

EDDYSUN (XIAMEN) ELECTRONIC CO., LTD.

Add: Floor 7, No. 23, Wanghai Road, Software Park, Xiamen 361008, China Tel: +86 592 2233733 / 2950673 Fax: +86 592 2200733 Zip code: 361008 E-mail: ndt@eddysun.com / eddysunchina@hotmail.com

# SMART-5001 Multi-frequency ECA Flaw Detector



SMART-5001 is a multi-frequency eddy current array flaw detector. It is designed for flaw inspection of metal material, and for sorting of alloy, heat treatment condition and thickness. Results from different inspection methods make engineers easy to analyze and easy to verify. This helps to obtain a more objective and true evaluation. The application fields including aviation, aerospace, electric power, nuclear industry, metallurgy, shipbuilding, and petrochemical industry, automobile and so on.



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### 01 EDDY CURRENT ARRAY

- 64 channels of eddy current array
- Welding inspection with no direction limit
- Compensation for lifting and shaking
- Distinct inspection for crack depth
- Special alarm mode of unequal amplitude and phase
- Various display modes: impedance display, time-base scanning display, time-base superposition display, ECA scanning (B/C) 2D/3D imaging display
- High definition and sensitivity
- Easy to operate, optional language of Chinese and English
- Data acquisition of C scanning
- Enable to test wall thickness reduction of tube, surface inspection, depth measurement, thickness measurement of coating and cladding on metal surface, sorting of metal material and hardness
- Designed with 16 mixing units to separate and suppress multiple interfering signals at the same time
- Various filter modes
- Enable to preset special process parameters for further use
- Various ways of storing data
- Provide the function of multi-frequency inspection configuration analysis
- Video inspection is available at the same time of eddy current testing.

#### 02 OTHER FEATURES

- Testing parameters and data can be saved, and reports can be exported in PDF\EXCEL\WORD format
- Designed with satellite positioning function
- The testing signal all through the inspection process can be saved and replayed
- Integrated with video inspection for visible surface defects
- To minimize personal error, SMART-5001 has functions of real-time menu prompt, man-machine interaction, touch screen operation, and keyboard/mouse



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operation

• Built-in lithium battery to operate more than 4 hours

#### **03** TECHNICAL SPECIFICATION

ITEM	SPECIFICATION
EDDY CURRENT INSPECTION	
Number of channel	64 channels of eddy current array
Number of link	2
Probe connector	LEMO
Number of frequency	4
Frequency range	10Hz~12MHz
Impedance display	8
Number of mixing unit	16
High pass filter	0~500Hz
Low pass filter	10Hz~10KHz
Digital filter	1~100
Pregain	10~35dB
Drive	8 levels
AMP & PHA measure	Automatic/manual
Phase	0∼359°
Gain	0 $\sim$ 90dB, in 0.5 dB steps
Display mode on the same screen	Impedance, time-base scanning, B/C imaging, time-base superposition
Alarm type	Half AMP-PHA, AMP-PHA, Rectangle
Filter modes	High pass/low pass/digital filter
Balance mode	Digital electronic balance
OTHER SPECIFICATION	



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Microprocessor	32bit (dual-core)
Storage	16G
Memory	1G
Interface	USB, network, HDMI, WIFI, mouse, shuttle knob operation
Display screen	8.4 in TFT touch screen with resolution 1024*768
Operating temperature	-20℃ ~ +55℃
Power requirements	DC 19V adapter, 14.8V 6.3AH rechargeable lithium battery