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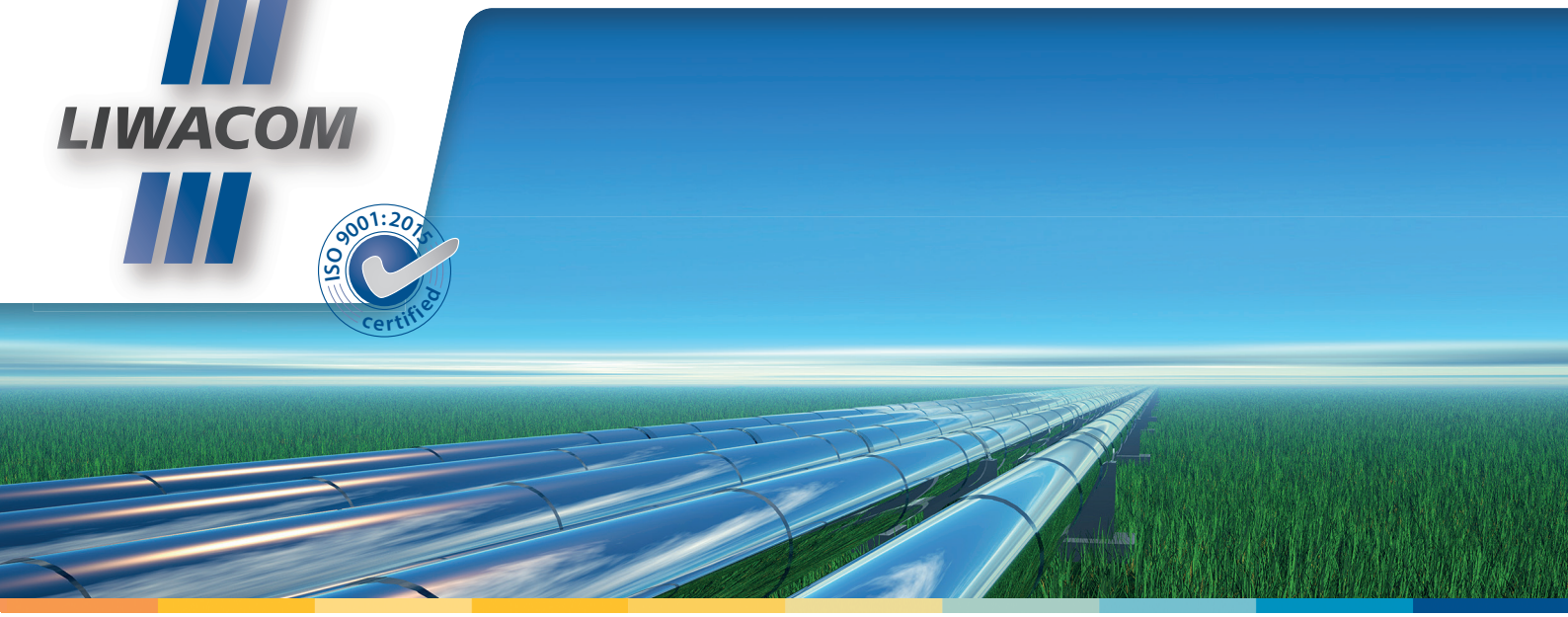


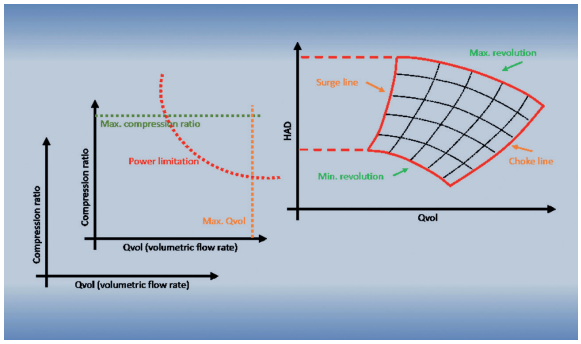
The compressor station is one of the most important components of the natural gas transport system. These stations perform the essential task of compressing natural gas as it travels through pipelines.

Compressor stations are associated with basic parameters that include suction and discharge resistance coefficients, and the location at the pipeline where gas turbines tap off their fuel.

SIMONE Compressor Station Modelling

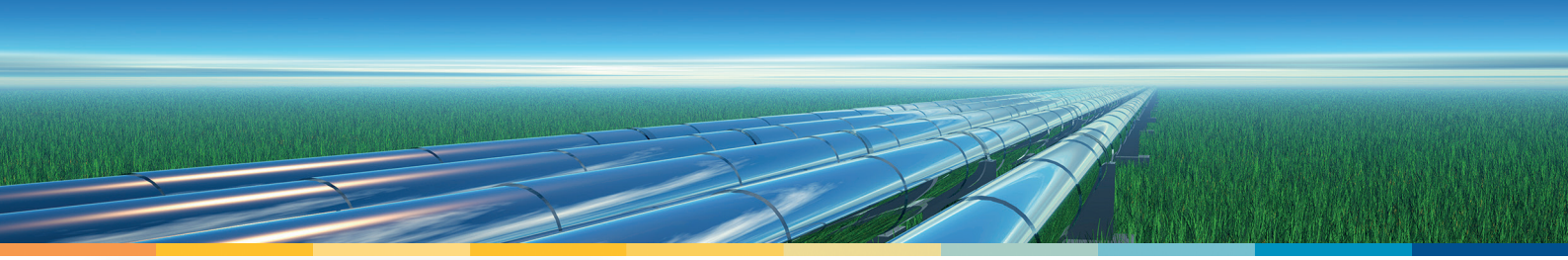
Various compressor models are at hand, ranging from a basic model up to SIMONE's unique high-fidelity model of compressor characteristics. The latter is used to optimize compressor operation; i.e. the compressor units to be on-line, and their operating set points are determined in order to minimize fuel cost, or to maximize throughput. The Optimizer fulfills the transport requirements, hydraulic equations, and operational constraints (e.g. limits on pressures and flows; compressor, prime mover and gas cooler constraints).

SIMONE Compressor Station Modelling offers, in addition to the Generic Model, the Detailed Compressor Station Model. It describes the performance characteristics and operating limits of centrifugal and reciprocating compressors, prime movers (gas turbines, gas and electric motors), and gas coolers.



SIMONE, Europe's leading standard software for simulation and optimization on gas networks provides the highest fidelity of compressor modeling and optimization.

SIMONE
SOFTWARE
Simulation and Optimization on Networks

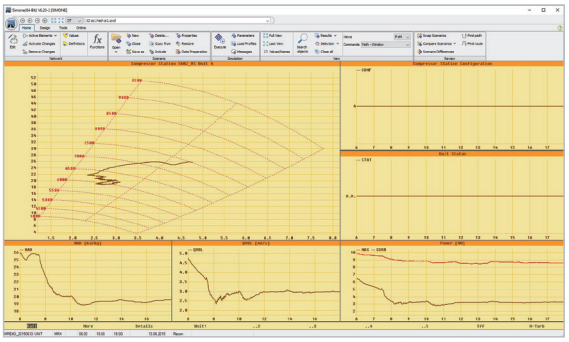


Fact Sheet

Compressor Station Modelling

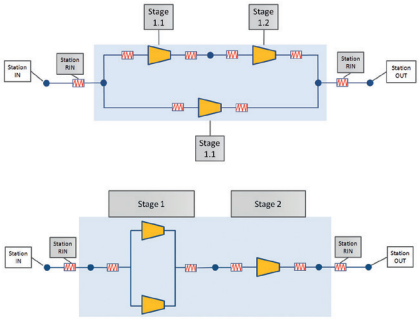
High sophisticated compressor modelling of turbo- and piston compressors

- Multi-stream compressor station management.
- Simple and detailed modelling of compressor drives (gas turbine, electric and gas engine).
- Supports parallel and serial compressor configurations.
- Detailed management of unit recycling.
- Implementation of compressor maps.



SIMONE

- Tracks gas compositions, gas parameters, and pipeline inspection gauges.
- Calculates temperature, line pack, flow speed, and more.
- Single kernel source code for Windows, Unix and Linux systems.
- Client Server Technology and Multi-User Support.
- Versatile Application Programming Interface, known as the SIMONE API, for integration with SCADA, GIS, databases, and customer applications.



SIMONE Users

FLUXYS

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gasunie transport services

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nationalgrid

Open Grid Europe The Gas Wheel

SWISSGAS

GAZ system

Contact and Product Support

SIMONE SOFTWARE

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