# **IRISNDT CEMS**

### ( CORROSION, EROSION MONITORING SYSTEM )

## Minimise operational risk and maximise productivity with enhanced asset intelligence

Continuous wall thickness measurements ideal for corrosion/erosion monitoring of critical assets across refining, oil & gas, power generation, renewables and mining.

**Keywords:** corrosion, erosion, in-service monitoring, hazardous environments, ultrasonics, high-temperature









### SOLUTION

- Continuous wall thickness in real-time to monitor and better manage maintenance and productivity of plant
- Non-intrusive, ultrasonic sensors operate on-stream with no hot-tapping or engineering costs to modify live circuits
- Direct, non-inferred wall thickness information direct to desk, using automated, secure, WirelessHART mesh technology
- High sensitivity, with traceable thickness data for highest accuracy and precision in even the most challenging applications
- Intrinsically safe certified to Zone 0, and wide operating temperature for use in the most hazardous locations

### **GAIN INSIGHTS**

- Frequent data collection to reduce operational costs and increase production revenues
- Consistent and accurate data. Fixed point removes variables of equipment
   and personnel
- Make informed decisions relating to process change or "what-if" scenarios
- Prevent loss of containment, reduce un-planned shutdowns and extend operational life
- Improve accuracy of asset retirement decisions, confirm models and improve estimates

### COMPLIMENT INSPECTION

- Fixed UT sensors provide increased measurement precision & collection frequency for reliable and real-time corrosion trending supporting RBI & FFS programmes
- Optimise Asset Integrity and Performance Management programmes with accurate and reliable wall loss data
- Compliant with latest guidance and RBI risk mitigation strategies
- Collect data in-between turnarounds to focus inspection resources
- Up to 5X improved precision compared to manual UT, but with traceability and validation of measurements by qualified NDT inspectors

# T A N BT



#### STANDARD SYSTEM SPECIFICATIONS

PARAMETER	VALUE		UNIT
HotSense™ UT sensors	Low profile sensors suitable for hazardous locations		
Operating temperature	(upto +550 [+1,022] on request) -200 to +380/[-328 to +716] Single element -55 to +150/[-67 to +320] Dual element		°C / [°F]
Sensor ruggedisation	Certified to IP 66/68 Stainless steel construction		-
Sensor deployment methods	<ul> <li>Epoxy bonded</li> <li>Magnetic</li> <li>Mechanical strap</li> <li>Quick and easy to insta shutdown or isolation of</li> </ul>		ll without of asset
Acoustic characteristics certificate of conformity to ISO 22232-2 supplied with each unit			
Caliperay™ wireless UT node	Automated thickness & temperature measurements		
Wireless protocol	WirelessHART mesh with AES 128-bit encryption (IEC 625491)		
Resolution	Absolute wall thickness, 0.1 Wall loss detection, 0.025		mm
Battery life (typical)	5-7 years (at 2 readings/day)		
Channels	4 pitch-catch, or 4 pulse-echo temperature compensated UT channels		



### **TYPICAL INSTALLATION LAYOUT**



Other variations available via request

For other specification requirements please contact our team



#### **IRISNDT SERVICES**

- Determination of sensor locations/CML site surveys
- Rapid deployment of monitoring sensors to compliment inspection strategies
- Rope access technicians for installation - reduce scaffold requirements
- Qualified UT NDT personnel to validate data, provide trend analysis and reporting •
- Site deployed secure server options with no need for site IT integration
- Periodic network health check and system maintenance over the lifetime of the installation •

IRISNDT is a certified installation partner of HotSense™ technology by Ionix.

• Offices worldwide to provide global support



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M IP 66/68 Class I, Div I

**CERTIFICATION** 

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### Want to discuss how IRISNDT CEMS can compliment your asset integrity management?

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