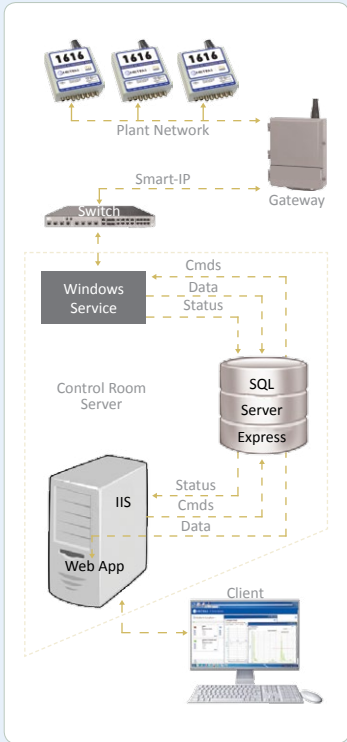
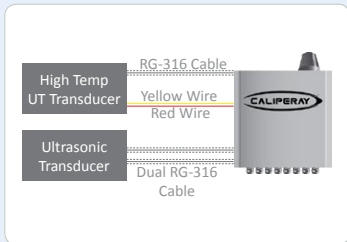


CALIPERAY™ Remote Thickness Tracker

1616 WIRELESS UT NODE



CALIPERAY™ System



OVERVIEW

As an industry standard solution for remote wall thickness tracking, the CALIPERAY™ allows plant operators to accurately and consistently measure corrosion, erosion, and build-up of wall thickness in high-temperature and hard-to-access piping, pressure vessels, and metallurgical assets, safely and inexpensively.

Designed with a plant's interoperability needs in mind, CALIPERAY™ remotely transmits condition data, thickness measurements, and corrosion information into a plant's existing Inspection Data Management System (IDMS), MISTRAS' Plant Condition Monitoring Software (PCMS®), or its web-based application for review and analysis.

With CALIPERAY's non-intrusive installation, its strategically placed sensors are not welded, unlike the expensive requirement of competing systems.

CAPABILITY

The CALIPERAY™ has a resolution of 2 mils (0.0022") in steel. It can detect metal loss as low as 2 mils using trending data.

FEATURES

Non-intrusive design and installation for reduced installation costs; Highly precise and reliable readings; Single element or dual element transducer capabilities; High temperature functionality; Export compatibility with top tier IDMS systems; Self-healing/self-organizing network capability.

THICKNESS TRACKING APPLICATIONS

Crude overhead lines; Injection points; Piping elbows; Reducers; Tees; Pressure vessels; Custom metallurgical equipment

OPERATING CONDITIONS

CALIPERAY™ has been designed for operations in a variety of indoor and outdoor conditions. CALIPERAY™ also utilizes a four channel multiplexer, with 4 single or dual crystal transducers, built-in thermocouples, and wireless technology for seamless integration within plant networks, providing streamlined monitoring for real-time condition and damage reports.

GENERAL SPECIFICATIONS

Manufacturer.....	MISTRAS Group, Inc.
Product Line.....	CALIPERAY Thickness Trackers
Reference Name.....	1616 Wireless UT Node
Model Number.....	1616-5015(JS Certified)
Level of Detection.....	2 mils (0.0022")
Resolution.....	2 mils (0.0022")
Multiplexer...4-Channel for single or dual crystal transducers	
Receiver.....	20-70dB Gain
Battery Life.....	5-Years at 1 measurement per day
Temperature Range	-55°C to +55°C
Made in USA	

SENSOR SPECIFICATIONS

Single Crystal Sensor (ISSUT5M-HT)

Operational Frequency Range	3 - 5 MHz
Shock Limit	10,000 g
Surface Temperature	-55°C to 350°C
Sensor Material	Stainless Steel 316
Connector Type.....	LEMO 00
Connector Location	Side
Sensor Type	Contact, Delay
Seal Type	Laser Welded
Sensor Height	1.5 inches
Sensor Diameter.....	0.75 inches
Delay Line	1 inch
Cable Type	1' hard line + 2M (6.6') soft line

Dual Crystal Sensor (ISDUT5M)

Operational Frequency Range	5 MHz
Surface Temperature	-55°C - 150°C
Shock Limit	10,000 g
Sensor Material	Stainless Steel 304/316
Connector Type	LEMO 00
Connector Location	Side
Sensor Type	Contact
Seal Type	IP66
Sensor Height	0.934 inches
Sensor Diameter.....	0.65 inches

INTRINSICALLY SAFE CERTIFICATIONS

The CALIPERAY™ system holds many top tier certifications. IS/Class I, Division 1, Groups A/B/C/D; AEx ia for Class I, Zone 0, Group IIC (US); Ex ia for Class I, Zone 0, Group IIC (CA); T4 for -55°C ≤ Ta ≤ +55°C; IP66; Ex ia IIC T4 for -55°C ≤ Ta ≤ +55°C; IP66; FM15ATEX0043X APPROVED.



WORLDWIDE HEADQUARTERS:
 195 Clarksville Rd •
 Princeton Jct, NJ 08550 • USA
 T: +1.609.716.4000 • F: +1.609.716.0706
 E-MAIL: sales.systems@mistrasgroup.com
 WEB: www.caliperay.com

CANADA T: +1.403.556.1350
CHINA T: +86.10.5877.3672
FRANCE T: +331.498.26040
GERMANY T: +49.040.2000.4025
GREECE T: +30.210.2846.801
HOLLAND T: +31.010.245.0325

INDIA T: +91.22.2586.2444
MIDDLE EAST T: +44(0)1954.231.612
SCANDINAVIA T: +46(0)31.252040
S. AMERICA T: +55.11.3082.5111
UK T: +44(0)1954.231.612

