Portable Ultrasonic Flaw Detector MFD510B

Overview

MFD510B Portable Ultrasonic Flaw Detector can test, orient, evaluate and diagnose various flaws such as unmelted weld joint, unpenetrated weld joint, crack, inclusion, air hole in worklpiece's interior swiftly and accurately without any destruction. It is widely used in fields of power engineering , boiler pressure vessel , Steel Construction , war industry , aeronautics , rail transportation ,auto and machinery etc. It is the essential instrument in NDT industry.

KEY FEATURES

● With English display, master-slave menu, shortcut key and digital swiftly knob, it's designed with leading technology and can be used very conveniently.

● With high brightness EL LCD display, it's suitable to work under outside strong light. And the LCD brightness can be set freely by yourself according to the environment.

● Designed with high performance security-guarantee battery module, it's easy for disassembly and assembly. And it can charge independent with offline. And the large capacity and high performance Lithium-ion battery module make the instrument' continuously working time to above 8 hours,

● With small size and light weight, the instrument can be hold by one hand. It's durable in use and lead industry trend.

RANGE

0~ 9999mm (at steel velocity); range selectable in fixed steps or continuously variable.

PULSER

Spike excitation with low, middle and high choices of the pulse energy.
Pulse Repetition Rate: manually adjustable from 10 to 1000 Hz.

Pulse width: Adjustable in a certain range to match different probes.

Damping: 100Ω, 200Ω, 400Ω selectable to meet different resolution and sensitivity need.

Probe work mode: Single element, dual element and through transmission;

RECEIVER

Real-time sampling at 160MHz high speed enough to record the defect information.

Rectification: Positive half wave, negative halfwave, full wave, and RF

DB Step: 0dB, 0.1 dB, 2dB, 6dB step value as well as auto-gain mode

ALARM

Alarm with sound and light,.

MERMORY

Total 100 configuration channels store all instrument operating parameters plus DAC/AVG curve; stored configuration data can be easily previewed and recalled for quick, repeatable instrument setup. Total 1000 datasets store all instrument operating parameters plus A-scan. All the configuration channels and datasets can be transferred to PC via USB port.

FUNCTIONS

Peak Hold:

Automatically searching the peak wave inside the gate and hold it on the display.

Equivalent diameter calculation: find out the peak echo and calculate its equivalent diameter.

Continuous Record: Record the display continuously and save it to the memory inside the instrument.

Defect Localization: Localize the defect position, including the distance, the depth and its plane projection distance.

Defect Sizing: calculate the defect size

Defect Evaluation: Evaluate the defect by echo envelope.

DAC: Distance Amplitude Correction

AVG: Distance Gain Size curve function

Crack measure: Measure and calculate the crack depth

B-SCAN: Display the cross-section of the test block.

REAL-TIME CLOCK

Real time clock for tracking the time.

COMMUNICATION

USB2.0 high-speed communication port

SPECIFICATIONS

Range: (0 ~ 9999) mm

Bandwidth: (0.5 ~ 15) MHz

Material Velocity: (1000 ~ 9999) m / s

Dynamic Range: ≥ 32dB

Vertical linear error: ≤ 3%

Horizontal linear error: ≤ 0.2%

Resolution:> 40dB (5P14)

Sensitivity Leavings: 60dB (flat-bottomed deep hole 200mmΦ2)

Rejection: (0 to 80)% Linear

Noise level: ≤ 10%

Power supply: DC 9V; lithium batteries work for 4 to 8 hours or more

Ambient temperature: (-20 ~ 50) ℃

Relative Humidity: (20 ~ 95)% RH

Overall dimensions: 263 × 170 × 61 (mm)

MFD510B Standard Configuration

No.	Item	Quantity
1	Main Body	1
2	Straight Beam Probe	1
3	Angle Probe	1
4	Machine-probe Cable (Q9-Q9)	1
5	Battery Module	1
6	Power Adapter (Charger)	1
7	Support Pillar	1
8	Manual	1
9	Instrument Case	1
10	Datapro Software	1
11	USB communication Cable	1