

Remote Transient Pressure Monitoring (RTPM)

Real-time Monitoring of Pipeline Transient Pressure

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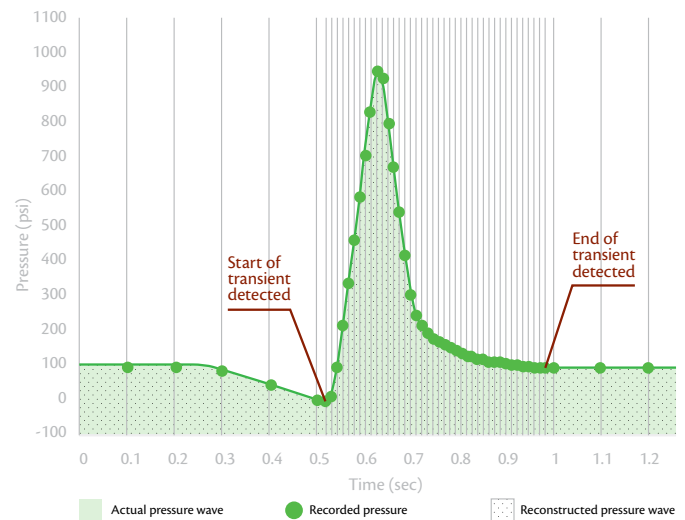
Introduction:

Remote Transient Pressure Monitoring (RTPM) records the variation of pressures within a pipeline caused by sudden changes in velocity of the liquid within the pipeline. Known as a “surge” or “water hammer” these events can exceed the structural strength of the pipeline and will cause damage in the form of a rupture or, more frequently, in the form of latent damage that can result in failure at a later date. RTPM helps to better manage a pipeline system and minimize the transient pressures that occur with pipeline operation. Knowing the precise time and power of a surge enables operators to analyze system operations and identify suspect actions and occurrences.

How it works:

A pressure transducer sensor is attached to the pipeline, so that full pressure comes in direct contact with the sensor. The transducer inputs signals to a computer, which processes the signals, and performs all of the calculations.

When a change in pressure is detected, the sampling rate is increased so the transient



can be plotted out in detail, When the end of the transient is detected, the sampling rate is reduced back to the standard rate.

RTPM Advantage:

- System is portable, easy to operate and install.
- Pressure sensors can operate at any range of positive or negative pressure.
- System communicates with user via all standard wireless and network protocols.
- System includes analysis software and the data can be exported directly to spreadsheets real time readout of current data.
- System features user programmable recording interval, and transient detection settings.
- Sensor can be attached to existing features ¼ inch tap or larger.
- System can be installed while the pipeline remains in operation.

RTPM Applications:

- All pipe material.
- All pipe diameters.
- Available for water and wastewater pipeline inspection.

Complementary PPIC Services:

- Acoustic Emission Testing (AET) to monitor distressed PCP pipe assets over a short or long-term.
- PPIC pipeline GIS software to store and quickly display condition assessment results to help optimize asset management.
- Sahara® Leak inspection to confirm that there are no leaks that could be causing erosion of the soil around the pipe or corrosion of the pipe.
- Remote Field Transformer Coupling (RFTC) to get a baseline of the condition assessment of the PCP pipe assets.



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