



# Cathodic Protection Current mapping In-Line Inspection Tool

DTPH56-05-T-0005

## PHMSA ACCOMPLISHMENTS

Pipeline and Hazardous Materials Safety Administration

Pipeline Safety Research and Development

Technology Development for Improved Corrosion Mitigation

### Project Abstract

The objective of this project was to develop a commercially viable in-line inspection tool that measures current traveling in the pipe due to cathodic protection or stray current from sources other than the pipeline system's cathodic protection system.

The data will provide information used to diagnose problems with the cathodic protection system and coatings.

PHMSA Funding: \$401,000

Public Project Page  
<https://primis.phmsa.dot.gov/matrix/PrjHome.rdm?prj=178>

### Commercial Partner

Baker Hughes PMG  
Telephone: (281) 230-7100  
<http://www.bakerhughesdirect.com>

### NET Improvement

This In-line Cathodic Protection Inspection tool is the first method to assess the effectiveness of a pipeline's cathodic protection system from INSIDE the pipe.

- Assessment of sections previously unreachable from the surface
- Timely inspection without physically walking the pipeline
- Closer interval data collection to improve data resolution
- Reduced exposure of workers to harsh environments
- Rapid integration of data with other datasets
- Assessment of the condition of the entire CP system without gaps, regardless of location.

US Patent under DOT Contract:  
7,104,147B2 & 7,317,308B2

### Contact

James Merritt  
303-683-3117

[james.merritt@dot.gov](mailto:james.merritt@dot.gov)



Courtesy: Baker Hughes

<https://primis.phmsa.dot.gov/rd/performance.htm>