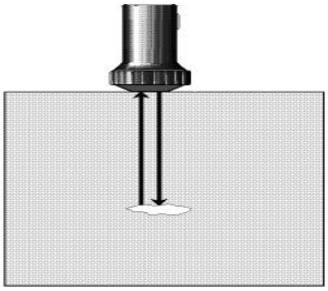
UTS-240 Digital Ultrasonic Flaw Detector

Overview

UTS-240 is a portable industrial non-destructive flaw detector, which can rapidly, easily and accurately inspect, locate, evaluate and diagnose various defects (crack, inclusion and pinhole, etc.) in a workpiece without destruction. It can be used both in a lab and field. The instrument can be widely used in any fields that need defect inspection and quality controlling e.g. manufacturing industry, iron & steel metallurgical industry, metalworking, chemical industry, etc., also be broadly used in the active safety inspection and service-life evaluation in such fields as aerospace, railway transportation and boiler pressure vessels, etc. It is an essential instrument for non-destructive inspection industry.

When the ultrasonic wave propagates in a job, one can detect the defect in it by the influence on the propagation of ultrasonic wave based on the acoustic characteristic demonstrated by the defect in the material. Based on this principle, by using ultrasonic wave one can measure such defects as crack, pinhole and inclusion in such media as metal, non metal and composite, etc.



Basic working principle for ultrasonic detection

Advantages:

★ Automated calibration, Automated gain
★ DAC, AVG, TCG, AWS
★ High-speed capture and very low noise
★ Solid metal housing
★ high contrast viewing of the waveform from bright
★ Powerful pc software and reports can be export to excel

Performance Features

1. Automated calibration of transducer Zero Offset and/or Velocity
2. Automated gain, Peak Hold and Peak Memory
3. Automated display precise flaw location(Depth d, level p, distance s, amplitude, sz dB, ф)
4. Automated switch three staff gauge ((Depth d, level p, distance s)
5. **100 independence setup, any criterion can be input freely, we can work in the scene without test block**
6. Big memory of 500 A graph.
7. Gate and DAC alarm, Acoustic-Optical alarm
8. USB port, communication with pc is easy
9. The embeded software can be online updated
10. **Li battery, continue working time up to 10 hours**
11. Display freeze
12. Automated echo degree
13. Angles and K-value
14. Lock and unlock function of system parameters
15. Electronic clock calendar
16. Two gates setting and alarm indication
17. High-speed capture and very low noise
18. **DAC, AVG, TCG, Solid metal housing (IP65)**
19. Automated calculate the size of the flaw with w ide bottom type in AVG function.
20. **6dB DAC functions**
21. Provides high contrast viewing of the waveform from bright, direct sunlight to complete darkness and easy to read from all angles
22. Powerful pc software and reports can be export to excel

2.6 Technical Parameters

Designation	Technical Data
Range of	Range of scanning (mm): 0-6000

scanning (mm)	Steps: 2.5, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 10000 Adjusting step: 0.1mm(2.5 mm-99.9mm), 1mm(100mm-10000mm)
D-delay (μs)	D-delay (μs): -20-+3400 Steps: -20, -10, 0.0, 10, 20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000, 1500, 2000, 2500, 3000, 3400. Adjusting steps:- 0.1(-20μs-999.9μs), 1(1000μs-3400μs)
P-delay (μs)	P-delay: 0.0-99.99 Adjusting steps: 0.01
MTLVEL(m/s)	MTLVEL: 1000-15000 10 fixed levels: 2260, 2730, 3080, 3230, 4700, 5920, 630012000, 13000, 14000, 15000 Adjusting steps: 1
Working mode	Single probe (receiving and sending), double probe (one for receiving and another for sending), transmission (transmission probe)
Frequency Range (MHz)	0.5-10
Gain adjustment (dB)	0-110 Adjusting step: 0.0, 0.1, 0.5, 1, 2, 6, 12
Reject	0%-80% of screen height, step: 1%
Vertical linear error	Vertical linear error is not more than 3%
Horizontal linear error	Not more than 0.2% in the scanning range
Sensitivity Leavings	≥62 dB
Dynamic range	≥34dB
Alarm	Three modes, i.e. forbidden wave, loss wave and auto
A-Scan display area	Full screen or local A-Scan display freezing and de-freezing A-Scan filling
Data save	500 A-Scan images (including setting of instrument)
Standard communication interface with PC	USB
Measuring unit	Mm / inch
Battery	Li battery 7.4V 4800mAh
Power adaptor	Input 100V-240V/50Hz-60Hz Output 9VDC/1.5A

Working temperature	-20℃-50℃
Working humidity	20%-90%
Port type	LEMO01 / BNC
Overall dimension (mm)	240x180x50
Weight (kg)	1.8

Standard Configuration

No.	Item	Quantity
1	Main Body	1
2	Straight Beam Probe 2.5MHz, 20mm	1
3	Angle Probe 4MHz, 8*9, 60 degree	1
4	Machine-probe Cable	2
5	Battery Module	1
6	1.5A/9V Power Adapter (Charger)	1
7	Instruction Manual in English	1
8	Instrument Carrying case	1
9	USB cable	1
10	Communication software for PC	1