Extended System Modeling

AFT Fathom™ 9 Modules

Take Your System Designs to a New Level

Building on the foremost modeling software for incompressible pipe flow systems, the AFT Fathom add-on modules extend capabilities into these areas:

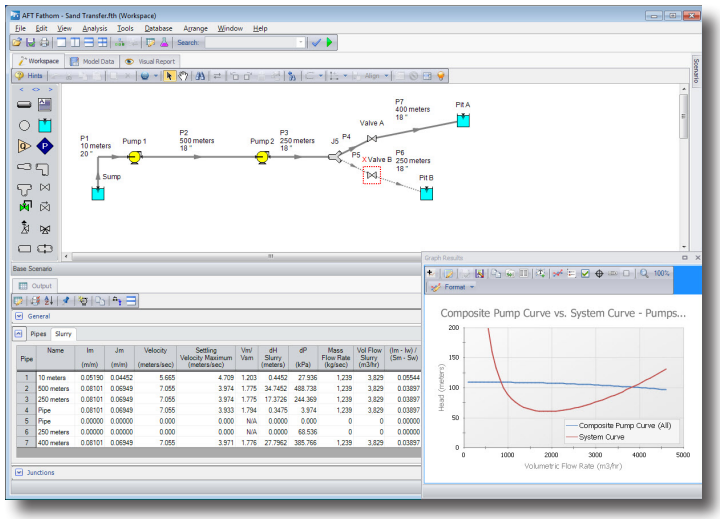
- Slurry Modeling - models the effects of moving settling slurries in pipes
- Extended Time Simulation - models dynamic system behavior
- Goal Seek and Control - automates identification of input parameters that yield desired output values and simulates control functions

These modules have been designed specifically for AFT Fathom and can work with your existing AFT Fathom system models.

Settling Slurries
SSL Module

Benefits
- Expertly handle slurry system challenges
- Avoid system failures and excessive operational costs
- Prevent plugged pipes and misapplied pumps
- Reduce energy usage
- Improve system performance
- Reduce operating and maintenance costs

Capabilities
- Solutions from the leading Wilson/GIW method
- Shareable database of solid particle properties
- Slurry pump de-rating using Warman or ANSI/HI methods
- Produces output reports with settling velocity, slurry volume/mass flows and other slurry parameters
- Generates slurry systems curves critical to understanding system velocity limits



Dynamic solutions for a fluid world ™

Applied Flow Technology

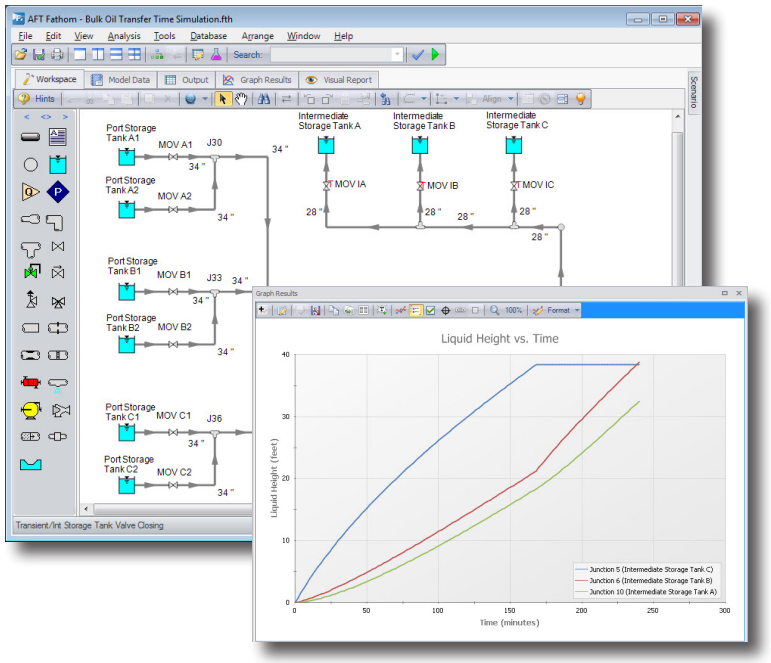
Extended Time Simulation
XTS Module

Benefits

- Understand how critical system parameters vary over time
- Automatically change variables for a dynamic simulation of your system

Capabilities

- Define a wide range of actions to occur during the time simulation including:
    - Tank volume and liquid level tracking
    - Pump start/stop and speed variation
    - Valve position changes
    - Control valve setpoint variation
- Text and graphical output
- Unique animation feature dynamically displays time varying parameters along selected flow paths



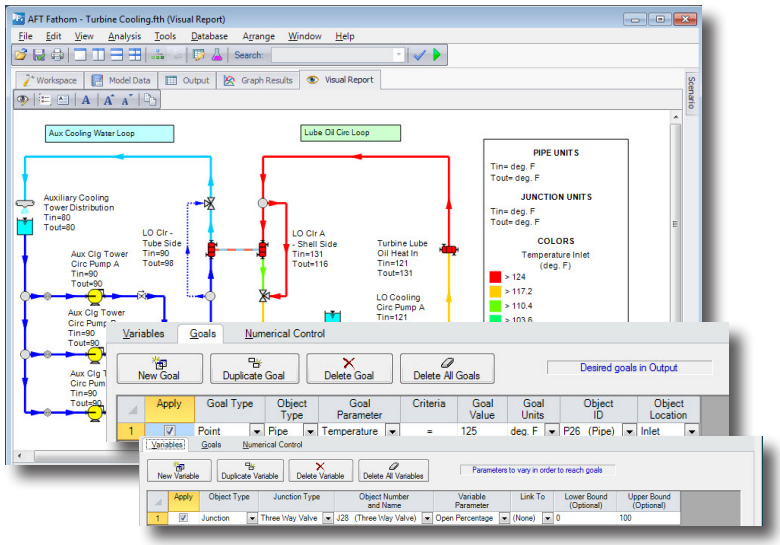
Goal Seek & Control
GSC Module

Benefits

- Evaluate the effects of changing system parameters
- Save time by avoiding manual iterative analyses
- Simulate control system behavior

Capabilities

- Define multiple variables and goals at multiple locations throughout the system
- Define goals as single point, differential or sum
- Calibrate models by automatically adjusting pipe friction and scaling to match measured data
- Modeling parameters for variables or goals include
    - Control valves - setpoint, open percent
    - Pumps – speed, flow, head rise
    - Valves - open percent, Cv/K, delta P, flow
    - Reservoirs - pressure, temperature
    - Orifice - diameter, area
    - Heat exchangers - heat rate, temperatures, area, U value
    - Spray discharge - area, K value, discharge coefficient, exit pressure



Get the most out of your AFT Fathom software investment

Training by our professional staff helps you learn about the software's wide range of capabilities and modeling techniques. Our seminars review fundamental theory, basic through advanced techniques and hands-on modeling. Whether you're a new or experienced user, you'll find an AFT Fathom seminar a worthwhile investment of your time. AFT offers regularly scheduled seminars at our offices in the USA. Seminars can also be held at your facility. Visit www.aft.com/learning-center/seminars for more information.

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