



Application of Remote-Field Eddy Current Testing to Inspection of Unpiggable Pipelines

DTRS56-02-T-0001

PHMSA ACCOMPLISHMENTS

Pipeline and Hazardous Materials Safety Administration

Pipeline Safety Research and Development

Technology Development for Improved Corrosion Mitigation

Project Abstract

The project conducted a technology assessment to determine the requirements for a new remote-field eddy current (RFEC) testing system. The purpose of the research is to determine if an In Line Inspection (ILI) using RFEC testing is adequate to inspect currently unpiggable pipelines. The tool developed under this research is expected to be able to detect corrosion and mechanical damage. The researchers designed, fabricated and tested a breadboard RFEC system using two excitation coil configurations (one smaller, one collapsible).

PHMSA Funding: \$1,655,262

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NET Improvement

The new RFEC sensor configured and tested for application to the internal inspection of natural gas pipelines. Some of its capabilities are:
1-Detection and characterization of corrosion.
2-Operation in natural gas systems up to 750 psig.
3-Retractation and deployment of the sensor pads during launching procedures and negotiating obstacles in systems un-piggable by traditional technology.

US Patent under DOT Contract:
7,459,999B2; 7,154,264 &
7,683,611B2

Commercial Partner

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