

Ultrasonic Testing Techniques for Bridge Inspections

MISTRAS Group, Inc. has teamed up with the Ohio Department of Transportation (ODOT) in an effort to improve state and local bridges in Ohio. Selected steel bridges throughout the state will have critical gusset plate condition testing done with the Pocket UT™, the world's first hand-held, battery-powered, C-scan imaging system.

The Pocket U, when accompanied by an R-scan, uses ultrasonic testing techniques to gather thickness data faster and display a graphical image to show areas of corrosion. The system runs on Windows CE and Pocket UTWin for data acquisition, analysis, and archiving and has the capability to perform A, B, and C-scan imaging. The data, retrieved by the two-pound unit, is stored on a 1-GHz compact flash card that can be easily transferred to a laptop computer.

Home to more than 42,000 bridges, Ohio requires more inspections on bridges than any other state. Trained bridge inspectors currently use conventional thickness gages to take spot readings of aging and deterioration of key areas like gusset plates in steel bridges.

With the addition of the Pocket UT to ODOT's bridge inspection and preservation program, inspectors will be able to pinpoint divots and section loss in a fraction of the time taken with typical gages used for bridge inspection. This information is stored on the device as a permanent record for future reference and readings.

"The Pocket UT is a huge time saver, because not only will it limit the amount of time we have to inconvenience the public with the shutting down of bridges, but it



allows us to receive better data, faster," said Michael Loeffler, an inspector for the Ohio DOT. "Also, the less time our inspectors have to spend on a bridge is a safety factor that cannot be measured.."

MISTRAS Group, Inc. provides non-destructive testing products and services under well-known industry-recognized brand names including CONAM Inspection and Engineering Services Inc., Physical Acoustics Corporation, and Vibra-Metrics as well as regional or product specific brand names.

Please visit www.mistrasgroup.com for more information on the Pocket UT and other products.