STEADY STATE & DYNAMIC CHEMCAD SIMULATION SOFTWARE

3 Day Seminar Programme

CHEMCAD Basics and Steady State Simulation

Day 1	**Introduction** MNL501 Review of CHEMCAD, CC-BATCH, CC-ReACS, CC-DCOLUMN and CC-THERM Folder / file handling - tool bars - function keys - zip - import/export - help **Fundamentals** MNL501 Flowsheet - units - components - calculation - convergence - simulation -report - PFD Flash fundamentals and process applications **Report Handling** Excel mapping feature for reporting and model enhancements Exporting data to Windows applications **Thermodynamics** MNL031 Component physical property plots and reports MNL035 User component & aqueous mixture - physical property regression and predictions MNL049 Thermodynamics model selection - expert system Phase equilibrium ideal and non ideal mixtures **Fluid Flow & Piping Systems** Review of the capabilities and applications MNL063 Fluid flow in pipes, valves, fittings and pumps – sizing and rating networks

Dynamic Simulation

Day 2	**Introduction** MNL061 Set up flowsheet, run dynamic models (Direct/Indirect Flow Regulation) MNL055 Process and Instrumentation control refresher MNL061 p19 Setting up a tank level control model (Level Control 1 and 2) **Relief System Sizing and Dynamic Behaviour** MNL043 Relief system sizing fundamentals and review of validation cases (API & Diers) MNL058 Relief network sizing and dynamic relief system cases (RELIEFNET, DIERS2DVSL) **Batch Distillation** MNL061 p53 Dynamic batch distillation - CC-BATCH module (Batch Distillation 1) MNL061 p57 Batch distillation using dynamic batch reactor and column module(Batch Distillation 2) **Batch Reactors** MNL063 Batch reactor direct jacket temperature control(Direct Cool with Reaction) Modelling of typical temperature control modules (Direct & Indirect Modes) MNL062 p19 Exothermic reaction thermal stability in stirred reactor (RXDOWJ)

Workshop

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