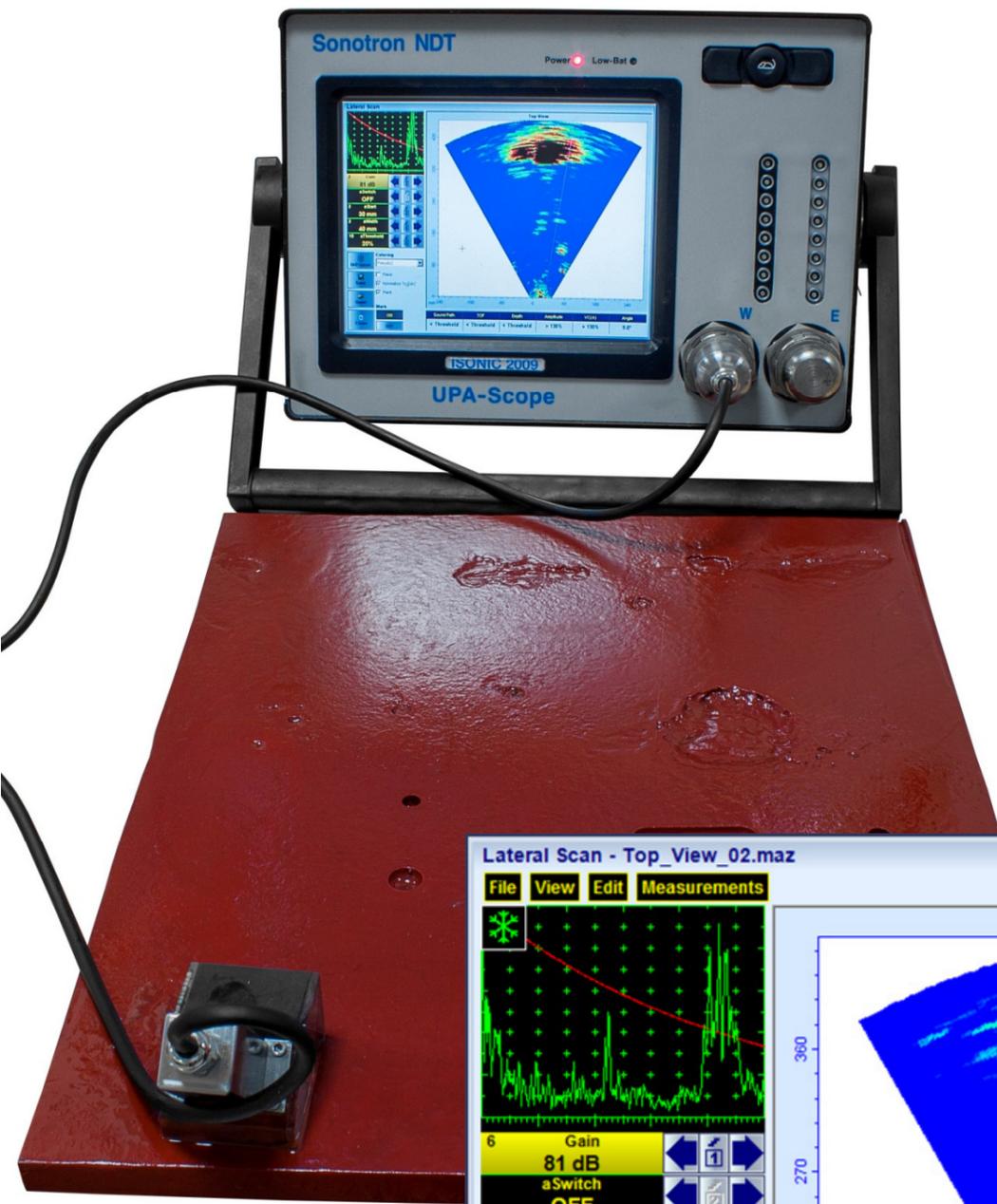


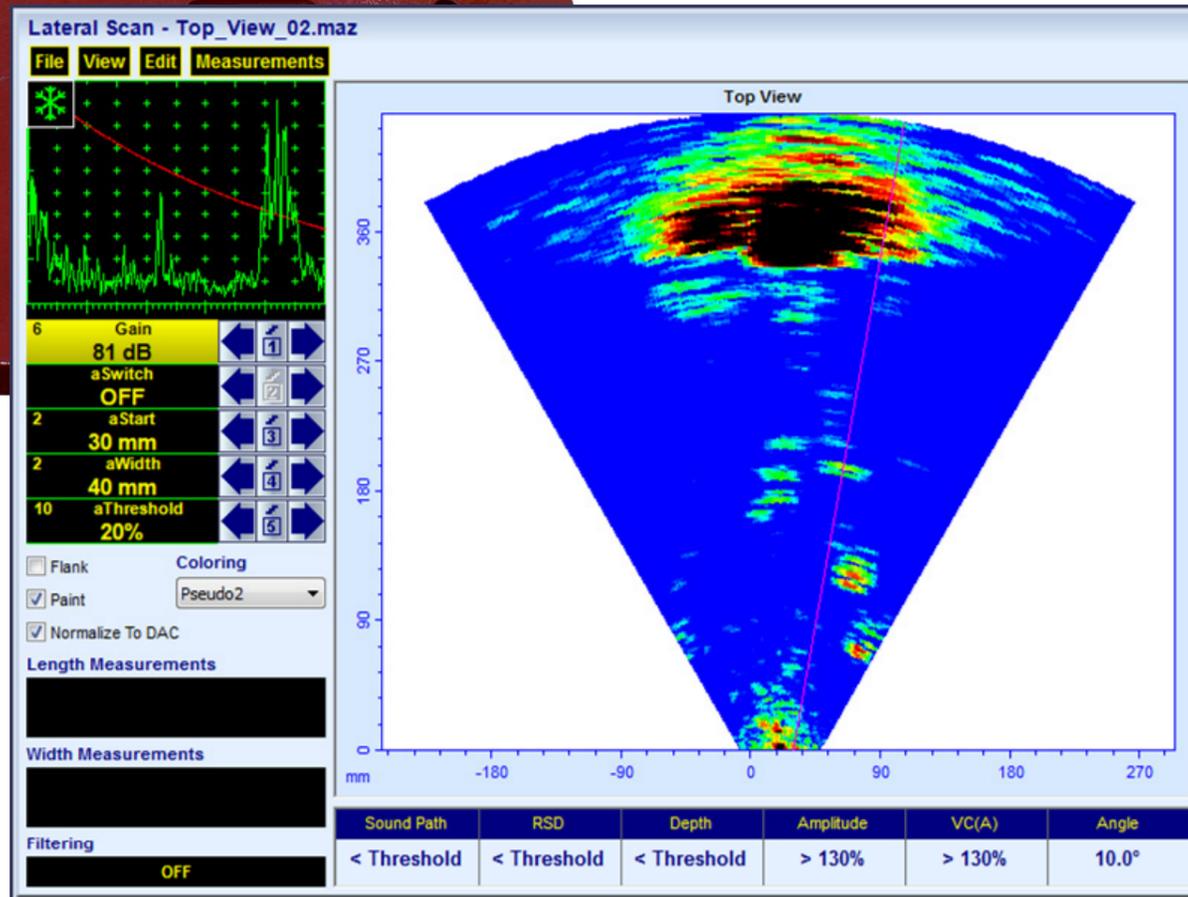


***Short Range Guided Wave (SRUT GW) Inspection
using Wedged Matrix Array Probes***



SRUT Guided Wave Inspection with use of wedged Matrix Array Probe – the sample of the annular ring with the artificial defects and real corrosion

The **8X8 wedged matrix array probe** is connected to **ISONIC 2009 UPA scope** while the **emitting / receiving aperture comprises all 64 elements** allowing 3D manipulating of ultrasonic beams. This allows both: finding of the mode of the guided wave, which is optimal for the part under test and the sectorial scan coverage and CB-Scan-type top view imaging on the material with 100% raw data capturing

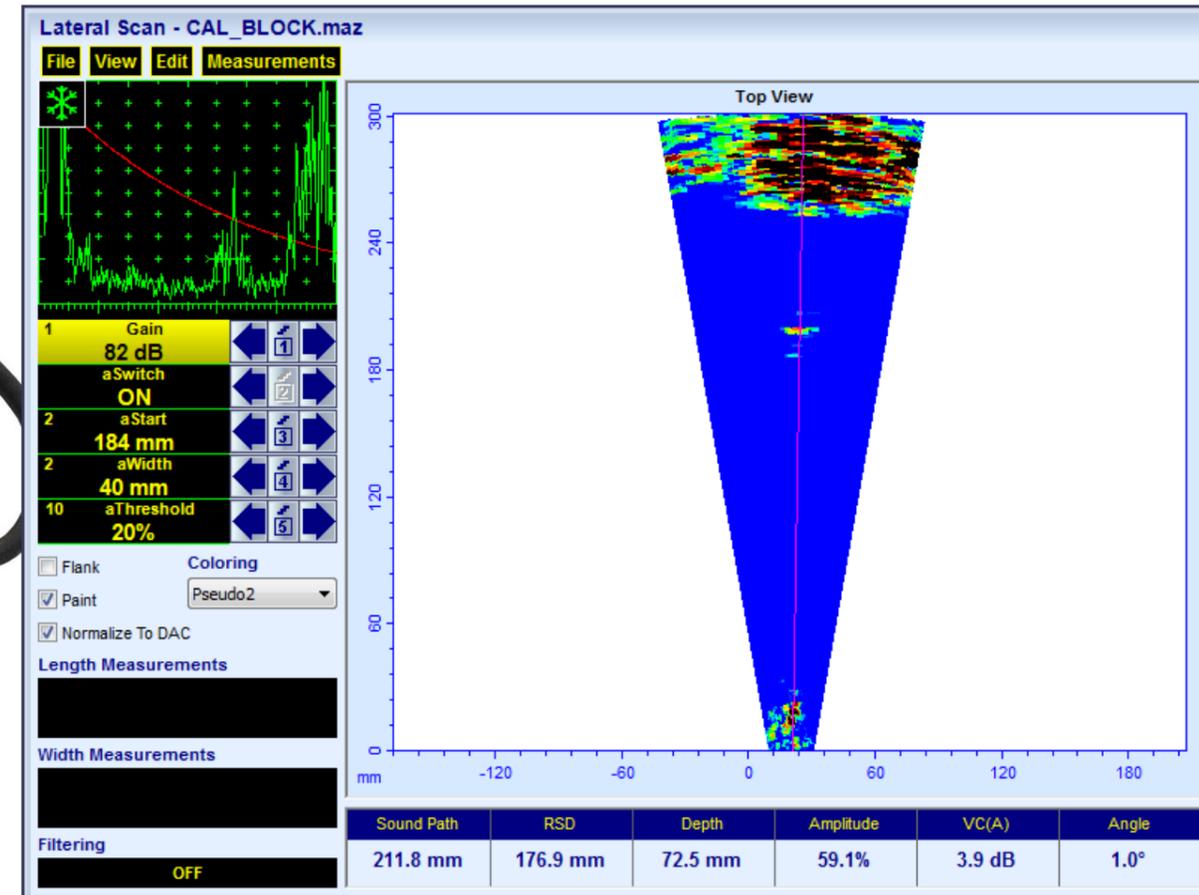


Item	Order Code (Part ##)
Inspection SW Application for ISONIC 2009 UPA-Scope - Phased Array Modality: 3D-SCAN S – Shear / Surface / Guided Wave Inspection with of Wedged Matrix Array Probes / Dual Linear Array Probes ⇒ Wedged Matrix Array Probes - 3D-Scan and Sector Scan Coverage → 3D-Control of Ultrasonic Beam → Vertical Plane Focusing with True-To-Geometry-Volume Corrected 3D-Coverage / Real Time 3D Imaging (3D-Scan) of the Material from Single Probe Position → True-To-Geometry Weld Overlay Volume Corrected 3D-Coverage / Real Time 3D Imaging (3D-Scan) from Single Probe Position → True-To-Geometry Volume Corrected Sector-Scan Coverage for Planar Cross Section Objects (Plates, Pipe Wall in Longitudinal Direction, etc) → Sector-Scan Cross Sectional Coverage → Intuitive Image Guided PA Pulser Receiver with 3D Beam Forming View → DAC / TCG Normalization → Independent on TCG Angle Gain Compensation / Gain Per Focal Law Correction → Encoded and Time based C-Scan → 100% Raw Data Capturing → Automatic Defects Alarming Upon C-Scan Acquisition Completed → Automatic Creation of Editable Defects List → Comprehensive Postprocessing Including: ▷ Recovery and Evaluation of Captured A-Scans from the Recorded Cross Sectional Views (Sector Scan / B-Scan) and C-Scans ▷ Recovery of Cross Sectional Views from the Recorded C-Scans ▷ Converting Recorded C-Scans or their Segments into 3D Images ▷ Off-Line Gain Manipulation ▷ Off-Line DAC Normalization of the Recorded Images / DAC Evaluation ▷ Numerous Filtering / Reject Options (by Geometry / Position / By Amplitude / dB-to-DAC / etc) ▷ Defects Sizing ▷ Creation of Defect List and Storing it Into a Separate File ▷ Automatic creating of inspection reports - hard copy / PDF File ⇒ Wedged Matrix Array Probes - Lateral Sector Scan Coverage: Shear / Guided / Surface Waves → 3D-Control of Ultrasonic Beam → Horizontal Plane CB-Scan Coverage and Imaging with Use of Shear, Surface and Guided Waves using Linear Arrays Situated Horizontally on the Fixed Angle Wedge → Azimuth C-Scan Coverage → Intuitive Image Guided PA Pulser Receiver with 3D Beam Forming View → DAC / TCG Normalization → Independent on TCG Angle Gain Compensation / Gain Per Focal Law Correction → 100% Raw Data Capturing → Comprehensive Postprocessing Including: ▷ Recovery and Evaluation of Captured A-Scans from the Recorded CN-Scan ▷ Off-Line Gain Manipulation ▷ Off-Line DAC Normalization of the Recorded Images / DAC Evaluation ▷ Numerous Filtering / Reject Options (by Geometry / Position / By Amplitude / dB-to-DAC / etc) ▷ Defects Sizing ▷ Automatic creating of inspection reports - hard copy / PDF File ⇒ Dual Linear Array Probes → True-To-Geometry Weld Overlay Volume Corrected Imaging - Cross Sectional and Top (C-Scan) - / Side- / End- View and 3D → Sector-Scan Cross Sectional Coverage → Intuitive Image Guided PA Pulser Receiver with 3D Beam Forming View → DAC / TCG Normalization → Built-In Weld Bevel Editor and Ray Tracer - Scanning Pattern Design → Independent on TCG Angle Gain Compensation / Gain Per Focal Law Correction → Automatic Coupling Monitor → Encoded and Time based C-Scan → 100% Raw Data Capturing → Automatic Defects Alarming Upon C-Scan Acquisition Completed → Automatic Creation of Editable Defects List → Comprehensive Postprocessing Including: ▷ Recovery and Evaluation of Captured A-Scans from the Recorded Cross Sectional Views (Sector Scan) and C-Scans ▷ Recovery of Cross Sectional Views from the Recorded C-Scans ▷ Converting Recorded C-Scans or their Segments into 3D Images ▷ Off-Line Gain Manipulation ▷ Off-Line DAC Normalization of the Recorded Images / DAC Evaluation ▷ Numerous Filtering / Reject Options (by Geometry / Position / By Amplitude / dB-to-DAC / etc) ▷ Defects Sizing ▷ Creation of Defect List and Storing it Into a Separate File ▷ Automatic creating of inspection reports - hard copy / PDF File	SWA 909809



SRUT Guided Wave Inspection with use of wedged Matrix Array Probe – the calibration block for the detection of the corrosion in the underground part of the steel poles (air to soil interface)

The 8X8 wedged matrix array probe is connected to ISONIC 2009 UPA scope while the emitting / receiving aperture comprises all 64 elements allowing 3D manipulating of ultrasonic beams. This allows both: finding the mode of the guided wave, which is optimal for the part under test and the sectorial scan coverage and CB-Scan-type top view imaging on the material with 100% raw data capturing





SRUT Guided Wave Inspection with use of wedged Matrix Array Probe – detection of the corrosion in the underground part of the steel poles (air to soil interface): the cut off was taken from the real steel pole

The 8X8 wedged matrix array probe is connected to ISONIC 2009 UPA scope while the emitting / receiving aperture comprises all 64 elements allowing 3D manipulating of ultrasonic beams. This allows both: finding of the mode of the guided wave, which is optimal for the part under test and the sectorial scan coverage and CB-Scan-type top view imaging on the material with

