

CODA Application Brochure

# Thickness Measurement and Flaw Detection

## Equipment Highlights

EMAT sensors allow for non-contact and no-couplant measurements ranging from  $-30^{\circ}\text{C}$  to  $650^{\circ}\text{C}$  on most metallic materials. DCUT sensors offer no-couplant measurements for both metallic and non-metallic components.



### Extreme Temperatures Measurement

Capable of temperatures from  $-30^{\circ}\text{C}$  to  $650^{\circ}\text{C}$  with no active cooling.



### High Accuracy

Great accuracy ( $12.7\mu\text{m}$ - $0.0005''$ ) and lateral resolution (up to  $3\text{mm}$ - $0.125''$ ).



### No contact EMAT Technique

No couplant needed. Hands-free inspection.



### Thin materials inspection

Capable of inspecting metals as thin as  $0.25\text{mm}$  ( $0.010''$ ).



### Rough Surfaces compatibility

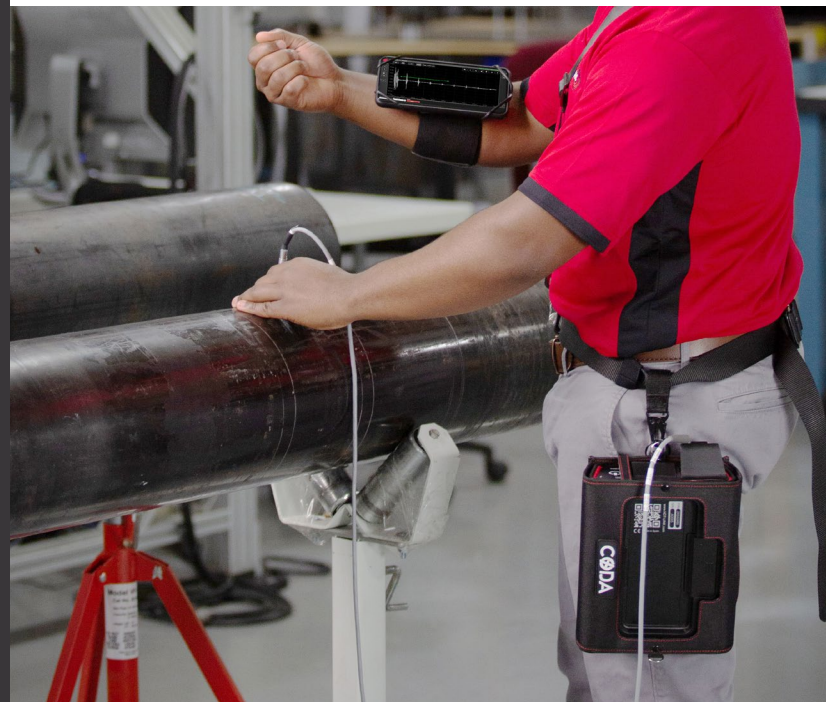
Capable of inspecting rough, dirty, oxidized, and coated surfaces down to  $0.3\text{mm}$  in thickness.

Innerspec's patented EMAT pulser technology and sensors permit using EMAT, DCUT, and conventional transducers from any manufacturer.

Our trully-portable equipments make possible a hands free inspection. In this way, facilitates rapid spot measurement with exceptional accuracy.

### How to measure thickness and flaw detection:

- Choose the appropriate sensor for your specific application. ([See sensor selection page](#))
- Connect the selected sensor to your CODA device.
- Power on the equipment.
- Link your device to NDT-Web and fine-tune your pre-built settings as needed.
- Scan the target part efficiently.
- Utilize the automated reporting feature to generate a PDF document or export data onto a spreadsheet.



# Sensor selection




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## SENSOR HT (650C)

Thickness on low-anisotropic parts on extreme temperatures. 200°C continuous contact / 650°C up to 5s. Best for carbon steel up to 650°C.

 SH Lorentz Spiral

 For High Temperatures

 1.0" D x 2.4" H  
(25.4 mm D x 61 mm H)




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## SENSOR HT (200C)

Thickness on stainless and highly resistive parts on extreme temperatures. 200°C continuous contact / 650°C up to 5s.

 SH Lorentz Butterfly

 For High Temperatures

 3.25" D x 2.38" H  
(82.55 mm D x 60.45 mm H)





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## SENSOR SH SPIRAL

Small sensor for thickness measurements. Best on steel.

 SH Spiral

 Up to 80°C

 0.6" D x 1.7" H  
(15.5 mm D x 43.2 mm H)




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## SENSOR SH BUTTERFLY BOOSTED

Flaw detection and thickness measurement (orientation dependent).

 SH Lorentz Butterfly

 Up to 80°C

 1.875" H x 1.00" W x 1.875" L  
(47.6 mm x 25.4 mm x 47.6 mm)




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## SENSOR L-WAVE LARGE (LR) SCANNING

Thickness measurement and flaw detection on all non-magnetic materials (not affected by sensor orientation). Ideal for aluminum.

 L-Wave

 Up to 80°C

 2.00" H x 1.56" W x 1.56" L  
(50.8 mm x 39.7 mm x 39.7 mm)




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## SENSOR L-WAVE XLARGE SCANNING WITH LIFT-OFF

Flaw detection on thick aluminum parts (logs, billets).

 L-Wave

 Up to 80°C

 2.38" H x 2.50" W x 3.50" L  
(60.5 mm x 63.5 mm x 88.9 mm)



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## DRY-COUPLED UT SENSORS (DCUT)

Thickness measurement for tube ID, complex curved parts, hard to reach places and scanning.

CODA can be used with conventional piezoelectric transducers from any manufacturer.



## HIGH TEMPERATURE DUAL ELEMENT PIEZO

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Dual element thickness gauging transducer for use in extreme environments. Up to 550°C.