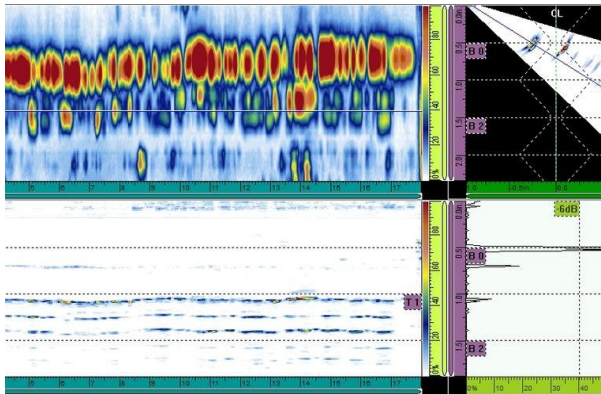


Phased Array PAUT

Ultrasonic phased array provides a fast and reliable solution for flaw detection and characterisation across multiple presentations simultaneously. This technology uses multiple elements fired in quick succession to produce beams that can be steered, swept and focused electronically. Inspections across multiple angles are performed concurrently, creating significant cost savings and providing recordable results for further analysis and/or future inspections. This technique is capable of performing multiple applications including weld quality, corrosion mapping, composites and components of complex geometry. Through use of accurate scan-planning and beam-steering capabilities, probability of detection is heightened while inspection times are reduced to a minimum.



THE Applus+ SOLUTION

Applus+ has developed proven and tested procedures for ultrasonic phased-array inspections in accordance with applicable codes. Our technicians are rigorously trained and assessed, both internally and externally, on data acquisition and interpretation.

Target customers

Phased array has been used on a variety of equipment and across a vast range of fields including:

- Upstream
- Midstream
- Downstream
- Transport pipelines
- Refining
- New construction
- Power

- Aerospace
- Nuclear
- Offshore
- Maintenance

This technique provides significant advantages over single- probe concepts and conventional radiography. These include:

- No inherent safety issues requiring boundary areas
- Improved defect detection
- Rapid component coverage
- Large range of inspection parameters
- Compliance with inspection codes

Key customer benefits

Phased arrays convey major advantages over conventional means of weld inspection, such as:

- No inherent safety concerns
- No disruption of production due to radiation hazards
- Near real-time inspection results
- Vertical defect sizing for engineering critical assessments

Being highly versatile, inspections can be tailored to suit almost any weld profile and predictable defects.

Furthermore, the use of encoders allows all data to be digitally saved and stored for weld-record retention and analysis as well as future repeatable inspections for in-service applications. All applications are performed using compact, portable equipment and can therefore be carried out on any site.