

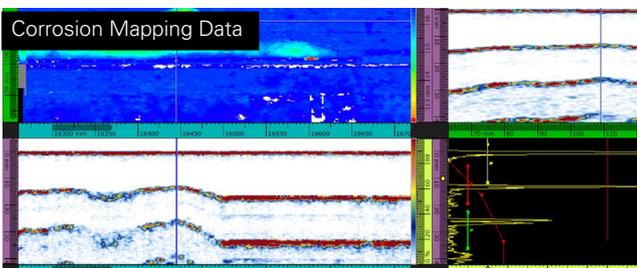
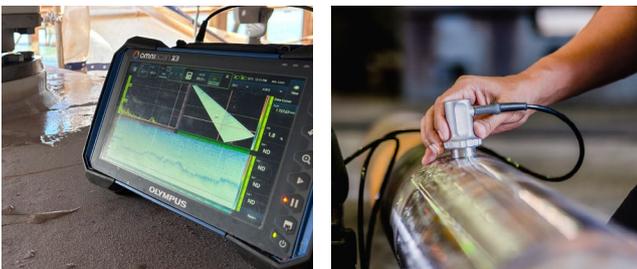
Phased Array Ultrasonic Testing (PAUT) for Mining

Overview

What is PAUT

Phased Array Ultrasonic Testing (PAUT) is an advanced ultrasonic inspection technique that uses electronically controlled sound beams to inspect materials at multiple angles and depths.

This capability provides full volumetric coverage, enabling earlier and more reliable detection of internal defects in complex mining assets.



Why PAUT is Critical in Mining Environments

Mining assets operate under extreme mechanical loads, abrasion, temperature cycling, and corrosive conditions.

PAUT enables early identification of damage mechanisms that can lead to unplanned shutdowns, safety incidents or catastrophic failure, without damaging the component.

Typical issues identified include:

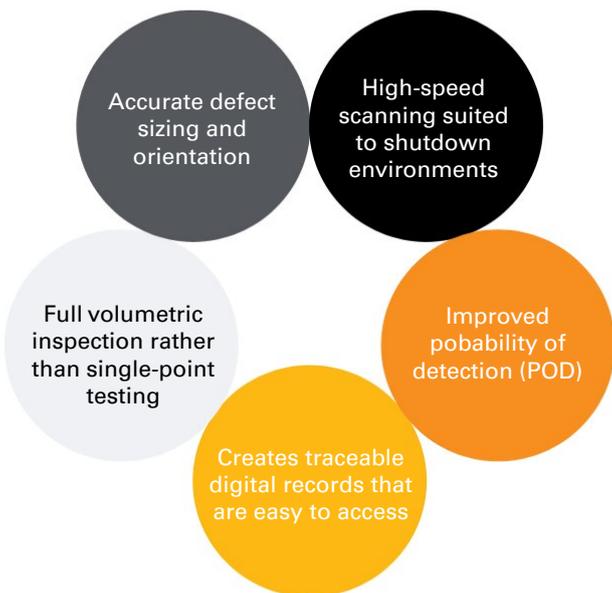
- ✦ Fatigue cracking in structural and repair welds
- ✦ Lack of fusion and inclusions
- ✦ Corrosion and erosion in thick-wall piping
- ✦ Internal cracking in bearing housings
- ✦ Wear-related damage in heavy mobile equipment

Common Mining Applications

- ✦ Critical shafts and rotating equipment
- ✦ Slurry, process, and water pipelines (C-scan mapping)
- ✦ Structural and mobile plant welds
- ✦ Pressure systems and shutdown weld Inspection



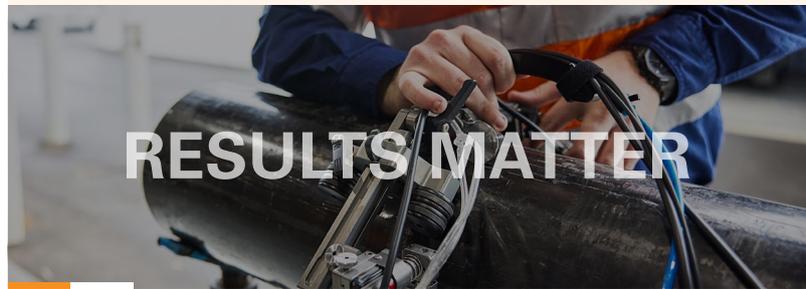
What Makes PAUT Different from Conventional UT



PAUT is best suited for high risk welds or components, inconclusive UT results, limited inspection time, life assessment work, or when regulatory assurance is required.

Delivering PAUT at Scale Why Choose ARI?

-  PAUT certified and experienced technicians
-  Integration into mine maintenance strategies
-  Extensive mining inspection experience
-  Rapid mobilisation to remote mining sites
-  Automated, semi-automated and manual scanning
-  Digital reporting and data analytics



Contact Us

Prevent unplanned shutdowns
 Improve workplace safety
 Extend asset life

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