UltraScan 5

ULTRASONIC INSPECTION AND ANALYSIS SYSTEM

FEATURES

- Portable computer for field inspection
- Windows applications with user-friendly interface
- Pitting, corrosion, lamination, and crack detection
- Real-time A-scan and oscilloscope display
- Real-time TOFD, A, B and C-scan corrosion and flaw mapping display
- High-speed Distance Amplitude Correction (DAC)
- Real-time averaging to measurement gates
- A-scan recording for offline recreation of C-scans
- Unique gate settings for each A-scan
- Easy data analysis and flaw sizing
- 3D display for better prospective view
- High-resolution scanner for pipes and flat surfaces
- Automatic report generation
- Support for foreign languages
- Free one-year software upgrade
- Optional mouse scanner for pipe elbow and reducer scanning

DESCRIPTION

UltraScan 5 is an ultrasonic inspection and analysis system. The system includes:

-an inspection scanner
-a portable computer with pulser/receiver and a high-speed converter cards

The system includes four applications: TOFD (time of flight diffraction) imaging, thickness mapping, X-axis flaw mapping, and Y-axis flaw mapping. The user interface includes A-scan, B-scan, C-scan, signal scope, real time mini-scope, 3-D display, and a control panel. Under the data analysis mode, the user can recreate the C-scan display by altering gate settings. Each A-scan retains its own unique gate settings. The user can generate a 3-D display of a C-scan instantaneously.

The system also generates a report with the following contents:

-A cover page including the project title and the report generation date
-A table of contents listing file descriptions and page numbers for each file
-Project information including project name, directory, start time, end time, project descriptions, and inspection log
-The B-scan and C-scan maps with user-defined scales
-TOFD images

The software is designed to simplify operating procedures; for example, the system automatically detects the attached scanner and sets up the appropriate parameters.

UltraScan 5 supports any language supported by Windows; the program windows, message boxes, and hard-copy reports can be displayed in any language.

HS212 and HS226 are X-Y coordinate scanners which are used to inspect flat surfaces and pipes. The minimum diameter of pipe can be as small as 2 inches, 0.5 inches with add-on wheels. Their magnetic wheels are ideal for quick setups on steel materials. Our optional scanner tracks can be used to inspect non-magnetic materials, using four suction cups to attach the scanner to the material to be inspected. MTSCAN series scanners are designed for X-Y scanning as well as TOFD scanning using interchangeable scan heads. HS100 is a single axis scanner, but it can also be used to generate C-scan maps.

Other accessories include a coupling kit and custom cable lengths. The coupling kit consists of a water compressor, tubing, a Y connector, and a flow control valve. The 100-foot and 200-foot cables are built with differential line drivers and receivers which ensure encoder signal strength.

US Ultratek, Inc. 4070 Nelson Ave. Suite B, Concord, CA 94520 USA (925) 687-7688 Fax: (925) 687-7689
Email: sales@usUltratek.com Web: http://www.usUltratek.com

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SPECIFICATIONS

Computer (upgradeable)	800MHz Pentium III or faster 128 MB RAM 20 GB Hard Disk Built-in CD-ROM Drive 1024x768 Display or better Color TFT Display Connector for external monitor Input: 100/220VAC 50/60 Hz
Maximum C-scan Data Point	Thickness Map: 4,175,000 Flaw Map: 835,000 up to 10 flaws per data point
Sampling Rate	100, 50, 25, 12.5, 6.25 MHz
Data Resolution	8 bits
Memory	256K samples or 128K samples
Scan Speed	up to 8 inches/second
Rectifications	RF, Full, +half, or -half

Scanner Resolution

HS212 and HS226

X Axis: 0.002685 inch (0.0682 mm)
Y Axis: 0.004027 inch (0.10228 mm)

HS100 (muse scanner)

0.00314nch (0.08 mm)

TOFD Scanner 0.003927 inch (0.1 mm)

MTSCAN X Axis: 0.0007” (0.017 mm)
Y Axis: 0.004” (0.1 mm)

Scan Range

HS212/MTSCAN12:

8" x 2815' (200 mm x 858 m)

HS226/MTSCAN26:

22" x 2815' (560 mm x 858 m)

Mouse Scanner: 82,943" (2096 m)

TOFD Scanner: 2745'

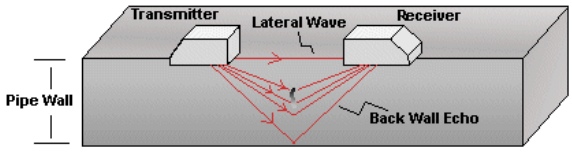
Test Pipe Diameter

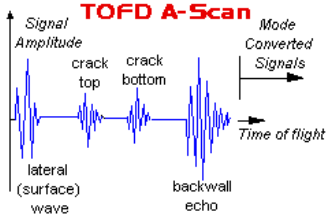
HS212 and HS226: ≥ 2" (50 mm)
≥ 0.5" (13 mm) with add-on wheels

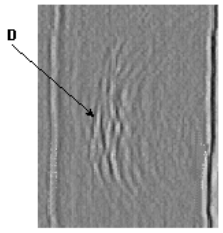
MTSCAN: ≥ 4”

Options

Coupling kit
100' long cable
200' long cable
Add-on wheels for pipes with small diameters
Scanner tracks
Mouse scanner for elbow & reducer inspection

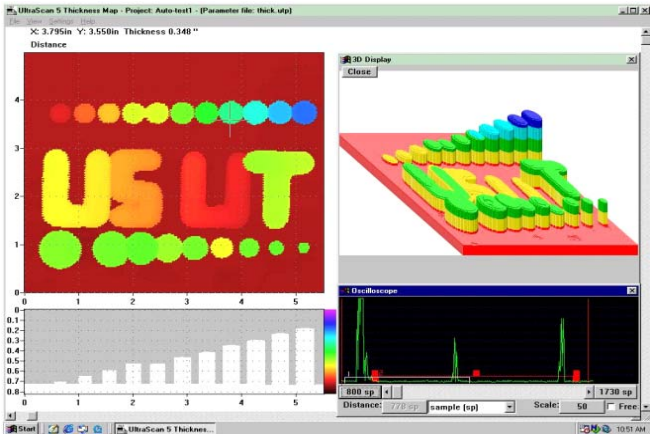


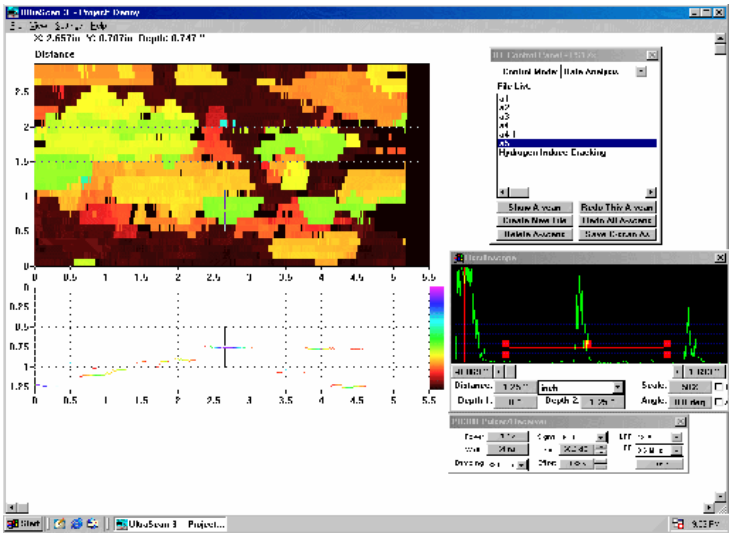




TOFD Scan of Butt Weld and Defect

Corrosion Mapping / HIC Inspection A, B, and C Scan (below)





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