



PIPING & HEAT EXCHANGER CHEMCAD SIMULATION SOFTWARE

3 Day Seminar

(Presented by P&I Design Ltd.)



Piping Systems Design and Rating

Day 1 Piping Systems	<u>CHEMCAD Refresher</u>
	MNL501B Component physical property plots and reports. User component & aqueous mixture > physical property regression. Excel mapping feature for reporting and model enhancements.
	<u>Flow Refresher</u>
	MNL063B Review of flow in pipe theory > friction factor > roughness > resistance coefficients Review of control valve and orifice plate sizing theory and methods.
	<u>Fluid Flow & Piping Systems</u>
MNL063B Shortcut sizing for Pipes, Control Valves and Flow Orifice Plates. Fluid flow in pipes, valves, fittings and pumps – sizing and rating networks. Piping system network analysis using Nodes.	
	<u>Relief System Sizing Theory and Application</u>
	MNL043A Relief system sizing fundamentals. MNL058 Review of validation cases from API & Diers data.

Heat Exchanger Design and Rating

Day 2 Heat Transfer	<u>Shell and Tube Heat Exchanger Refresher</u>
	MNL032A Review of design practices and methods for shell and tube heat exchangers.
	<u>CC-THERM for Design > Rating > Fouling</u>
MNL066 Training example horizontal condensation (BH 3-3), Set up > Shortcut > THERM Calculation > Optimise. THERM Capabilities for Design > Rating > Fouling. Set up and optimise various shell and tube heat exchanger configurations.	

Discussion and Workshop

Day 3 Workshop	<u>Discussion</u>
	Review of course content and general discussion on topics of specific interest. Set up and run simulations on engineering applications of specific client interest.
	<u>General Workshop</u>
MNL067 Course participants to set up and run simulations detailed in workbook provided. Workbook will include practical examples in all areas covered by the course.	