

PHASED ARRAY AUTO ULTRASONIC MACHINE



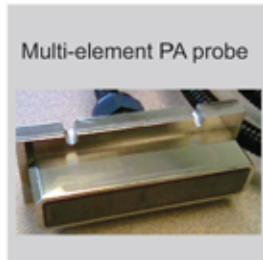
BIS Approved
NABL Accredited Chem & Mech Labs.
ISO 9001 & IATF 16949 Certified by UL DQS
ISO 14001 & OHSAS 18001 Certified by TUV Nord
AD 2000 Merkblatt WO /PED Certified by TUV Nord

Salient Features



Phased Array Technology

Phased Array testing is a specialized type of ultrasonic testing that uses sophisticated multi-element array transducers and powerful instrumentation/ software to steer ultrasonic beams through the test piece and map returning echoes.



Multi-element PA probe

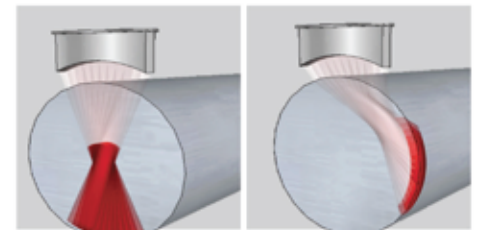


Quick Scan LT PA

The electronic configuration of the solution for Phased Array inspection is based on the Quick Scan LT PA (16/256 or 32/256) unit.

Phased Array Ultrasound Concept - Round

No rotating movement, only electronic scanning is done
 Depth focalization for bar volume inspection (LW)
 Electronic steering for bar surface inspection (SW)

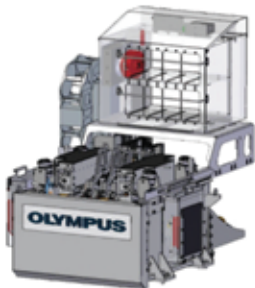


Longitudinal Wave

Shear Wave

Advanced Floating Head Mechanism

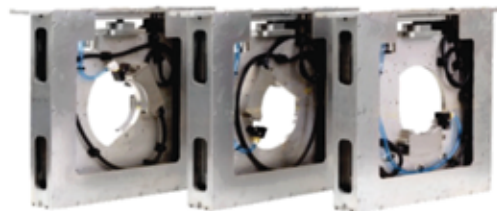
Floating head system is immersed in the UT tank and bar passes through centering devices, which guide the floating head and maintain constant position of probes with respect to bar surface.



Immersion Tank



Floating Head



Probe Cassettes

Phased Array probes are mounted in cassettes with pre-defined mechanical overlap between each of them depending on the diameter of the bar for 360° coverage on round products.

SPECIFICATIONS

- Immersion Tank Type
- Diameter range 15 to 120mm
- Full Bar Volume Inspection

REFERENCE DEFECTS

- SDH (diameter in function of Size Range)
 Location (Depth)
 SDH 1 – At 50% of nominal diameter
 SDH 2 – At 2mm from back wall
 SDH 3 – At 5mm from back wall
 SDH 4 – At 3mm from back wall
 SDH 0.5mm(0.3mm can be guaranteed by extrapolation)

ACCEPTANCE CRITERIA

- FBH (diameter in function of Size Range)
 Location (Depth)
 FBH 1 - At 40% of nominal diameter
 FBH 2 - At 5mm from back wall
 FBH 0.7mm up to 60mm diameter
 FBH 1.2mm for 60 to 120mm diameter