

# Ultrasonic Shear Wave

The ultrasonic shear wave method is a technique which encompasses the use of predetermined angles for the identification of subsurface anomalies not found directly underneath the transducer itself. Indications within a material and or weldment reflect ultrasonic energy back to the transducer, displaying as an A-scan, in which an operator may assess for relevant information concerning component integrity.



## THE Applus+ SOLUTION

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

## Target customers

Shear waves have 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

## Key customer benefits

The use of ultrasonic shear waves has all the advantages of weld inspection with no inherent safety concerns, no disruption of production due to radiation hazards, near real-time inspection results, and vertical defect sizing for engineering critical assessments. Information can be obtained on surface and subsurface indications detrimental to the end use of components. A high degree of accuracy can be achieved in estimates of discontinuity size, shape and orientation. The technique requires access to only one side of the component, with minimal specimen surface preparation.