



**LRUT INSPECTION SOLUTIONS**

THE COMPANY RECOGNIZED BY ISO DNV LLOYDS ABS CLASSNK IRCLASS BY RINA IBR  
"The Quality matters"

LRUT Inspection Solutions

# Long Range Ultrasonic Testing for Smarter Pipeline Integrity

Fast, non-intrusive, in-service screening for corrosion, wall loss, cracks, and hidden defects across long pipeline sections.

Fast screening

Minimal access

No shutdowns

Bi-directional range

## Screen long sections from a single test location.

Guided waves travel in both directions, helping teams inspect more pipeline with less access, less excavation, and less disruption.

A dedicated LRUT division of **NDT & PWHT Solutions Pvt. Ltd.**

**Headquartered in India | Operating Worldwide**

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## Guided wave LRUT for long-range pipeline screening

Engineering-led inspection for buried, insulated, elevated, offshore, and hard-to-access assets.

# Why operators choose LRUT

NDT & PWHT Solutions Pvt Ltd is an Indian inspection company with a global presence, providing NDT, LRUT, heat treatment, and industrial maintenance services. Its focused LRUT division delivers advanced guided wave inspections for buried, insulated, elevated, offshore, remote, and otherwise difficult-to-access assets.

## 18 years

overall company track record

## 10+ years

LRUT field specialization

## In service

screen active lines with less

## Worldwide

global project execution

### How LRUT works

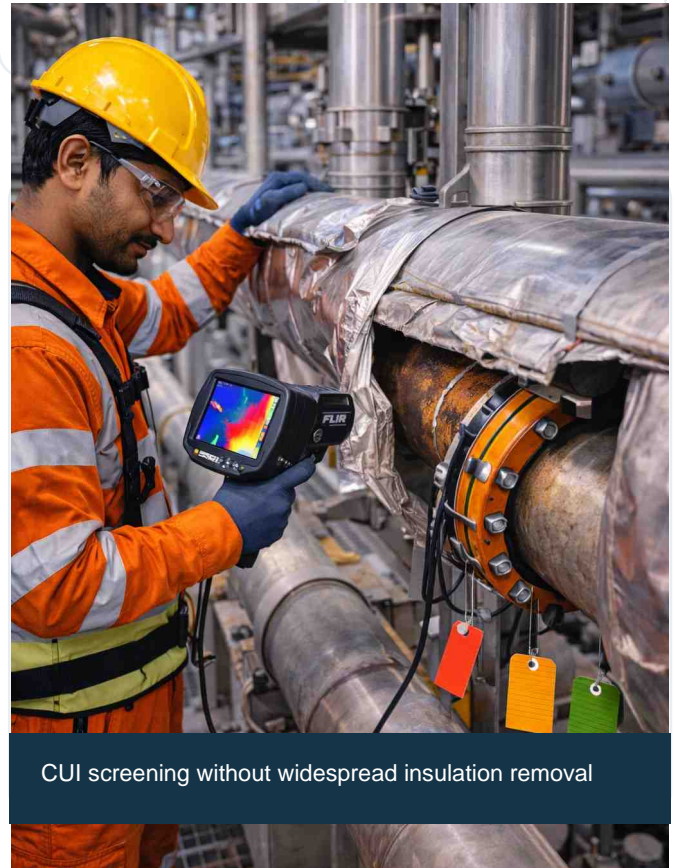
Long Range Ultrasonic Testing (LRUT), also called Guided Wave Ultrasonic Testing (GWUT), uses circumferential transducer collars to send low-frequency guided waves along the pipe wall. From one test point, the system can screen extended distances in both directions and flag anomalous reflections for engineering review.

### Why it adds value

- Covers long distances from minimal access points
- Reduces excavation, insulation removal, scaffolding, and rope access
- Supports risk-based inspection (RBI) and shutdown planning

#### Important note

LRUT is a screening tool. Suspect indications are typically followed by localized NDT for confirmation and detailed sizing.



CUI screening without widespread insulation removal

### What LRUT can screen for

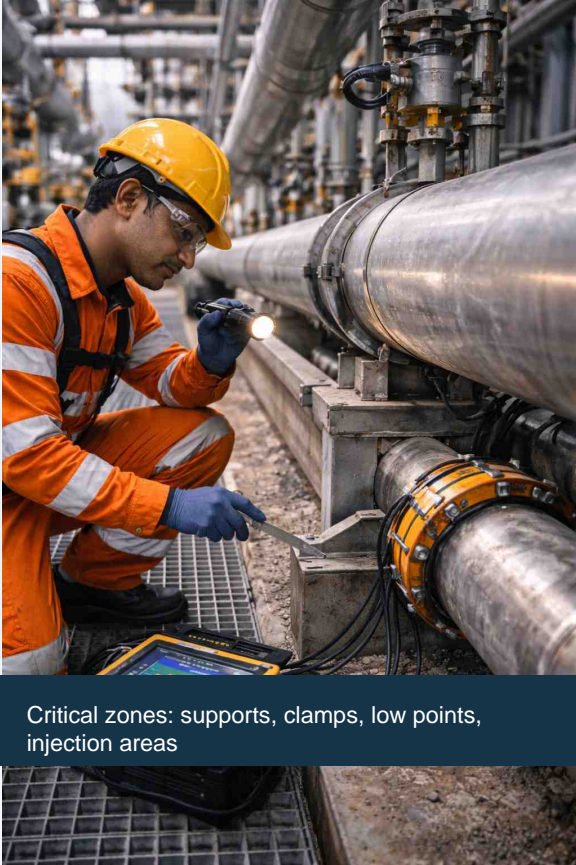
- General corrosion and wall thinning
- Metal loss and erosion zones
- Corrosion at supports and clamps
- CUI-prone circuits and inaccessible sections
- Anomalous reflections that need targeted follow-up

### Field approach

The website emphasizes fast, reliable, non-intrusive screening for buried, insulated, and elevated pipelines with minimal operational disruption.

# Where LRUT adds the most value

The site positions LRUT as a practical solution for challenging assets, corrosion-prone zones, and large networks where conventional spot inspection would be slow, intrusive, or expensive.



Critical zones: supports, clamps, low points, injection areas

## Typical assets and locations

- Buried and insulated pipelines
- Pipe racks, supports, risers, and tie-ins
- Road, river, and jetty crossings
- Transfer lines, utility networks, and trunklines
- Remote, elevated, and otherwise inaccessible sections

## Industries served

- Upstream, midstream, and downstream oil and gas
- Refineries, petrochemical plants, chemical facilities, and LNG terminals
- Power generation, utilities, tank farms, and storage terminals
- Marine, offshore, subsea, mining, metals, and broader infrastructure



Field-proven deployment for active industrial assets

## Integrity challenges addressed

- External corrosion and localized wall loss
- Corrosion under insulation (CUI)
- Corrosion at supports, clamps, saddles, and low points
- Erosion and damage in critical process zones
- Aging infrastructure where broad screening is needed before intrusive work

# Technical capability and project deliverables



Engineering-led guided wave inspection with structured reporting and mobilization support.

## Core technical capability

- Piezoelectric collar LRUT systems
- EMAT guided wave systems for high-temperature and challenging surfaces
- Custom collar solutions for pipe diameters from 1.5 in to 72 in and beyond
- Ambient and high-temperature deployment options
- Engineering-led range prediction and test point optimization

## Project deliverables

- Inspection execution plan
- Coverage / scanned-range documentation
- Distance-based indication table
- Severity ranking: High / Medium / Low
- Feature mapping and engineering summary report
- Recommendations for targeted follow-up verification

## Engineering and consulting support

- Feasibility studies and attenuation analysis
- Procedure drafting, review, and approval support
- Mock-up validation trials and R&D collaboration
- Integrity strategy input for maintenance and RBI programs

## Why choose this team

- Advanced Piezo and EMAT capability
- Large-diameter and custom collar experience
- Engineering-driven methodology
- Structured integrity reporting
- Global deployment mindset

## Quality framework

- ISO 9712 Level I / II / III personnel
- OEM-certified guided wave specialists
- Structured indication classification methodology
- Code-compliant reporting and documented scanned ranges

## Contact the LRUT team

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