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Ultrasonic Testing (UT) | Ultrasonic Inspection

Ultrasonic testing solutions ready for global deployment

Applus+ offers advanced ultrasonic inspection tools and techniques to meet a wide range of **non-destructive testing (NDT)** challenges, from basic thickness measurements to fully automated inspections. With offices worldwide, Applus+ can quickly mobilise ultrasonic inspection teams, ensuring prompt and efficient service globally.

THE Applus+ SOLUTION

Innovative technologies for precision ultrasonic inspections

Ultrasonic testing uses high-frequency sound waves to perform examinations and measurements. It is commonly applied for thickness assessment, dimensional evaluation, material characterisation, and flaw detection.

Recent developments in ultrasonic NDT have expanded its application from standard thickness measurement to advanced inspection modes. At Applus+, we continuously invest in the development of new ultrasonic testing technologies and applications, keeping pace with evolving industry standards.

Our proprietary technologies support key industrial applications, including:

- RTD Vessel Scan – weld inspection in pressure vessels
- RTD RotoScan – butt-weld inspection in new pipelines
- Beetle – wall inspection in storage tanks
- Mapscan – semi-automated corrosion mapping in complex geometries

- RTD LNG Scan – weld inspection in large-grain materials
- Lorus – flaw and corrosion screening in hard-to-reach areas
- RTD IWEX – full-volume precision ultrasonic inspection
- EMAT – screening through coatings and at high temperatures
- PIT – inspection of unpiggable pipelines

Additional UT solutions include time-of-flight diffraction (TOFD), guided-wave ultrasonic testing, and phased array ultrasonic testing—methods increasingly adopted as industry standards.

Target customers

Versatile applications of ultrasonic testing across industries

Ultrasonic testing plays a critical role in ensuring asset integrity across various industries. By providing reliable diagnostic insight, it supports operators in managing infrastructure risks and maintaining operational continuity.

This method can be applied at any stage in a component's life cycle—from inspecting plates, castings, and welds during production to monitoring corrosion in-service.

Industries that commonly use ultrasonic testing include:

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

Key customer benefits

Key benefits of ultrasonic testing for asset integrity

The use of ultrasonic testing within NDT programs provides several strategic benefits:

- Widespread adoption of semi-automated and fully automated equipment
- Creation of permanent electronic inspection records
- Improved probability of flaw detection (POD)
- Greater accuracy in inspection results
- Enhanced confidence in asset integrity by uncovering hidden issues