

CHEMPUTE SOFTWARE

Personal Computer Software for the Engineering Industry

P.O.Box 856, Kloof, 3640, South Africa

Tel : Intl +27-31-7646840 Fax : Intl +27-31-7645934 Email : sales@chempute.com

AFT HYDRAULIC PIPE NETWORK TRAINING COURSE

General Scope

The basic theoretical background to hydraulics in piping systems and system design and analysis is covered, including efficient design. Training makes use of AFT Fathom, AFT Arrow and AFT Impulse (plus add-on modules) as well as hand calculations. A discussion/question/answer format is also employed in

order to maximize retention of course material and theoretical concepts. Some of the specific topics covered* are outlined below.

Course Accreditation No:

SAIMechE-0864-05/18

CPD Points for this Course : 2

Directors: David A. Wickham, Andrew Taylor.
Registration Number: 2004/017798/07

Theresh Pather



Managing Director of TSR Consulting Engineers, is a Professional Process Engineer (PrEng) with over 15 years of combined experience in the fields of Process Plant Operation, Plant Design, and Project Management. He holds a Master's degree in Chemical Engineering and has performed research into Coal Pyrolysis. In addition, he holds a Chartered Engineer status from IChemE. He has gained experience in the following key process industries:

- Synthetic fibre plant
- Solvents plant-acrylic acids and acrylates including Training in Japan by Mitsubishi
- Diesel hydrotreater plant
- Multi-products pipeline projects
- Crude Distillation, Vacuum Distillation units and Gas plants
- Water and Waste Water Treatment
- Power plants

This included Management/Lead engineering roles on several projects. His level of experience coupled with his qualifications and achievements would enable him to comfortably excel in any process industry. He has a strong affinity for achieving high quality results within budget and schedule restrictions in a design environment or to exceed production targets in a plant operation.

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Course contents

AFT FATHOM

Overview of AFT Fathom
Hydraulic Solution Methodology
Demonstration Problem - Sizing a Pump
Understanding Solution Control Options
AFT Fathom Hands-On Modeling
Troubleshooting AFT Fathom Models
The Five Primary Windows
Pipe and Junction Details
Special Topics
Using the Scenario Manager
Customizing Fathom and Using Databases
Intelligent System Sizing
Introduction to AFT Fathom Modules
More AFT Fathom Hands-On Modeling

AFT ARROW

Overview of AFT Arrow
Fundamental Equations of Compressible Flow
Demonstration Problem - Determining Delivery Conditions
Understanding Solution Control Options
AFT Arrow Hands-On Modeling
Troubleshooting AFT Arrow Models
The Five Primary Windows
Pipe and Junction Details
Special Topics
Verification of Solutions
Using Scenario Manager
Customizing Arrow and Using Databases
Introduction to AFT Arrow Modules
More AFT Arrow Hands-On Modeling

AFT IMPULSE

Overview of AFT Impulse
Steady State Hydraulic Solution Methodology
Waterhammer Solution Methodology
Demonstration Problem – Surge at Valve Closure
AFT Impulse – Hands on Modeling
Troubleshooting AFT Impulse Models
The Five Primary Windows
Pipe and Junction Details
Time and Event Transients
Steady and Transient Special Conditions – With Examples
Pump Transients – With Examples
Pipe Sectioning and Transient Control
Surge Suppression
Using the Scenario Manager
Customizing Impulse and using Databases
More AFT Impulse Hands-on Modeling

Who should attend

Engineers responsible for pipe system design and/or Analysis. Current users of AFT software who want to deepen their understanding of the software and theory.

*New users interested in an overview
AFT Fathom users who want to know more about the Add-on Modules. Engineers who wish to better understand AFT software for purchasing decisions*