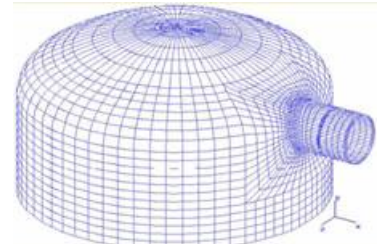


Day 1 NozzlePRO Basics

- Basic Nozzle Analysis
 - Satisfying the Sec. VIII – Div. 2 Code
 - Volumetric Analysis
 - Steady State and Transient Heat Transfer in Nozzles
- Saddles and Pipe Shoes
 - Satisfying the Codes
 - Steady State and Transient Heat Transfer in Saddles and Pipe Shoes
- Basic Nonlinear Use (Introduction to Sec. VIII - Div. 2 Part 5 Elastic Plastic Analysis)
- Nonintegral Repads
- Introduction to the new Drawing Tools
- Introduction to basic Fitness for Service: Local Thin Areas and Crack-Like Flaws



Nozzle in Head of Vessel

Day 2 FEPIPE Basics

- FEPIPE Templates and Their Capabilities
- Multiple Nozzles and Supports
- Combining Models to Create Larger Systems
- Skirts and Static/Dynamic Seismic Analysis
- Pressure Capacity and SIFs for B16.9 and EN10253 Welding Tees

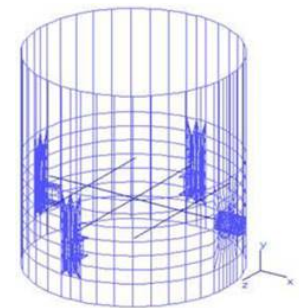


Day 3 NozzlePRO / FEPIPE Advanced Topics

- Establishing Noncyclic Service for Vessels & Piping Systems
- Simple Volumetric Rules of Thumb
- Nonlinear Analysis Introduction
- Section VIII Div. 2 – Specific examples for pressure vessels and piping
- New Drawing Tools – Intermediate and Advanced Capability

Day 4 New Functionality

- Nonlinear Analysis VIII-2 Part 5 Elastic-Plastic Compliance for Higher Allowable Loads
- Nonlinear Elastic-Plastic Analysis of Flange Joints
- Local Thin Area and Crack Analysis | Fitness for Service
 - Knowing when to inspect for cracks
 - Crack Prediction – how to use the FFS and Inspection Guidance
 - Crack Growth Model and Inspections
 - FFS & Linear Analysis | FFS & Nonlinear Analysis
 - J Integrals



Tank with Internal Supports and Piping

Day 5 New Functionality

- Point Cloud Examples
 - Establish a baseline for an installed piping system
 - Understand accuracy calibration by the laser scanner
 - Evaluating operating piping systems – what to expect
 - Verifying vessels and nozzle placement
- BOS B31 – basic fluid mechanics and common variables for:
 - Slug Flow
 - Waterhammer
 - Relief Valve Firing
 - Two Phase Flow
- Cumulative Damage and Code Compliance (PCL-Gold and CAESAR II)
- Piping Fitness for Service
- When is it critical to use B31J?
- When should a piping system be inspected?
- Piping System Gap Analysis for Flanges



Displacement due to Relief Valve Firing

REGISTRATION FORM

Module	Course	Days/Dates
Module 1	NozzlePRO Basics	Monday.....October 15, 2018
Module 2	Module 1 (+) FEPIPE Basics NozzlePRO/FEPIPE Advanced	Monday - WednesdayOctober 15 – 17, 2018
Module 3	Module 2 (+) Two Days of New Functionality	Monday - FridayOctober 15 – 19, 2018

	Price	M	T	W	Th	F
<input type="checkbox"/> Module 1: NozzlePRO Basics	\$ 900	•				
<input type="checkbox"/> Module 2: Above (+) FEPIPE Basics NozzlePRO/FEPIPE Advanced	\$ 2,700	•	•	•		
<input type="checkbox"/> Module 3: Above (+) Two Days of New Functionality	\$ 3,500	•	•	•	•	•

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A rental car is recommended, however the hotel will provide van service to our offices if pre-arranged with the hotel upon check-in.			