December 2010

Asset Care Counts #3

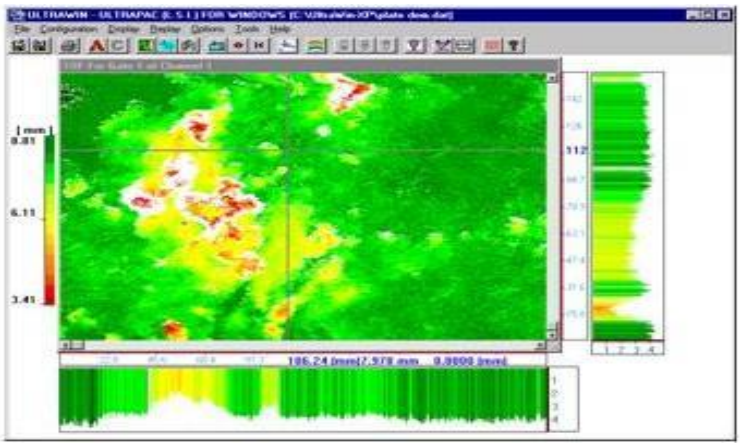
ULTRASONIC CORROSION MAPPING

Ultrasonic thickness surveys on pressure vessels, tanks, piping and similar industrial equipment typically involve taking a series of discrete readings and presenting the results in numerical tabular form.

Where the surfaces being measured are corroded and pitted, this spot measurement technique may not necessarily identify the minimum thickness regions. In addition, the results presentation provides limited information on the extent, severity or distribution of any corrosion/erosion damage present.

The use of corrosion mapping techniques however can generate intuitive, pictorial representations of material thickness, colour coded for severity and include cross-sectional profiles of regions of interest. As all data is recorded during the inspection, comparison with earlier surveys of the same locations is possible.

A wide variety of corrosion mapping systems are available for use on flat and curved surfaces, ferrous and non-ferrous materials, to provide accurate and comprehensive information on asset condition. The testing is non-intrusive and can be carried out with the equipment still in operation, maintaining reliability, safety and production while saving considerable cost compared to the conventional shutdown and vessel entry alternative.



Ultrasonic colour C-Scan corrosion map showing cross sectional B-Scan thickness profiles along the 2 cursor positions relative to a photo of the actual plate material.

For further information on corrosion mapping, thickness testing or other inspection problems please contact any ALS Industrial Division office.

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