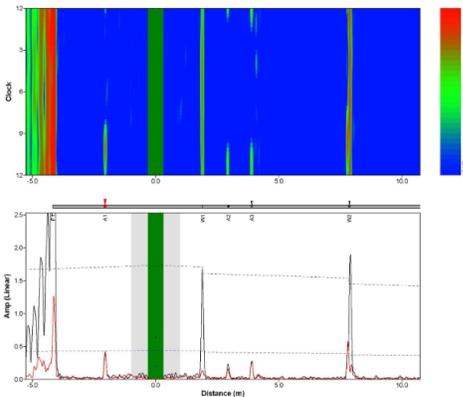


# Guided Wave Ultrasonics

**Guided wave ultrasonic testing** has been identified as an effective pipe-screening technology capable of assessing damaged areas over extended lengths in pipeline integrity inspections. The technology used by Applus+ for (long-range) **guided wave NDT** is designed with a minimum footprint of sensors and bands so that the asset integrity inspection can cover zones previously hindered by insulation or poor access. The coatings are now accessible, which reduces the mobilization times. Recent technological improvements mean that Applus+ can deploy guided wave ultrasonic testing in an array of environments and product temperatures. The results obtained from the guided wave UT inspection can be analyzed on-site by Applus+ and the client, enabling technicians to focus their efforts on areas of concern and help reduce the overall costs of system assessment.



## THE Applus+ SOLUTION

Applus+ has a long history of working with guided wave ultrasonic testing technology. Through extensive training and procedure development in guided wave ultrasonic testing and pipeline inspection, Applus+ has created a world-class programme for asset integrity inspections, which extensive knowledge in pipeline inspections in different sectors.

Guided wave NDT services may be conducted on an ad-hoc basis or as part of an asset integrity inspection programme, thereby benefitting clients looking to analyse their systems in an efficient manner, focusing efforts on identifying and resolving problems.

## Target customers

The services Applus+ deploy for guided wave NDT and ultrasonic testing are applicable to a number of sectors, including:



- Oil and gas (upstream, midstream, downstream)
- Power
- Nuclear
- Aerospace
- Food and beverage
- Onshore/offshore NDT

## Key customer benefits

The benefits of the services Applus+ provides with guided wave ultrasonic testing include:

- Available for pipe diameters of 5cm to 142cm (2" to 52")
- Maximum temperature of around 500°F
- Extreme long range guided wave ultrasonic testing
- Great screening/monitoring tool (recognised and accepted worldwide)
- Very cost-effective for CUI inspection
- Easy to deploy
- Very versatile – desert to subsea pipeline inspection
- Ability to see 3% cross-sectional change (dependent on signal-to-noise ratio)
- High reproducibility
- Areas for quantifiable subsequent inspections identified very quickly and accurately
- Indications of length greater than 2.5cm (1") easily identified
- Areas of concern noted with length for detrimental calculations
- C-scan NDT: accurate c-scan available with nominal resolution
- Real-time processing and evaluation
- Results can be tied to internal or external GPS/GIS locations automatically
- PHMSA, DOT and CCR qualified