Validation and Enhancement of Long Range Guided Wave Ultrasonic Testing: A Key Technology for DA of Buried Pipelines DTRS56-05-T-0002

PHMSA ACCOMPLISHMENTS

Pipeline and Hazardous Materials Safety Administration

Pipeline Safety Research and Development

Technology Development for Improved Corrosion Mitigation

Project Abstract

The objective of the proposed (individual) project is to further validate and develop a product that can be used as a screening tool to detect external and internal corrosion and coating defects in gas pipes (with diameters from 2" to 60"). It is particularly useful where traditional Direct Assessment or inspection technologies cannot be used. Propagation distances are claimed to be on the order of 50 – 100' in each direction from the transducer ring but distances vary based on pipe geometry, coating, content and presence of pipe appurtenances such as valves, tees, etc.

PHMSA Funding: $ 531,331

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NET Improvement

This project developed and tested in the field enhanced methods of using ultrasonic guided waves, employing a physical focus of the ultrasonic energy to increase sensitivity for detection of corrosion and other defects in pipelines. Its implemented in both hardware and software in the Plant Integrity Teletest® Focus™ system. This allows classification of the severity of defects detected from guided wave test.

US Patent under DOT Contract:
N/A

Commercial Partner

Plant Integrity Ltd.
http://www.plantintegrity.co.uk/

Courtesy Plant Integrity Ltd.