

**IMPACT ECHO SCANNER (IES)**  
**ASTM C1383-04**

Freedom Data PC or NDE 360 Platform Required, Sold Separately  
(patented technology by Olson Instruments, Inc.)



Olson Instruments, Inc.



**SPECIFICATIONS**

**HARDWARE SPECIFICATIONS**

- » Rolling test head with integrated rolling displacement transducer and 2 solenoid-operated impactors
- » Standard solenoid impactor usable frequency range: 3,000 to 24,000 Hz
- » Medium solenoid impactor usable frequency range: 1,500 to 12,000 Hz
- » One-hand operation of test head with automatic firing of solenoid every 1 inch (25 mm)
- » Displacement Transducer Frequency Range: 500 - 100,000 Hz
- » Test Head Cable Length: 25 feet (7.6 m) standard, other lengths optional
- » Dry coupled, high-durability, water-tight, urethane covered transducer wheel elements
- » No conductive disks or other disposable materials required for use
- » Extension Pole for overhead and floor use ~ 5 ft (1.5 m) length
- » Test interval: approximately 1.0 inch (25 mm) per test along scan line
- » Dual impactor system allows selection of depth range
- » Test thickness range with standard solenoid impactor: 3 - 24 inches (7.6-61 cm)
- » Test thickness range with medium-mass solenoid impactor: up to ~ 40 inches (1 m)
- » Maximum scanning speed: 1 ft/s (0.3 m/s)
- » Recommended scanning speed: 0.5 ft/s (0.15 m/s)

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SOFTWARE FEATURES (WINIES)
» Automatic data collection with full display of current waveform and thickness versus distance plot
» Full X-Y grid setup and tracking with user-selectable scan line grid spacings
» Color display of 2-D (line) and 3-D (area) thickness plots
» Automatic real time thickness calculation and plotting from user-defined scan criteria, or manual picking of thickness peaks
» Multiple digital filtering and windowing options for data cleaning and display
» Time domain windowing available (user-selectable)
» Various scan manipulations possible - adding multiple scans together, etc.
» Full user selection of channel gains, units, sampling rate, sampling length, trigger channel, trigger polarity and amplitude, pre-trigger length
» Impactechogram plot available, allowing 2-D visualization of multiple echo thicknesses on a single plot for a single scan
» Combine multiple scans to reduce 2-D/3-D color scaled plots of dominant echo depths, scan distance

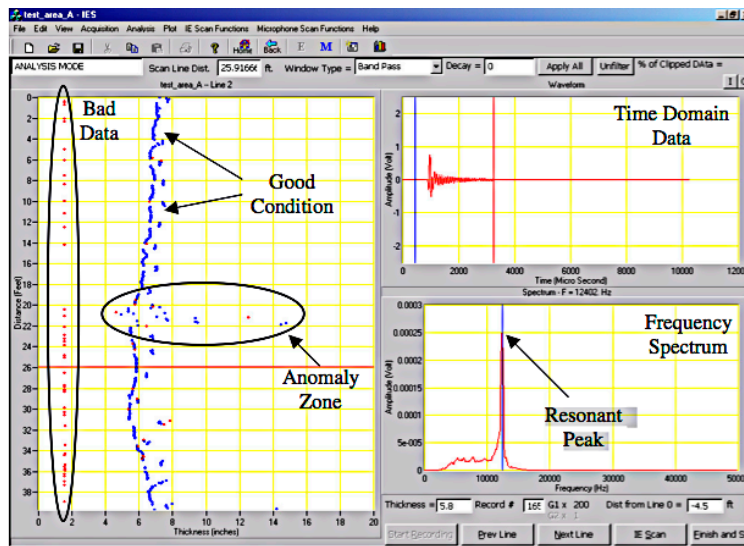
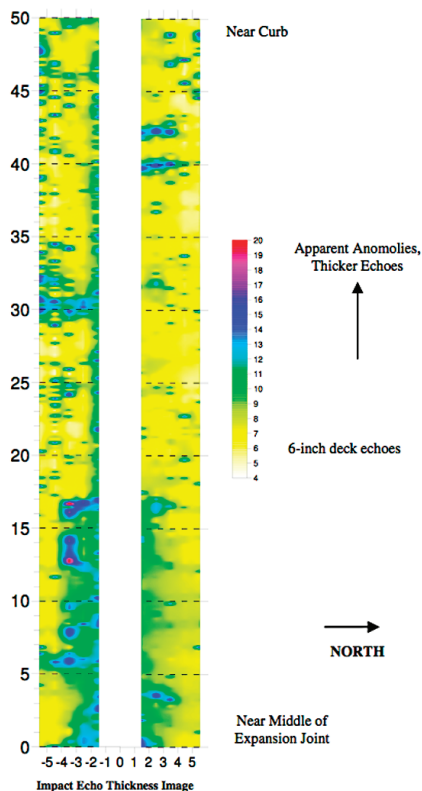


Figure 5: Impact Echo Scanning Software, Showing one 40-foot scan line taken in Area A. (0 ft is at the East end of the joint near the column, 40 ft is near the middle of the expansion joint)