

PV Elite – Pressure Vessel & Heat Exchanger (IGT-PVT)

Course Length:	2 Days
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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.

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® Operating Systems

Curriculum

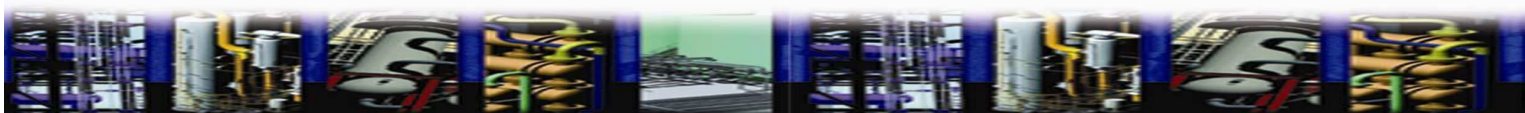
DAY 1

Vertical Vessel Modelling & Analysis

- ❖ **Vessel Element Modelling**
 - Heads (Elliptical, Spherical, Tori Spherical, Flat Head)
 - Cylinder (Shell), Cone, Skits, Body Flange
- ❖ **Vessel Attachment Modelling**
 - Nozzles, Stiffer Ring, Legs & Lug
 - Platform, Tray, Packing, Lining, Insulation, Fluid
- ❖ **Nozzle Opening Area Calculation**
- ❖ **Thickness Calculation for Internal & External Pressure**
- ❖ **Wind & Seismic Load**
- ❖ **MDMT Calculation**
- ❖ **Report Reading and Evaluation**
- ❖ **WRC 107 Local Stress Analysis for Nozzles**
- ❖ **Practical Example**

Horizontal Vessel Modelling & Analysis

- ❖ **Horizontal Vessel Element Modelling**
- ❖ **Horizontal Vessel Attachment Modelling**
 - Saddle, Sump Head, Horizontal Clip
- ❖ **Hill Side Nozzle, Nozzle to Nozzle, Sump Head Nozzle**
- ❖ **Report Reading and Evaluation**
- ❖ **Practical Example**



Day 2

Heat Exchanger Modelling & Analysis

- ❖ **Vessel Element Modelling**
 - Channel Side, Shell Side
 - Tube Sheets, Tube Layout Buddle
 - Expansion bellows & Load Case
- ❖ **Report Reading and Evaluation**
- ❖ **Practical Example**

Codecalc Component Modelling & Analysis

- ❖ **Component Modelling & Analysis in Codecalc**
 - Jacketed Vessel
 - WRC 107 / FEA Local Stress Analysis
 - Rectangular Vessel
 - Fitness for Services (FFS) as per API-579
 - Lifting Leg
- ❖ **Report Reading and Evaluation**
- ❖ **Practical Example**

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