

### 🕒 Tradition

We specialize in the fabrication of innovative ultrasonic sensors and multi-parameter sensor networks for monitoring the mechanical integrity of piping, tanks, pressure vessels, and pipelines. We bring innovative technologies to the market that provide a positive environmental benefit, protect personnel, and enhance current and future energy resources. 35 years of worldwide commercial NDT services, installations, and applications.

### 🔍 Overview

The Eagle Ultrasonic Corrosion Rate Probes eliminate coupon removal, cleaning, shipping, and weighing. They also provide quantitative data, with UT A-Scans, to improve process condition assessments. The probes acquire and store data with BSI's proprietary universal logger. The data can be accessed via local PC/tablet or via cloud storage and data management.

### ✂️ Implementation

- Ability to be installed under above ground storage tanks or under pipeline insulation
- Acquire and store data with BSI's universal logger

### 📋 Features

- Monitoring the effectiveness of the tank CP system
- Extend the value of your corrosion inhibitor program
- Create a new level of asset protection
- Increase corrosion rate certainty
- Determine the precise rate of under insulation corrosion
- Monitor corrosion 360 degrees around pipes and tanks

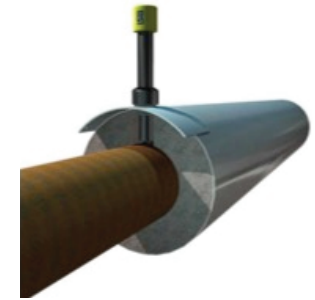
### 📶 Connection

#### Two ways to connect:

- Plug-n-play
- Wireless:
  - Wi-Fi
  - Cellular Network
  - Local Mesh Network

### 📍 Location

- Difficult to access environments
- Off-shore/on-shore



CORROSION UNDER INSULATION



CORROSION ABOVE OR BELOW GROUND STORAGE TANKS





# Ultrasonic Probes

## Corrosion Rate Probes: Under Tanks & Under Insulation

### ⚡ Electrical

- Coupon and adapter not energized until data is taken
- Suitable for hazardous locations
- UT Data Connector:
  - AWG silver plated pins in keyed shell
  - Mil-Spec service rating 250VDC
  - Operating temperatures from -55°C to 125°C
  - UL file E115497
  - CSA File LR69183

### 🔧 Mechanical

- Probe Diameter: 1.5" | 38.1 mm
- Probe Length: 18" | 457.2 mm - variable
- Probe Coupon Thickness: 1/4" | 6.35mm
- Probe Dimensions:
  - Length: 4" | 101.6 mm
  - Width: .625" | 15.875 mm
- Weight: 6 oz. | 170.097 g
- Temperature Rating: -20°F to +450°F (-28.9°C to 232.2°C)

### 👁️ Monitoring

#### Measure & Monitor Wall Loss with precision while:

- Measuring AC Current Density & Voltage
- Measuring DC Polarization & Current Display
- Evaluating Impressed Current System Performance
- Multi-channel AC/DC Close Interval Potential Surveys

### 📦 Materials

- Probe Body: G10 - FR4 fire-resistant, fiber reinforced laminate shell
- Probe Coupon: A36 carbon steel standard, wide range of material option
- Connection: olive drab chromate over cadmium plating on aluminum alloy shell

### 📏 Coupon Thickness Measurement (UT)

- Material Thickness Measurement Modality: Ultrasound
- Ultrasound Center Frequency: 500kHz - 5 MHz
- Pulse: Broadband or narrow band pulse echo
- Transducer Type: Piezocomposite, Lead Zirconate Titanate, or Lead Metaniobate
- Thickness Resolution: Approx. +/- 0.001 in. (frequency dependent)
- Ultrasonic Imaging Area: .250 - .625 in. per transducer (size dependent)
- Sensor Population : 2 typical
- Transducer to Metallic Surface Coupling: Elastic Non-conductive silicon
- Proprietary permanent couplant blend
- Designed to be read by BSI's IMPACT datalogger
- Readable by standard handheld thickness gage using BSI adapter

