Advance Software Solutions Centre Pte Ltd
Specializing in Computer Aided Software Applications, Trainings & Consultancy

AFT Fathom Add-on Module Tutorial Training

Duration:

1 Day

9:00 am - 6:00 pm

1 hour lunch break

Min 4 pax to start an onsite privacy training course

Focus:

To provide an immediate experience with hydraulic pipeflow solutions by using AFT Fathom add-on module. It is primarily for people who are interested in starting up with Fathom Add-on modules now but have little or no experience with the Fathom add-on module. The examples are arranged in order of increasing complexity.

Prerequisites:

- Basic literate in Windows 98 or Win ME or Win2000 or semilar.
- Basic understanding in fluid dynamic, thermodynamic and heat transfer.
- AFT Fathom tutorial course.

Agenda:

FATHOM GSC MODULE

FG1. Introduction to Fathom GSC Module
FG2. Using Fathom GSC
FG3. GSC Module Interface with Fathom
FG4. Troubleshooting
FG5. Special Topics
FG6. Fathom GSC Hands-on Modeling

FATHOM CST MODULE

FC1. Introduction to Fathom CST Module
FC2. Using Fathom CST
FC3. CST Module Interface with Fathom
FC4. Special Topics
FC5. Fathom CST Hands-on Modeling

FATHOM XTS MODULE

FX1. Introduction to Fathom XTS Module
FX2. Using Fathom XTS
FX3. XTS Module Interface with Fathom
FX4. Reservoirs in XTS
FX5. Time & Event Transients
FX6. Special Topics
FX7. Fathom XTS Hands-on Modeling

FATHOM SSL MODULE

FS1. Introduction to Fathom SSL Module
FS2. Settling Slurry Theory
FS3. Using Fathom SSL
FS4. SSL Module Interface with Fathom
FS5. Fluid and Solids Data in SSL
FS6. Special Topics
FS7. Fathom SSL Hands-on Modeling

Selective Hand on Tutorials:

Fathom GSC Examples:

1) Heat Transfer in a Pipe: In-depth discussion of setting up a GSC module model, including variables and goals.
2) Spray Discharge System: This example explains the difference between Group Max/Min and Group Sum goals, and gives examples to illustrate their use.
3) Pump Sizing with Flow Control Valves: This example uses the GSC module to allow the sizing of a pump upstream of flow control valves without encountering Reference Pressure problems.
4) Cooling System: This example demonstrates how to use multiple variables and goals. The example varies pump speed and PRV set point to maintain a HX flow rate and the PRV % open.
5) Controlled HX Temperature: This examples varies the % open of a three way valve to determine the flow split through a HX to maintain a specified downstream temperature.

Fathom XTS Examples:

1) Filling a Tank: In-depth discussion of transient analysis using XTS.
2) Reservior Balance: This example introduces users to finite reservoirs by using XTS to examine the affects of different hydrostatic pressures on the fluid levels in three reservoirs that are connected in series.

3) Valve Closing: This example illustrates how to set up an event based transient for a valve junction. A valve is set to close when the liquid height in a tank reaches a specified level.

4) Water To Housing Project: This example uses a Dual Event Cyclic transient to simulate a supply pump used to replenish a water storage tank used to supply water to a housing development during fire situations.

5) Variable Demand: This example uses a pump transient to initiate auxiliary pump start up for a system with variable demands to ensure adequate pressure drop across a control valve.

Fathom CST Examples:

1) Controlled HX Temperature: Demonstrates the fundamental concepts of the Cost (CST) add-on module by using the CST module to determine the cost of the heat exchanger system over a 10-year period. Include material, installation, and energy costs.

2) Plant Cooling System: Demonstrates how the CST module can be used to calculate the material, installation, and energy costs for a plant cooling system for a 10-year system life cycle.

Fathom SSL Examples:

1) Pump Sizing for Sand Transfer System: Uses the Settling Slurry (SSL) add-on module to size a pump for a sand slurry transfer system.

2) Slurries with Variable Fluid Properties: Uses the Settling Slurry (SSL) add-on module to evaluate system performance as slurry is introduced into a clear water system.

3) Slurry System Feasibility Study: Demonstrates how to evaluate slurry system operating points for feasibility and stability of operation.