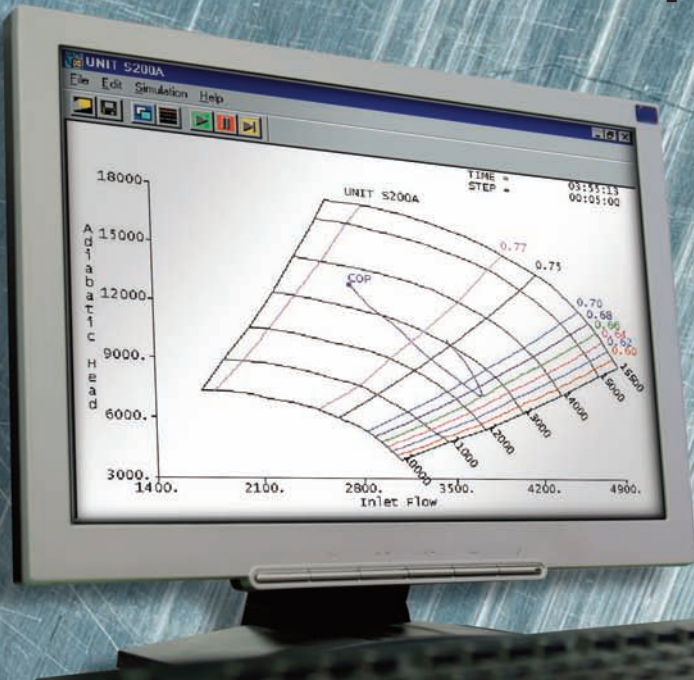


Stoner Pipeline Simulator (SPS)



Stoner Pipeline Simulator (SPS) leads the world in the fidelity of transient fluid flow simulation of natural gas pipeline networks. Control system analysis, equipment performance analysis, temperature analysis, composition analysis, pressure-flow capacity analysis, or any combination of these can be simulated accurately and easily with SPS. Of course, SPS performs simplified idealised simulations as well. You decide the complexity to fit your needs.

Equipment and Controls

SPS simulates all existing equipment including pipes, centrifugal and reciprocating compressors and station yard piping, regulators, valves, headers and heat exchangers, exactly as configured in the field. SPS models your entire control system, sensors, PID controllers, relays and actuators. You can use the SPS idealised controls for more simplified simulations.

SPS models compressors simply or in complete detail. Enter your centrifugal compressor performance data at a single speed, and SPS will apply fan laws to complete the performance map. You can also specify the entire performance curve for the compressor and/or turbine driver or simulate variable guidevane compressors. For reciprocating compressors, use either simplified units or detailed compressors that consider pocket displacement and clearance ratios.

Simulation Capabilities

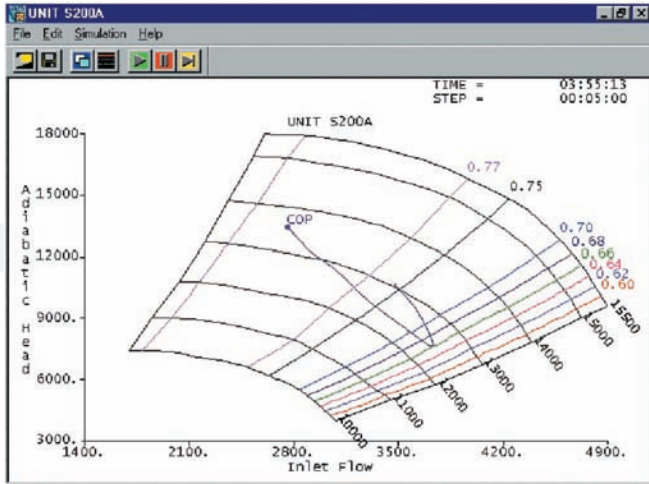
SPS provides a comprehensive selection of equations-of-state including BWRS, CNGA and AGA-8. SPS tracks gas composition with proven accuracy. You can also specify unique gas properties, such as gas ownership, and track the mixing of these properties throughout the network.

As with equipment, you select the level of thermal modelling that fits your study needs, from a purely isothermal analysis to a fully transient radial heat transfer solution. SPS not only simulates the thermodynamic behaviour of the gas and the heat transfer to its surroundings, but also accounts for the heat capacity of the surroundings to store and release the transferred heat.



SPS Leakfinder

SPS/Leakfinder maintains constant vigilance over pipelines transporting crude oils, petroleum products and natural gas, calculating the pipeline state even when poor or missing telemetry data compromise the SCADA system. SPS/Leakfinder continually analyses the calculated state, searching for anomalies that suggest a leak. Using two different leak detection techniques concurrently, SPS/Leakfinder provides truly effective leak detection.



SPS/Predictor

SPS/Predictor propels our hydraulic simulation technology into your company's bottom line. SPS/Predictor gives you unprecedented confidence in your business plan by testing it in advance of actual operations. Not only can your gas controllers check for alarms in advance, they can test "what-if" scenarios to increase efficiency or push the envelope of capacity during projected high demand periods. With SPS/Predictor, you can confirm nominations with the confidence that you are not leaving capacity dollars on the table.

Added Functionality

The SPS family includes a complete range of compatible simulation solutions from the planning desktop through operator training and qualification, and into online systems including leak detection and predictive simulation. Using new technologies and innovative architectures, the SPS family can be deployed to meet the needs of engineering and operations, and to help your marketing department improve your bottom line.

SPS/Statefinder

Statefinder closes the gaps in SCADA measurement and filters inherent measurement errors to provide accurate essential pressure, flow, pack rate and other operating values at any point in the pipeline. As a real-time surveillance tool, Statefinder helps pipeline controllers operate safely and economically, even in critical situations.

SPS/Trainer

SPS/Trainer helps gas and liquid pipeline companies prepare control room staff to safely operate their pipeline networks. SPS/Trainer provides a safe environment to enhance operating skills during normal and abnormal pipeline conditions. Much like a flight simulator used to train airline pilots, SPS/Trainer enhances the performance of even your most seasoned operators. Using SPS/Trainer, operators will learn the "feel" of your pipeline's dynamic operation, recognise the signatures of emerging problems and learn to mitigate effects and return the pipeline to safe operation.

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