

AIS3000



Advanced Indentation System 3000

AIS3000

Portable Residual Stress Measurement

FRONTICS

What is AIS 3000 ?

AIS-3000

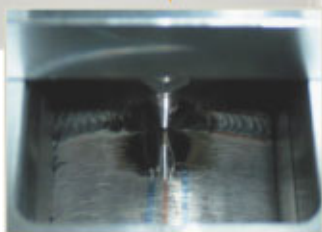


AIS3000 (Advanced Indentation System 3000) is a portable indentation system for non-destructive residual stress evaluation. AIS3000 is made up of a main body and a laptop with software.

Residual stress in a material shifts the indentation load-depth curve. Shallow indentations less than 200mm deep can provide quantitative values for residual stresses in materials.

The AIS3000 can be used to evaluate welding residual stress of structures and facilities. Its accurate and reproducible test is well suited for field work.

The AIS3000 can help users perform fast and easy tests with its wireless communication module between the laptop and main body. Portability is further enhanced by an optional light-weight battery, so a local power source is not required.



• Residual stress at HAZ near fusion line

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BY LPR GLOBAL INC.

LPR Global, Inc. www.uskoreahotlink.com 416-423-5590 info@lprglobal.com

AIS3000

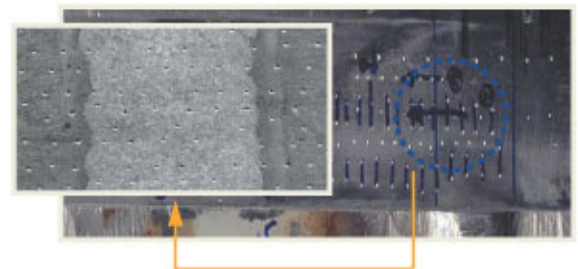
Powerful Applications In Field and Laboratory

Applications of AIS300

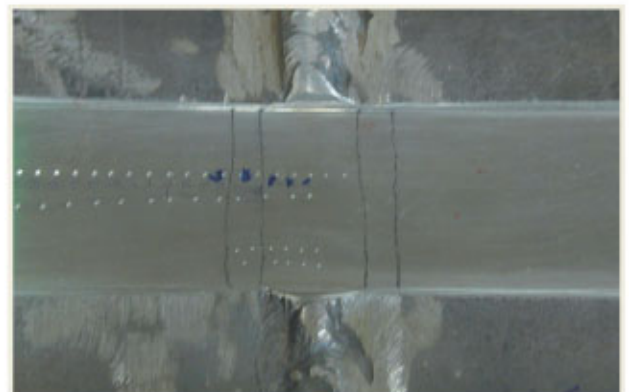
■ In-field



■ In-laboratory



<Indentation array across weldment>



- Portable tests for facilities under construction or in service
- Powerful attachments for various shape and size conditions

AIS3000

Specifications: AIS3000 & AIS 2100

■ Hardware

Model		AIS2100	AIS3000
Size (weight)		180x180x430 mm (14 kg)	180x180x430 mm (14 kg)
Maximum Load		300 kgf	300 kgf
Resolutions (Load / Depth)		100 gf / 0.2 um	5.6 gf / 0.1 um
Full stroke		40 mm	40 mm
Loading rate		0.05~30 mm/min	0.05~60 mm/min
Communication		RS-422	RS-422/ wireless module
Data acquisition rate		30/sec	100/sec
Power	Adapter	AC 110~220V (free voltage)	AC 110~220V (free voltage)
	Battery		Portable battery (10hrs in a charge)
Analyzing computer	Standard	Lap-top PC (w/SW)	Laptop PC (w/SW)
	Special	Rugged Computer (Optional)	
Indenter		WC spherical indenter (Dia. 0.5 / 1.0 mm) Vickers, Rockwell C Indenter	WC spherical indenter (Dia. 0.5 / 1.0 mm) Vickers Indenter
Attachment Tool (Select or option)	Field	Multicurve magnet Flat magnet Light-weight mechanical chain U / V-block (└~6 inch)	Multicurve magnet Flat magnet Light-weight mechanical chain U -block (3~6 inch) Multi-point dovetail slider
	Laboratory	Precise X-Y axis stage Various vises (plate/clamping jig)	Precise X-Y axis stage Various vises (plate/clamping jig)

■ Software

Model	Tensile Properties	Residual Stress	Hardness	Fracture Toughness
AIS2100	✓	N/A	(optional)	(optional)
AIS3000	✓	✓	(optional)	(optional)