

STEEL PLATE ULTRASONIC INSPECTION TROLLEY



This equipment is a convenient and easily mobile trolley which is manoeuvred around the plate to ultrasonically inspect plate products. See the reverse of this brochure.

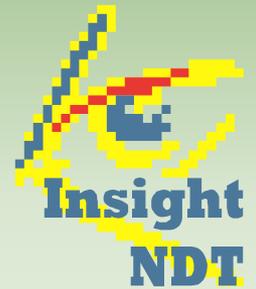
Available as a 1, 4, 8 or 16 channel system.

Can test up to a band 400mm wide in one pass.

Excellent near and far surfaces resolution of 2mm.

Able to view both flaw and time of flight information for all channels in real-time while scanning.

Can generate a C-Scan of an area on the plate.



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Our range of plate inspection trollies have been designed specifically to have a sensitivity such that a 6mm flat bottomed hole to within 2mm of the near and far surface of the plate will be detected. The equipment consists of a wheeled trolley fitted with the following components;

- 3-wheeled Inspection unit designed for both umbilical or on-board electrical power and ultrasonic couplant supplies.
- 1, 4, 8 or 16-Channel ultrasonic Probe Head fitted with a similar number of ultrasonic transducers each individually sprung loaded, with wear shoes.
- Industrial grade portable computer.
- 1, 4, 8 or 16-Channel ultrasonic flaw detector system, where the A-Scan is displayed on the computer.
- Single channel hand transducer with couplant feed for manual defect verification.



These trollies are pushed over steel plate ensuring the surface area is completely covered, while, the ultrasonic system monitors the signal from the transducers in

the probe head for detection of defective areas. A band of up to 400mm in width, for the 16-channel system is covered on each pass along the plate.

A report file including Plate serial number is set up initially to store all required test information. The plate is then tested. The software, displays each channel as a bar graph. Defective areas are alarmed within the software in the form of signal level bar graphs and alarm gates for each transducer channel. These are displayed and updated continuously during the scanning process.

Any areas of confirmed local defects can be logged into the reporting file by means of a C-Scan of the area along with X-Y co-ordinates manually entered. This C-scan facility has a limited single strip range as it is only intended for local defect reporting.

The reporting file may be downloaded and viewed, including any C-Scans that may have been performed, on any PC that conforms to the minimum required specifications and is loaded with the report viewing software supplied.

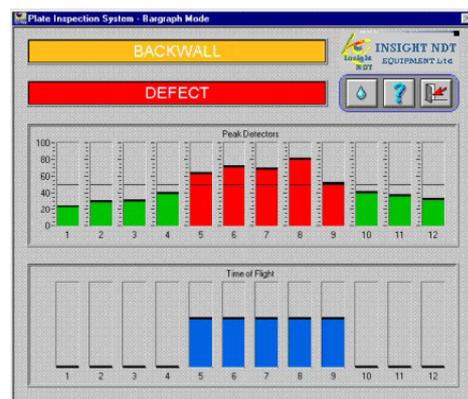
Plate Testing Software

The plate testing software is designed to show a real-time display of the amplitude of the signal within the gate, in the form of a bar graph. The display colour of this amplitude changes if the signal is above the pre-set threshold level.

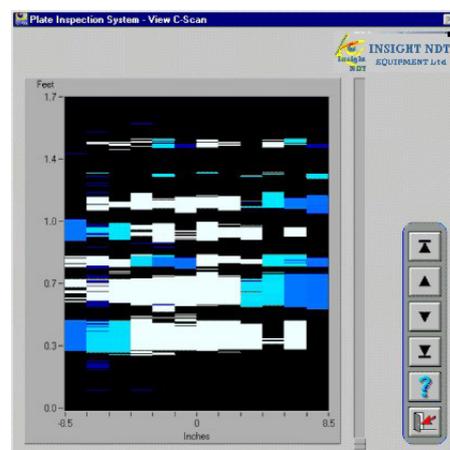
The position of any flaw is indicated by the time-of-flight bar graphs which change colour based on the depth of the flaw within the plate.

The colours for both above and below the flaw threshold can be pre-set by the user. Also the colour range for the time-of-flight bar graphs and the C-Scan are user pre-set.

Two separate alarms are provided, one **DEFECT** alarm, which indicates that a channel has exceeded the preset threshold. The other, **BACKWALL**, which indicates, that there is a loss, for whatever reason, of the back wall signal.



The Main Screen of the plate testing software is shown above.



A typical C-Scan from the plate testing software is shown above.