

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 truly-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.



# Sensors selection



## SENSOR HT (650C)

274A0272

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 (3-pin Lemo 0K)



## SENSOR HT (200C)

274A0486

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 1.0"D (3-pin Lemo 0K)



## SENSOR SH SPIRAL

274A0409

Small sensor for thickness measurements. Best on steel.

SH Spiral Up to 80°C 1.0"D (4-pin Lemo 0K)



## SENSOR SH BUTTERFLY HIGH LIFT-OFF

274A0342

Thickness and flaw detection with high lift-off, up to 7mm.

SH Lorentz Butterfly Up to 80°C 1.0"D (3-pin Lemo 0K)



## SENSOR L-WAVE LARGE (LR) SCANNING

274A0381

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

L-Wave Up to 80°C 1.0"D (3-pin Lemo 0K)



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

274A0447

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

L-Wave Up to 80°C 1.0"D (3-pin Lemo 0K)



281A0030



281A0297



281A0244

## 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

281A0349

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