

DOT 460 Quarterly Report – Public Page

Date of Report: January 5, 2015

Contract Number: DTPH56-10-T-000009

Prepared for: DOT

Project Title: “MWM-Array Characterization of Mechanical Damage and Corrosion”

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Public Page Section-

This project is aimed at advancing JENTEK’s MWM-Array technology to provide quantitative characterization of pipeline corrosion and mechanical damage as measured through coatings or insulation. Also of interest are higher resolution images produced with the coatings or insulation removed. For mechanical damage, quantitative characterization includes geometric variations and multidirectional residual stresses (near the surface and deeper within the pipeline). In addition, this program will develop capability to detect cracks at damage sites. For corrosion, enhanced high resolution imaging of both external and internal corrosion will be developed for specific applications to support life management decisions. The JENTEK team will build on demonstrated MWM-Array and MR-MWM-Array detection capabilities to deliver substantially enhanced characterization of damage and a practical means for implementation. This technology has been successfully applied in the aerospace and manufacturing industries and, compared to conventional NDE methods, provides substantially improved performance for imaging curved surface and buried damage through coatings.

During the seventeenth quarter of this program, we have: (1) Obtained approval from DOT for a no-cost extension for this program. It is now scheduled for completion in March 2015. The reason for the extension is to coordinate a dig location with a major North American pipeline operator to perform field demonstration of our SCC crack imaging and depth sizing tool. We previously coordinated a dig location with the same pipeline operator but due to inclement weather at the dig location, we could not perform the demonstration. Discussion with this pipeline operator is ongoing to coordinate another field demonstration. (2) Completed the first commercial delivery of an SCC crack imaging and depth sizing system. Training was provided on-site at the customer facility by JENTEK personnel. (3) Continued refinement of training materials and user manuals to support training of inspection service personnel.

General Information required on all Public Quarterly Reports

Results and Conclusions:

This section summarizes progress made in this program. This project is aimed at advancing JENTEK’s MWM-Array technology to provide quantitative characterization of corrosion and mechanical damage to pipelines.

Progress has been made in a number of areas:

- Perform demonstrations and field trials for SCC mapping and crack depth measurement – Field Demonstration – We have continued discussions with a major North American pipeline operator to coordinate a dig location to perform a field demonstration of our SCC crack imaging and depth estimation tool.
- Evaluation of transition requirements – Completed first commercial delivery of our SCC crack mapping and depth measurement tool. We have continued to evaluation transition requirements for our corrosion mapping tool. We are defining the remaining obstacles to operation of our systems in the field. We have also continued development of training coursework for NDE service personnel as well as manuals and procedure documents to operate the equipment.

Planned Future Activities:

N/A