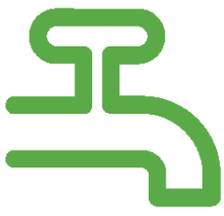
[ Solution Brief ]

# Leakage Management, Transmission Pipeline Transport Systems

## Leak detection and location



Detect leaks - no false alarms

### SAVINGS AND OTHER BENEFITS

Minimum detectable leak size: 0.5-2% of throughput

Detection time:

| | |
|---|---|
| 1-2% leak | 5-6 minutes |
| 8-10% leak | 1-2 minutes |

Leak Location

| | |
|---|---|
| 1-2% leak | 8-10% of distance between pressure meters |
| 8-10% leak | 1-2% of distance between pressure meters |

**POWERED BY AQUIS**

By using the Leakage Management Transmission Pipeline Transport System from Schneider Electric , you will benefit from a solution with the following properties:

- The highest capability.
- The most robust system.
- The most cost-effective to buy, install and operate.

Based on more than 40 man-years of experience with leak detection and location on pipeline transmission systems, we have developed the Leakage Management System; the ultimate model-based leak detection system for liquid pipelines. The system is equally well suited for pipelines carrying, for example, crude oil, refined products or water.

The capability of Leakage Management depends on the instrumentation of the pipeline. For state-of-the-art flow meters and pressure transducers, you may consider the following key figures as guidelines:

- Minimum detectable leak size: 0.5-2% of throughput, depending on the pipeline layout, operation and quality of instrumentation.
- Location accuracy: 1-10% of distance between the pressure meters, depending on leak size and flow velocity.

Leakage Management runs a dynamic real-time simulation model to generate leak responses. This means that your Leakage Management System will work under all operating conditions, including periods with starting and

stopping of pumps, opening and closing of valves, etc.

The following leak responses can be generated:

- Unexpected flow (UF).
- Unexpected pressure (UP).
- Net volume balance (NVB).

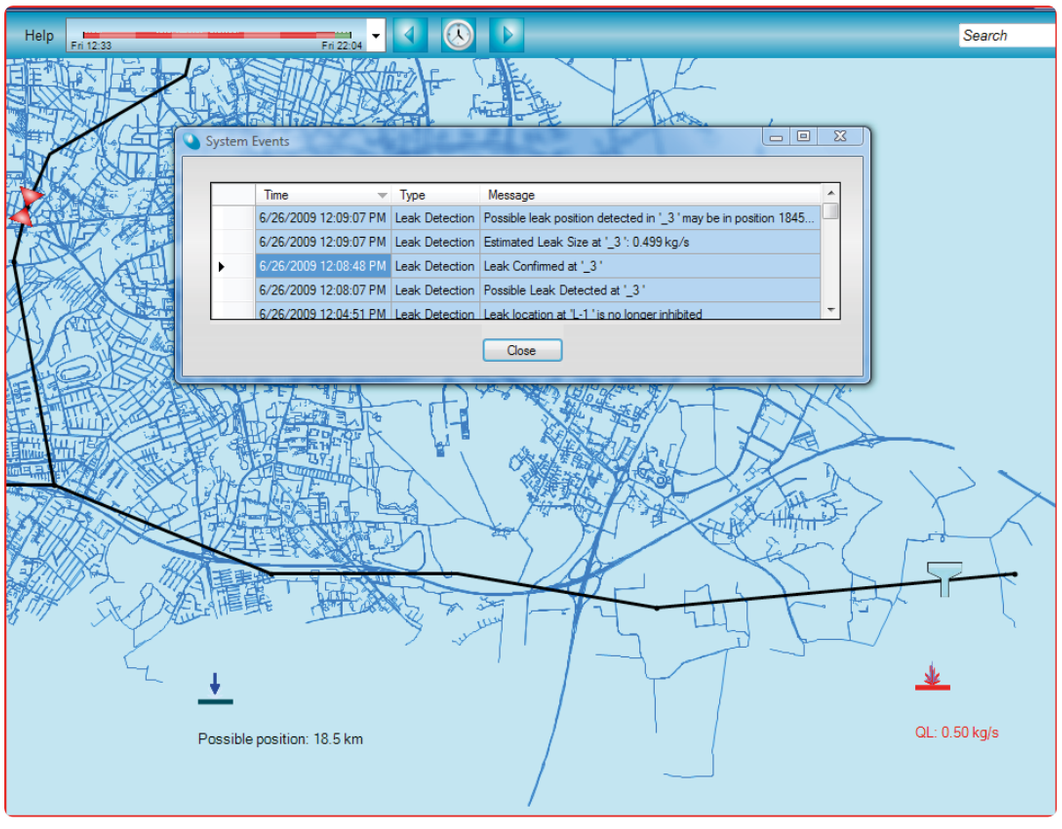
Leakage Management may either be embedded as a component in the SCADA system, or you may implement it as a stand-alone system with a data communication interface to the SCADA system or directly to the PLC's (Programmable Logic Controller).

**Leakage Management Technology**

Leakage Management has a user-friendly interface enabling easy access to most modern SCADA systems.

To ensure a robust leak detection system that uses all currently available information and is always in operation, the interface module provides you with a number of customizable options for checking incoming measurements and emulating missing or faulty data. Furthermore, you have access to straightforward configuration of the system and clear presentation of results via the comprehensive graphical user interface.

Leak alarms are stored in the Leakage Management event log, or they may be transferred to the SCADA system by means of the Leakage Management-SCADA intercommunication.




User-friendly interface enables easy access to most (modern) SCADA systems

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