

AFT Impulse™

Add-on Modules



Enhance Your Transient Analysis

Building on the foremost software for calculating pressure transients in piping systems, the AFT Impulse add-on modules extend your analysis capabilities. These modules have been designed specifically for AFT Impulse and can work with existing AFT Impulse models.

- **Slurry Modeling** - the only commercial software that can model both non-settling and settling slurries.
- **Pulsation Frequency Analysis** - identify and avoid resonant frequencies



Settling Slurries SSL Module

Benefits

- Expertly handle slurry system challenges
- Avoid system failures
- Prevent plugged pipes and misapplied pumps
- Improve safety by understanding slurry waterhammer transients

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 ratio, slurry volume/mass flows and other slurry parameters
- Calculates wave speeds for liquid-solid mixtures

The screenshot displays the AFT Impulse software interface. The main workspace shows a piping model with a pump (P1) and a tank (T1). The 'System Properties' dialog box is open, showing settings for 'Basic Water Slurry Input'. The 'Graph Results' window shows a plot of 'Maximum / Minimum Pressure Static vs. Length, Pipe 1 - 4' with pressure in psig on the y-axis and length in feet on the x-axis. The plot shows two lines: a red line for 'Max Static Pressure' and a blue line for 'Min Static Pressure'. The 'Output' window shows a table of slurry properties for four pipes.

Pipe (feet)	Name	In (ft)	Out (ft)	Velocity (ft/sec)	Settling Velocity (ft/sec)	Vel. Ratio	d _p (microns)	ρ _p (lbm/ft ³)	Mass Flow Rate (lbm/sec)	Vol. Fr. (%)
1	Pipe	14.27	10.81	21.97	12.281	1.789	1.251	2.927	998.1	4
2	Pipe	14.52	10.92	21.97	9.718	2.261	43.684	25.173	998.1	5
3	Pipe	14.26	10.74	21.97	12.826	1.713	5.993	18.196	998.1	5
4	Pipe	14.52	10.92	21.97	9.718	2.261	43.684	25.209	998.1	5



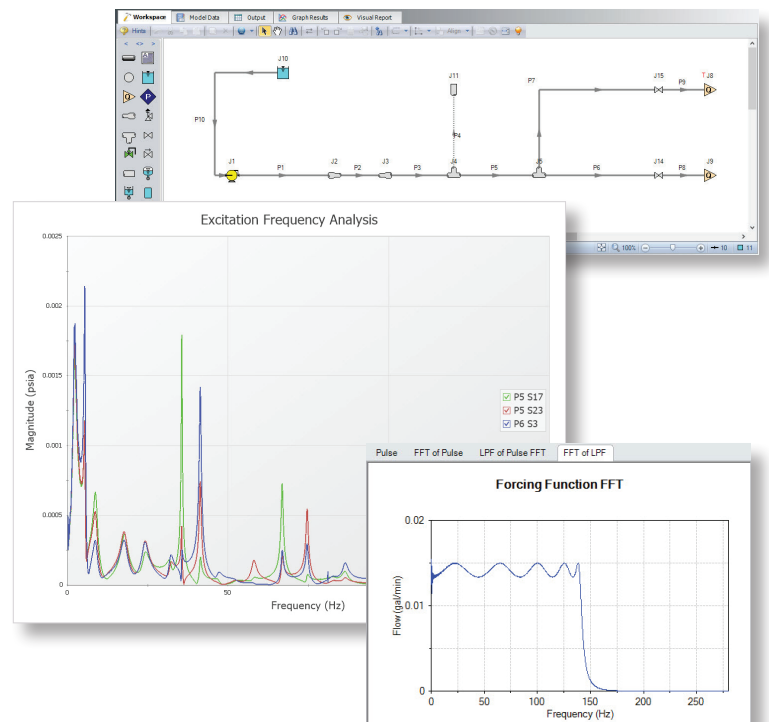
Pulsation Frequency Analysis PFA Module

Benefits

- Avoid system weakening, damage and/or failure
- Reduce operating and maintenance costs
- Minimize disruptions in production processes

Capabilities

- Understand and predict resonant frequencies in systems that use positive displacement pumps so they can be avoided in operation
- Automatically create scenarios to evaluate how large pressure pulsations are when operating at the resonant frequencies
- Compare the pressure pulsation magnitudes to that allowed by API Standard 674 so you can check compliance with this standard



World Class Support

Your software includes one free year of product upgrades and technical support. Additionally, AFT offers a variety of training for all levels of knowledge.



Training Seminars

This classroom style setting teaches you how to be an AFT analysis and simulation expert.



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