PD 5500 Tower Design Example, ASME Design Example
- ❖ Horizontal vessels on saddle supports





Day 2

Introduction to Storage TANK

- ❖ **Structural Library ,**
- ❖ **Material Data Bases and Editor ,**
- ❖ **Integrated Error Checking.**
- ❖ **Interactive Report Review.**
- ❖ **Custom Program Configuration.**
- ❖ **Analysis and Design Capabilities.**
- ❖ **Thickness Design.**
- ❖ **Wind Girder and Stability.**
- ❖ **Internal Pressure Analysis per Appendix F.**
- ❖ **Stainless Steel Adjustments per Appendix S.**
- ❖ **Cone Roof and Supported Cone Roof Design per Brownell & Young.**
- ❖ **Seismic Analysis per Appendix E.**
- ❖ **Nozzle Flexibilities and Limiting Loads per Appendix P.**
- ❖ **Graphics Display of Solution Data.**

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