

# Evaluation, Location, Excavation, and Documentation of ILI Anomalies

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**Informed Decision-Making**

## About the Class

This course will help you understand and learn the more advanced skills used for evaluating and locating ILI reported anomalies. The course will also cover proper techniques for locating anomalies along the right of way with proper measurements techniques including GPS systems. The workshop will also help eliminate frustration with hard to find indications in hard to get to areas. You will also gain an in-depth understanding of ways to measure, document, and categorize anomalies. This hands on course covers the use of micrometers and ultrasonic meters using real data on one of only a few ILI flow loops in North America.

The first day of the workshop concentrates on the tools required to evaluate and measure anomalies. Specific tools are necessary for this evaluation and a simple toolbox (dig kit) is reviewed. The theory behind ultrasonic technology and its use is also covered. Ultrasonic technology is used to check pipewall thicknesses and to locate internal defects. Digital micrometers are covered along with the accompanying instruments for measuring depths. ASNT (American Society for Nondestructive Testing) techniques are taught to ensure the proper use and application of this equipment. The benefit of using these methods is reflected in improved documentaion and categorization of anomalies.

The second day will focus on the basic use of LinaView®, the ILI integrity management software and ways to identify indications produced by magnetic flux leakage (MFL) inspections.

Wide ranges of signals are produced by ILI tools and proper signal recognition prior to excavation can save time and money. Tuboscope has one of the only ILI test facilities (flow loop) in North America and this authentic pipeline data is used to identify and locate indications. These indications are then made into digital dig sheets where students use hands-on techniques to locate and measure these defects on a 30" pipeline. Documentation of the findings is also critical and sophisticated methods are covered to record these results.

## Who should attend

This workshop is designed for pipeline operators and contractors that are involved in pipeline corrosion evaluation and repairs. The emphasis is on proper locating, measuring, and documenting of anomaly findings. Attendees that would gain from this class include field operation personnel, project managers, and intergrity assessment personnel such as management and project engineers.

Benefits of the class include a basic understanding of industry practices and how to used In Line Inspection data to locate and catalog MFL indications.

## Day 1\*

### OPERATION OF TEST EQUIPMENT

- UT Testing
- Theory of UT
- Dig Kit Review
- Required Equipment
- Micrometer Testing
- Measurement Tools

## Day 2\*

### DEFECT IDENTIFICATION

- Using ILI Survey Data
  - Locating Anomalies to Evaluate
  - Identifying Good Correlation Anomalies for Bad ILI Signal Reconnection
- Hands-On Techniques
  - Identifying Defects Based on ILI Computer Data
  - Locating and Measuring Defects Identified on Tuboscope's 30" Flow Loop
  - Making Defect Rubbings / Sketchings
  - Evaluation of Findings

*\*Both days include Continental breakfast and lunch.*



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