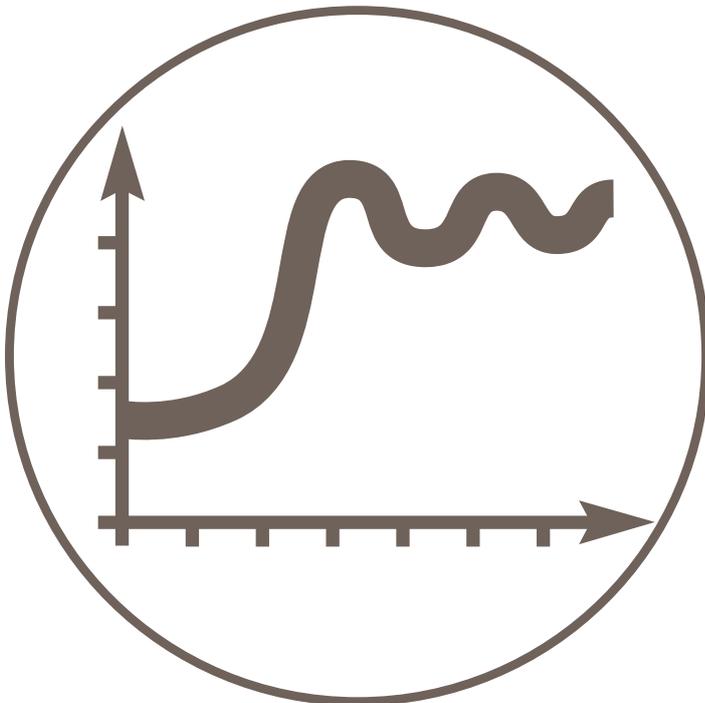


## Atmos Surge Analysis

### Meeting government regulations and saving valuable time by automating a series of surge analysis scenarios

#### The challenge

Being able to predict operational conditions within a pipeline is difficult, but being able to identify surges that could cause potential problems or bursts is even harder. Some authorities, for example, the US Department of Transport (DOT), require pipeline operators to have up to date surge analysis studies completed and filed for all of their pipelines. For many operators, this is a very demanding and time consuming task due to the many thousands of miles of pipelines to be analyzed.

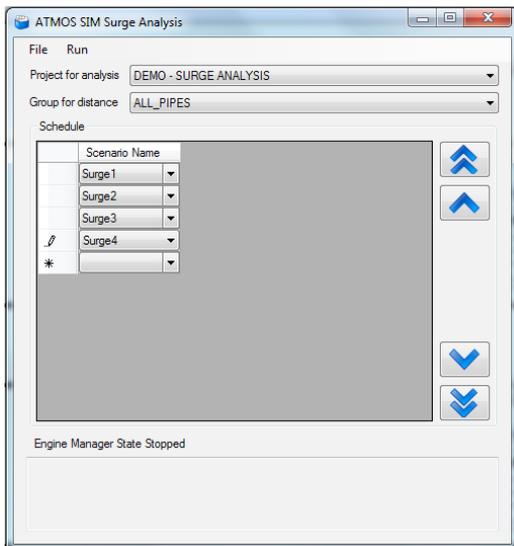


Atmos Surge Analysis has the following main benefits:

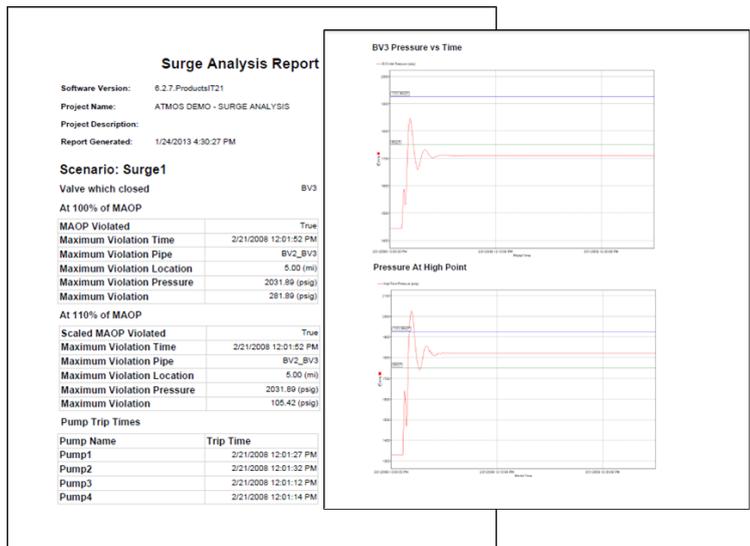
- **Leak prevention:** identifies the pipeline locations where an operation is most likely to cause a rupture
- Uses the same configurations as Atmos SIM Offline. No additional models are required
- Saves valuable time for the pipeline operators through the automation of the process
- Automatically generates a report containing all of the precise data and graphs required for DOT submission

#### Main features

- Surge analysis is an additional module of Atmos SIM, field-proven to be the most accurate pipeline simulation tool on the market
- A schedule of pipeline scenarios can be set to run automatically while the operator completes other tasks. No additional input from the user is required until the analysis is complete
- One analysis session can include an entire pipeline and any branches or subsections
- The system speeds up and simplifies surge analysis tasks
- Reports are automatically generated by Microsoft® Word



Surge selector



Surge analysis report

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**What is Atmos Surge Analysis?**

Atmos Surge Analysis is an additional module available as a bolt-on to Atmos SIM Offline. Atmos SIM Offline has a wide range of functionality and can be used for pipeline design, equipment sizing and locating, operational design, operational tuning and, training.

The Surge Analysis module has been purpose built to simplify and automate the process of submitting a detailed report to the relevant authorities, as required by law. The single-minded focus behind its development has led to the ultimate tool for surge analysis.

It works by scheduling the running of a series of scenarios such as valve closures and pump trips. The schedule is then run, and the data for each scenario analyzed for pass and failure criteria. This data is then automatically entered into a report, where the data is displayed graphically in trends, pipeline maximum pressure points are located, and pump trip times are identified.

**System outputs**

A full report is automatically generated in Microsoft® Word. This includes charts and tables that can be easily added to other studies and reports, such as DOT documentation.



Mining Oil Gas Aviation Chemical Multi-phase Water



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**About Atmos International**

Founded in 1995, Atmos International provides pipeline leak and theft detection, simulation technology, instrumentation and engineering services to the energy, water and associated industries. Atmos is the first choice of most pipeline companies worldwide, and is extensively used by major operators like Shell, BP, ExxonMobil, Petrobras, Enbridge and Total. With associated offices in the USA, China, Russia, Singapore, Indonesia, Colombia, Ecuador, Peru and Costa Rica, and local agents in 28 countries, our multi-cultural and multilingual team is dedicated to effective global support for the lifetime of our products all over the world.

