

INTERMEDIATE NDT (Handheld EM & UT TOOLS)

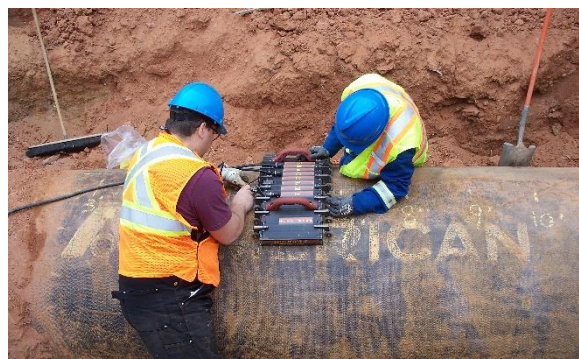
Aging Infrastructure Challenges

- Detecting the precise location of potential problem areas
- Pipelines may have unknown structural or hydraulic deterioration that negatively impacts pipeline operations
- Unexpected pipeline failures
- Increasing customer and community expectations for service continuity and environmental stewardship

Service Solution Overview

PICA offers a wide range of handheld electromagnetic (EM) scanning tools to detect and measure wall loss in cast iron, ductile iron and steel pipes 6+ inches (15+ cm) in diameter. These flexible, multi-channel, multi-frequency EM tools can be used both internally and externally (ID and OD) and allow for localized/spot inspections to detect wall thickness reductions, individual pits, graphitic corrosion and erosion.

Handheld EM tools can identify potential critical failure locations and the extent of damage (depth and length) for accurate integrity assessment. PICA's Bracelet Probe is also available in a version that inspects for corrosion under insulation (CUI).



Proactive Asset Management

- Save money with targeted repairs versus full replacement
- Allocate the cost and schedule of rehabilitation efforts by knowing where there are potential issues of pipeline integrity
- Reduce unplanned, emergency repairs keeping pipelines in service more consistently
- Avoid negative consequences with customers and communities

Pipeline applications include:

- Water
- Wastewater
- Raw water
- Industrial water
- Slurry
- Sludge
- Hydrocarbons
- Multiphase

BRACELET PROBE

PICA's Bracelet Probe technology quickly and easily adapts to various pipe diameters greater than 6 inches (15 cm). The tool is portable, flexible and identifies precise areas of localized wall loss, pits or through-holes for a high resolution condition assessment.

- Specialized Bracelet Probe software produces wall thickness variation data in real-time
 - Wall thickness can be quantified while the pipe is still excavated using PICA's handheld UT probes
- The Bracelet Probe scan width is 10 inches/25 cm (external) or 24 inches/61 cm (internal)
- PICA offers three versions of the Bracelet Probe:
 - External
 - Internal
 - Corrosion Under Insulation (CUI)



UT & EMAT PROBES

PICA uses handheld ultrasonic thickness (UT) probes to quantify wall loss in metallic pipes.

Electro-magnetic acoustic transducer (EMAT) probes can measure wall thickness through coatings without the need for a couplant.



UT & EMAT probes are used:

- In conjunction with the Bracelet Probe to quantify wall loss
- To validate wall loss data from PICA's RFT tools
- To measure wall loss through bare or coated pipe