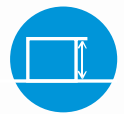


# CTS-49

# CTS-59

Ultrasonic Thickness Gauge



Through Coating

Auto Echo Search

Rotatable Screen

Two-point Calibration

Corrosion Application

# SIUI



# CTS-49/CTS-59

## Small Size, Powerful Functions

### —New Generation General-Purpose Thickness Gauge

The latest ultrasonic thickness gauge CTS-49 and CTS-59 are newly released by SIUI. To keep pace with the leading technology and the market requirements, CTS-49 and CTS-59 are the high-end thickness gauge models which combine the latest techniques, innovative design and complete inspection requirements. It is suitable for a wide range of applications, especially corrosion application.



## Superior Features

- Compatible with different kinds of probes.
- Measurement range: 0.5~600mm.
- Compact size and weighs only 0.6kg including battery.
- 5" high resolution color TFT-LCD monitor with high-brightness LED backlight (visible under sunshine), 800x480 pixels.
- Auto search function can automatically adjust display delay, display range, gain and measurement gate based on the detected echo.
- Standard (R-B1, transmission pulse to the first echo), velocity measurement, through coating measurement (B1-B2, or Bm-Bn) and coating measurement functions available.
- One-point, Two-points and Fast Zero point calibrations available.
- Single and dual element probes for selection. CTS-59 can support dialogue thickness gauge probe to realize probe auto-recognition function, which can reduce display measurement data error.
- A/B scan functions.

## Portrait and Landscape Screen/ Auto Gravity Sensing Design

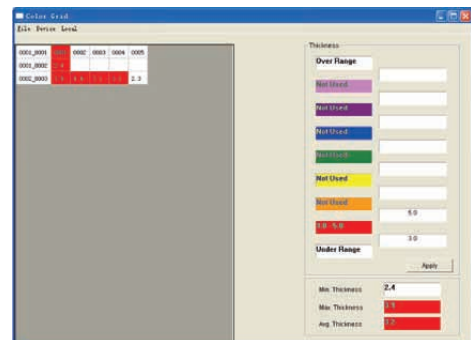


Portrait



Landscape

## DataView Software



A Microsoft Windows based application is used to acquire, create, print and manage data on the CTS-49/59.

Measurement data will be displayed in color grid view mode for better data analysis.

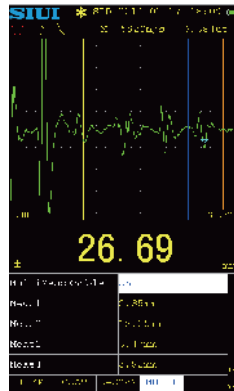
# Application Examples

## COAT Measurement Function



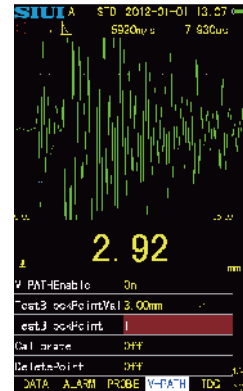
Under Thru-Coating mode, after setting the painting velocity, through-coating thickness and coating-thickness can be displayed at the same time.

## MULTI-Layers Measurement Function



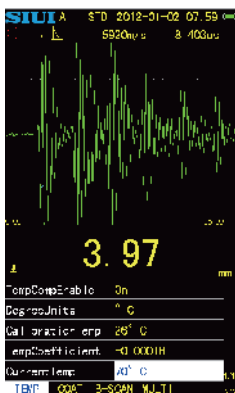
For work piece with multi-layer materials and tight bonding between each layer, thickness measurement of each layer with known velocities as well as the total thickness, can be displayed.

## V-PATH Function



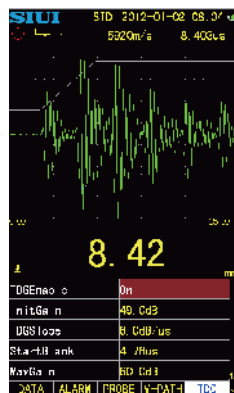
The system default sets a group of V-PATH calibration curve for all compatible dual crystal probes. Users can make a group of V-PATH curve corresponding to the probes to be used.

## TEMP Function



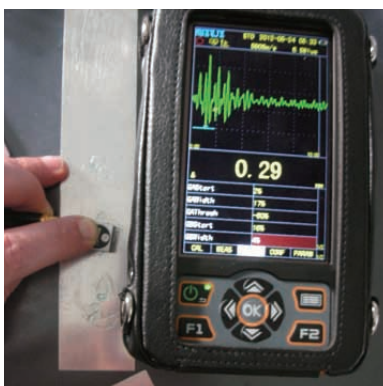
When there is temperature difference between the calibration block and the detected work piece, it can be used for temperature compensation.

## TDG Function (Time Depth Gain Function)



It can be used for compensating wave amplitude loss caused by transmitting sound path.

## Multiple Connectors



CTS-49 with 10MHz probe



CTS-59 measures the wing struts from a Piper PA-11 small aircraft



CTS-59 with pencil probe



# Specifications

Model	CTS-49	CTS-59
Display Screen	800×480 pixels, 5" high-brightness color TFT-LCD monitor with high resolution LED backlight (visible under sunshine)	
Measurement Mode	Standard (R-B1, transmit pulse to the first echo): Through coating measurement (B1-B2, or Bm-Bn): All measurements using Zero Crossing.	
	—	With known coating velocity, coating thickness can be measured.
Measurement Range	0.5~600mm (subject to probe, material, temperature and selected configuration)	
Display Resolution	0.01mm / 0.1mm (0.001 in / 0.01 in)	
System Bandwidth (-3dB)	0.5MHz~20MHz	
Compatible Probes	Twin crystal probes(delay line probe)	
	Single crystal probes(normal probe)	
	Single crystal probes(delay line probe)	
	High temperature probes/ Pencil probes	
—	Smart-dialog twin crystal probes	
Velocity Range	400~15000 m/s	
Gain	0-110dB manually adjustable(step:0.5/2/6/12dB)/auto (for auto-search)	
Auto Search	Off/On: With this function activated, proper display range and gain can be adjusted automatically based on the measured waveform echo, which improves measurement efficiency.	
A-scan Rectification	RF/Full/Positive/Negative	
Pulser	Negative square wave transmission, with pulse-width and voltage auto fits the probe	
Measurement times	4/8/16/32	
Display Error (With standard configured probe)	0.80mm ~ 9.99mm: ± 0.05mm 10.00mm ~ 99.99mm: ± (1%H + 0.04)mm 100.0mm ~ 400.0mm: ± 3%H mm 【Note】 : H is thickness of the detected material.	
Tube Wall Thickness Measurement	With a standard configured probe, it can measure steel tube with diameter not less than 20mm and wall thickness not less than 2.0mm.	
Calibration	a. Fast zero point calibration with the built-in test block. b. User-defined calibration (one-point/two-point calibration)	
Measurement Function	Standard/ minimum/ maximum/ average/ difference	
Interface Mode	Standard /Simple menu measurement interface	
Other Functions	Velocity dynamic measurement, measurement value over-limit symbol, sound alarm, auto gain and freeze function.	
Portrait/Landscape Screen	Portrait/Landscape screen/auto (gravity-sensing auto switch), suitable for left/ right handedness	
B-scan	—	B-scan
Storage Function	Up to 10,000 sets of measurement data (including measurement value, velocity and multi file formats for application); Up to 500 sets of parameter data (such as measurement value and system setting)	Up to 20,000 sets of measurement data (including measurement value, velocity and multi file formats for application); Up to 500 sets of parameter data (such as measurement value and system setting)
Data Transmission	The data can be stored to a micro SD card and transferred to a PC via a card reader; It can also be transferred to a PC via the miniUSB port.	
Measure Unit	inch/mm	
Language	English/Chinese/Spanish/German/Japanese/Russian/Polish/Portuguese/French/Czech	
Auto Shutoff	Off/2/5/10/20/30 minutes for selection	
Operation Temperature	-10~45°C	
Power Supply	a. DC 12V power adapter b. ≥6 hours' operation with 7.4V rechargeable lithium battery set	
Battery Charge Time	a. With battery in the system: approx. 6 hours b. With external charger: approx. 3 hours (option)	a. With battery in the system: approx. 6 hours b. With configured external charger: approx. 3 hours
Dimension	105 mm × 180 mm × 42 mm (WxHxL)	
Weight	Approx. 600g with battery	
System Port	MiniUSB, micro SD card holder, DC-IN (DC12V input), LEMO 00 compliant (T/R)	
Software	—	COAT Measurement Function, MULTI Layers Measurement Function, V-PATH Function and TDG Function and TEMP Function.
EN Norm	EN-15317 compliant	

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