

Atmos Pipe - The Statistical Volume Balance Leak Detection System to “Go Beyond” Standard

Detected more pipeline leaks and ruptures around the world than any other system

Most trusted

Pipeline controllers trust the supreme reliability and ease of alarm and event analysis; prompt response to Atmos Pipe leak alarms has helped minimize the consequential costs of dozens of real pipeline leaks and ruptures.

More accurate

Fast scanning option makes leak location more precise, as accurate as $\pm 100\text{m}$.

More methods

SCADA Wave

- Rarefaction wave leak detection using SCADA data from existing pressure meters to identify the onset of a leak
- Significantly faster detection time and greater sensitivity
- Great compliment for pipelines with faulty or inaccurate flow meters
- Designed for long sections of pipeline with several block valves and pressure meters

Rupture detection option

A trusted rupture alarm to prompt immediate shutdown by the pipeline controller.

As conventional leak detection systems search for small leaks as well as ruptures, inherent uncertainties can cause false alarms, forcing the controller to take time to confirm a leak alarm before shutting down the pipeline. In contrast, the rupture alarm will convince the controller to shut down the pipeline immediately.

Cumulative Volume Balance

Performs line balance and over/short calculations. Compares the volume of the product injected with the volume of the product removed from the pipeline. Can be configured for various averaging periods, each with a specific leak size. When configured for longer averaging periods, it can detect very small leaks.

Most compliant

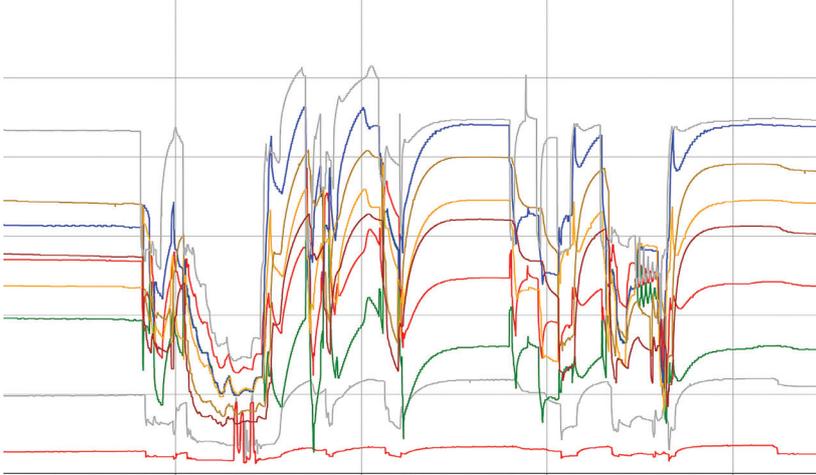
Statistical tool automatically records and reports Key Performance Indicators (KPIs) critical for your Pipeline Leak Detection Program (API 1175).

- Reliability (false alarm rate)
- Sensitivity
- Detection time
- Leaks detected
- Supporting components;
 - Instrument performance
 - Communications outages

Key features

- Very reliable-minimum false alarms
- Field proven for over 25 years on more than 800 pipelines
- Detects onset and existing leaks
- Leak location accuracy as good as $\pm 100\text{m}$ (with fast scanning option)
- Leak detection size as good as 0.25% of flow with high quality instrumentation
- Deployed in pipelines from 0.4 to 1,900km long, and 0.5” to 48” in diameter
- Software solution that uses flow and pressure data from SCADA or PLC systems
- First choice of most major pipeline operators worldwide
- Detects leaks under all operating conditions with negligible reduction in minimum detectable leak size during transients
- Draining and filling module to reduce the likelihood of false alarms during pipeline filling
- Stat Tool automatically documents performance of the LDS and supporting components in line with API 1175
- Fully compliant with; API 1130, API 1175, API 1155, API 1149 CSA Z662, German Regulations for Pipeline Leak Detection (TRFL), Shell Pipeline Leak Detection Recommendations (DEP 31.40.60.11Gen)

rs.P124_KM327 (None) Meters.P132_DEA (None) Meters.P18_KM71 (None) Meters.P29_DSTVW (None) Meters.P32_DSTVW (None) Meters.P38_EREAB (None) Meters.P89_KM213 (None)
 rs.P8_VHWY1 (None) Meters.P80_RDAB (None)



- Instrument faults, including telecommunication failures
- Operational changes from shut-in to start-up, and running
- Fluid property changes
- Seasonal changes or supply and demand variations
- Instrument drifts or calibrations

Atmos Pipe identifies operational changes in the pipeline and continues to detect small leaks during transients.

Sensors used

- Pressure meters at each end and, optionally, at intermediate pump and valve stations
- Flow meters at supply and delivery points
- Temperature meters are not crucial, but recommended when there are large differences between product temperature and ambient temperature

Data source

Atmos Pipe: SCADA, DCS, PLC, or RTU

Atmos Pipe with Fast Scan: PLC or Atmos AWAS high-speed data acquisition units

Atmos Pipe is proven to detect leaks through transient conditions

Why Atmos Pipe is the most reliable

Since its inception as the first statistical volume balance system in 1995, Atmos Pipe has been at the forefront of leak detection technology. It uses the powerful Sequential Probability Ratio Test (SPRT) with pressure and flow analysis to optimize leak detection.

At Atmos we understand that every pipeline has its own personality. The design of Atmos Pipe assures tuning and optimization for every pipeline to minimize the effect of;

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**The original, one of the best;
 now even better!**

SCADA Wave

Significantly decreases detection time and detects even smaller leaks.

Fast scanning

Improves leak location to as accurate as ± 100 meters with correct conditions. Uses PLC or Atmos AWAS high-speed data acquisition units.

Rupture detection

A highly reliable rupture alarm to prompt immediate shutdown minimizing the consequence of a rupture.

GO BEYOND

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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.

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