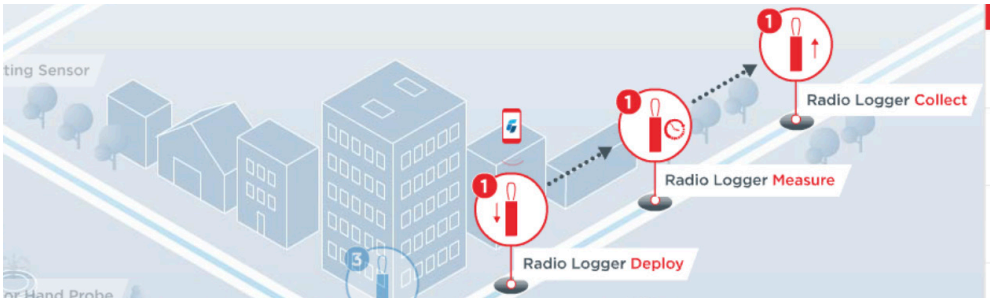
Gutermann

Leak Detection



AQUASCAN TM2 Trunk Main Leak Locating Correlator

The TM2 correlator is a non-invasive and non-destructive technology used to detect leaks in large diameter pipes (trunk mains). The TM2 system can detect even quiet leak noise at low frequency and accurately pinpoint their location. The system can be used on both metallic and non-metallic pipelines and can correlate leaks over distances of up to 2000-feet. Operates using hydrophones that are attached to features such as hydrants, valves, back flow preventers, or the pipe itself if applicable. The hydrophones are placed such that they bracket the desired span of pipe to be inspected.

ZONESCAN 820 Correlating Radio Loggers

The 820 loggers operate very similarly to the TM2 system but is geared toward smaller diameter pipelines. The loggers are physically attached to features along the water pipeline throughout a pipeline system by magnetism. Valve stems, fire hydrants, back flow preventers, and hose bibs are the most common appurtenances to which the loggers are attached. The loggers record audio along the pipeline and are programmed to identify the acoustic signature associated with a leak. The technology is refined to rule out false positives (or false negatives) while also filtering out ambient noises. Correlation occurs when sequential loggers detect the same acoustic leak signature at which point the precise location of the anomaly is recorded.

AQUASCOPE 3 Digital Acoustic Leak Locator

The simplest, yet reliable, tool that CPM Pipelines operates for leak detection is a ground microphone. Ground microphone equipment is used to manually attempt to locate or verify leaks in pipelines. Acoustic microphones are used to detect and amplify the noise created by leaks in pressurized pipes and can be used to pinpoint the exact location of suspected leaks. Generally, ground microphones are used as part of a phased approach to pipeline leak detection after specific locations have been determined with the correlating loggers. The microphone is used to validate leaks in areas indicated by the loggers but can also be used independently if other evidence suggests a leak in a specific area.

CPM PIPELINES

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