

Ultrasonic Testing (UT)

Applus+ has an extensive range of tools and techniques to match every inspection challenge, from simple thickness measurement to fully automated inspections. We have offices located coast to coast with the ability to mobilize units on short notice, ensuring a prompt and timely response.



THE Applus+ SOLUTION

Ultrasonic testing uses high-frequency sound energy to perform examinations and make measurements. Ultrasonic testing may be used for dimensional measurements, thickness, material characterisation, flaw detection, and more.

Multiple advances in ultrasonics have taken place in recent times, evolving from the conventional thickness application to the use of more advanced methods encompassing various modes. At Applus, large efforts are employed to develop new applications and technologies surrounding ultrasonics as a whole, while staying abreast to current industry practices and methods.

Applus+ has developed a series of industry-leading technologies for the following key applications:

- RTD Vessel Scan: for weld inspections in pressure vessels
- RTD RotoScan: for butt-weld inspections in new pipes
- Beetle: for wall inspections in storage tanks
- Mapscan: for semi-automatic corrosion mapping around difficult geometries
- RTD LNG Scan: for weld inspections in large-grain materials
- Lorus: for corrosion and flaw screening in difficult to access areas, such as support contact areas and tank floors.
- RTD IWEX: an innovative, new, full volume, precision inspection technology

- EMAT: for corrosion screening and thickness measurements through coatings or at high temperature
- PIT: Pipeline Inspection Tool for unpiggable pipelines, adjustable for every challenge

Other ultrasonic testing solutions include time-of-flight diffraction (TOFD), guided-wave ultrasonics and ultrasonic phased array, among others, and these are fast becoming the industry standard in today's ultrasonic testing environment.

Target customers

Ensuring quality and integrity within various industries is vital to an operators continued success. Providing turnkey solutions through the employment of ultrasonics is a viable solution, providing operators the insight required to effectively manage assets and risks in today's aging infrastructure.

Ultrasonic testing may be used at any point in the life-cycle of an item, from inspection of plates, forgings, castings or welded components to in-service corrosion monitoring. Ultrasonic testing is used by many industries including:

- Food processing
- Paper production
- Oil and gas production and refining
- Power generation
- Aerospace
- Maritime

Key customer benefits

Benefits of UT include:

- Most equipment is now semi-automated and or fully automated
- Produces a permanent electronic record of the inspections performed
- Leads to a marked increase in 'probability of detection' (POD)
- Improves inspection integrity
- Promotes asset integrity confidence, identifying the unknown