In-Ditch Validation Methodology for Determination of Defect Sizing

DTPH56-13-T-000008L

PHMSA ACCOMPLISHMENTS

Pipeline and Hazardous Materials Safety Administration

Pipeline Safety Research and Development

Technology Development for Improved Crack Detection

Project Abstract

The project developed, improved and demonstrated a robust technology for accurate and reliable sizing of complex crack like anomalies. The project developed and validated Inverse Wave Field Extrapolation (IWEX) technology to discriminate closely spaced defects and accurately size cracks irrespective of their axial orientation. This solution addresses a gap in sizing complex cracks such as stress corrosion cracks and seam weld defects.

PHMSA Funding: $1,096,473

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Commercial Partner

Applus
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NET Improvement

The research development and validation success in this project supported incorporating IWEX technology onto calibration tools, seam weld inspections and magnetic crawlers for stress corrosion cracking inspections at Applus. IWEX is a next-generation ultrasonic inspection technique with the ability to image flaws viewed as a 2D cross-section or displayed as a 3D image allowing the user to get a better look at the flaw to determine if they are true defects or benign.

US Patent under DOT Contract:
App # 14/991,013
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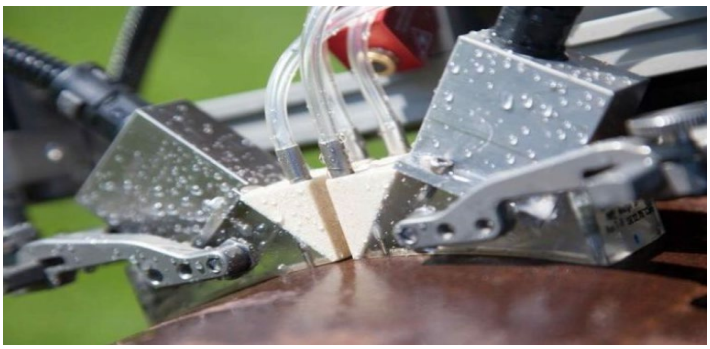

Picture Courtesy: Applus