Dynamic Response Imaging™ (DRI™)

Pipeline Condition Simplified

Dynamic Response Imaging (DRI™) is an innovative, accessible, and non-invasive solution that helps utilities tackle their most pressing pipeline condition assessment and asset management challenges. DRI provides pipeline owners with simple yet powerful data to make informed decisions about their pipelines, optimizing operations and capital expenditures.

ADVANCED EXTERNAL PIPELINE CONDITION ASSESSMENT

Solving key pressure pipe asset data challenges

Prioritizing Pressure Pipeline Capital Replacement
DRI assessments provide accurate, actionable data, helping pipeline owners prioritize capital replacement and optimize financial resources. Our condition data enhances desktop models, refining prioritization and predictive maintenance strategies, and syncs with existing decision making.

Condition Assessment of Backbone Pipelines
Gather condition assessment data for essential distribution pipelines and transmission mains. DRI provides a non-invasive, precise evaluation to identify pipes needing immediate and/or short-term repair, predict remaining service life, probability of failure, and provide a structural condition rating.

Assessing Challenging and Hard-to-Inspect Pipelines
DRI's non-invasive approach can assess pipelines where other technologies are too operationally complex and pose an unacceptable service level risk. DRI is deployed without interruption to service and/or system modifications.

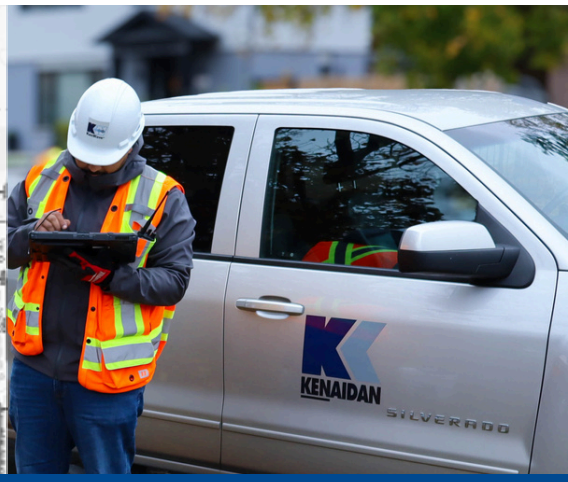
What is Dynamic Response Imaging (DRI)?
DRI uses acoustic and advanced vibroacoustic technologies to provide leaks and detailed, actionable pipeline condition data. This innovative approach combines advanced hardware, sophisticated software, and proprietary analysis to deliver comprehensive insights into pipeline health and distress level.

DRI uses patent-pending vibroacoustic technology to detect variations in pipe wall stiffness, which is a direct indicator of a pipe's residual strength, as a result of changes in pipe material properties and pipe wall physical condition, helping pipeline owners optimize operations and extend infrastructure lifespan without invasive procedures.

How DRI Works
KenWave's passive and dynamic response –based methods simplifies data collection across all standard pipe types, materials, and sizes. It delivers the highest resolution available among external, full-length non-invasive assessment technologies, while simultaneously detecting leaks and evaluating pipe wall condition.

DRI uses vibroacoustic analysis to interpret vibration signatures from pipes in service. A Kappa vibration generator emits precisely tuned vibrations into the pipe wall, and the resulting vibrational response is measured and analyzed to pinpoint the location and severity of wall stiffness variations.

The collected data is interpreted with pipe material characteristics to provide accurate measurements of wall distress, wall loss, composite strength, brittleness, and/or ovality.



FEATURES & BENEFITS

- Leaks and Pipe Wall Assessment
- Pipe material & size agnostic
- Works with lines currently in service
- No risk to water quality or level of service
- Minimal utility operations support
- Easy to deploy
- Simplified external data collection
- Globally validated projects
- Data accepted by asset management regulators
- High resolution external assessment
- Non-destructive testing