

IMPROVED INSPECTIONS WITH 5-RING TORSIONAL TRANSMISSION

Eddyfi Technologies' FOCUS+ guided wave ultrasonic inspection system uses an NDT method to detect corrosion/erosion defects in pipes and pipelines in areas inaccessible to conventional methods.

FOCUS+ is the only system on the market with a 5-ring torsional array, contrary to competitors who only have 2-ring arrays.



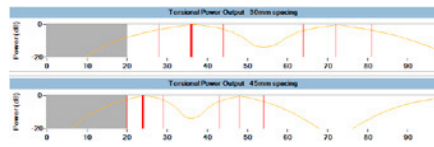
5-ring torsional tool

The advantages of this system over its rivals include:

- 33% better power output
- Broader test frequency range
- Better reception capacity

The increased power is advantageous on high-attenuation lines and increases the distances that can be achieved from one inspection location.

The broader frequency ranges gives operators more frequencies, which, in turn, makes it easier to optimize test frequency selection. Below is a representation of the wider frequency range achieved with the 5-ring torsional tool.



Display of wider frequency ranges

The reception capacity also improves as the signal is received on three rings instead of the usual two.

A typical application for the system is buried pipelines because of the problems and costs associated with access. Below is a typical application on a buried section of pipes.



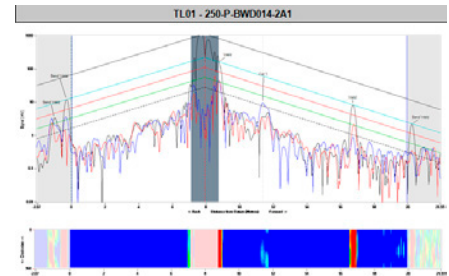
Typical example of buried line installation

The inspection of buried lines using guided wave ultrasonic testing can vary in performance from many factors. Some of the issues that can influence

performance include the type of coatings, wraps, backfills, or content of the pipeline in questions. These elements can increase attenuation, influence the signal-to-noise ratio, and, therefore, sensitivity.

Buried pipeline inspection is an ideal application where the 5-ring torsional tool outperforms 2-ring torsional systems. Only one excavation is necessary to install the collar, in this particular application, the pipeline was wrapped in bitumen, but only removed at the tool location.

The inspection was performed with full coverage of the buried section. A low-amplitude signal was reported with an excellent signal-to-noise ratio. This is only possible with a 5-ring torsional system. The A-scan from the buried section appears here.



A-scan of buried section