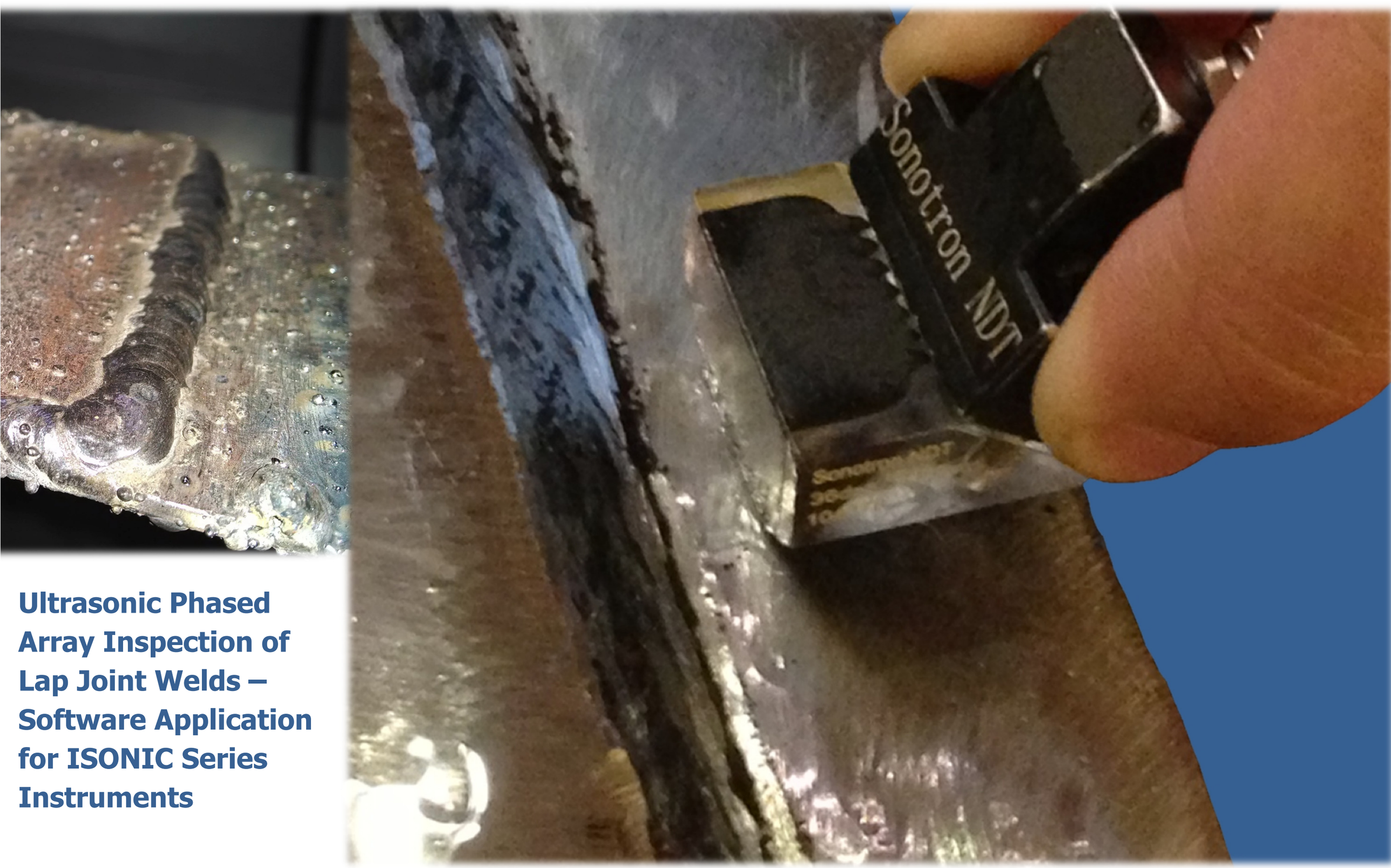


Ultrasonic Phased Array Inspection of Lap Joint Welds – Software Application for ISONIC Series Instruments

SONOTRON NDT

4, Pekeris st., Rabin Science Park, Rehovot, 7670204, Israel
Phone: +972-(0)8-9311000, Fax: +972-(0)8-9477712
www.sonotronndt.com

Shear wave inspection of the lap joint
(performance demonstration block - mockup)

Item	***Order Code (Part ##)***
Inspection SW Application for ISONIC 3510T, ISONIC 3510 - Phased Array Modality: **Expert Lap Joint - Inspection of Lap Joint Welds**	SWA 3510024
Inspection SW Application for ISONIC 2010 / ISONIC 2010 EL - Phased Array Modality: **Expert Lap Joint - Inspection of Lap Joint Welds**	SWA 910824
Inspection SW Application for ISONIC 2009 UPA-Scope - Phased Array Modality: **Expert Lap Joint - Inspection of Lap Joint Welds**	SWA 909824
⇨ 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 Beam Forming View ⇨ DAC / TCG Normalization ⇨ Built-In Weld Geometry Editor and Ray Tracer - Scanning Pattern Design ⇨ Independent on TCG Angle Gain Compensation / Gain Per Focal Law Correction ⇨ Automatic Coupling Monitor ⇨ Automatic Scanning Integrity Monitor ⇨ Detection of the defects in the parent material simultaneously with weld inspection ⇨ Encoded and Time based C-Scan ⇨ 100% Raw Data Capturing ⇨ FMC/TFM Protocol for the data acquisition and imaging ⇨ Automatic Defects Alarming Upon C-Scan Acquisition Completed ⇨ Automatic Creation of Editable Defects List ⇨ Automatic Creating of Scanning Integrity Report Upon C-Scan Acquisition Completed ⇨ Comprehensive Postrpocessing 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 to TCG / TCG to DAC toggling for all types of stored files (A-Scans, cross-sectional views, C-Scans, etc) → Off-Line DAC Normalization of the Recorded Images / DAC Evaluation → Off-Line editing of Angle Gain Compensation / Gain per Shot Correction applied to the stored the Cross-sectional Views / C-Scan data → Numerous Filtering / Reject Options (by Geometry / Position / By Amplitude / dB-to-DAC / etc) → Defects Sizing → Automatic Creation of Defect List and Storing it Into a Separate File → Automatic Creating of Scanning Integrity Report → Automatic creating of inspection reports - hard copy / PDF File	

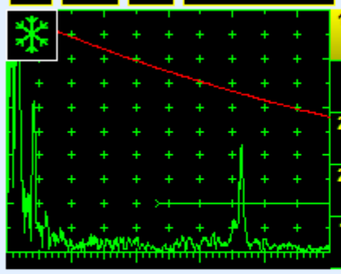
SONOTRON NDT
4, Pekeris st., Rabin Science Park, Rehovot, 7670204, Israel
Phone: +972-(0)8-9311000, Fax: +972-(0)8-9477712
www.sonotronndt.com

Shear wave inspection of the lap joint
(performance demonstration block - mockup)

SONOTRON NDT
4, Pekeris st., Rabin Science Park, Rehovot, 7670204, Israel
Phone: +972-(0)8-9311000, Fax: +972-(0)8-9477712
www.sonotronndt.com

Sector Scan - LAP_JOINT2.lab

File View Edit Measurements

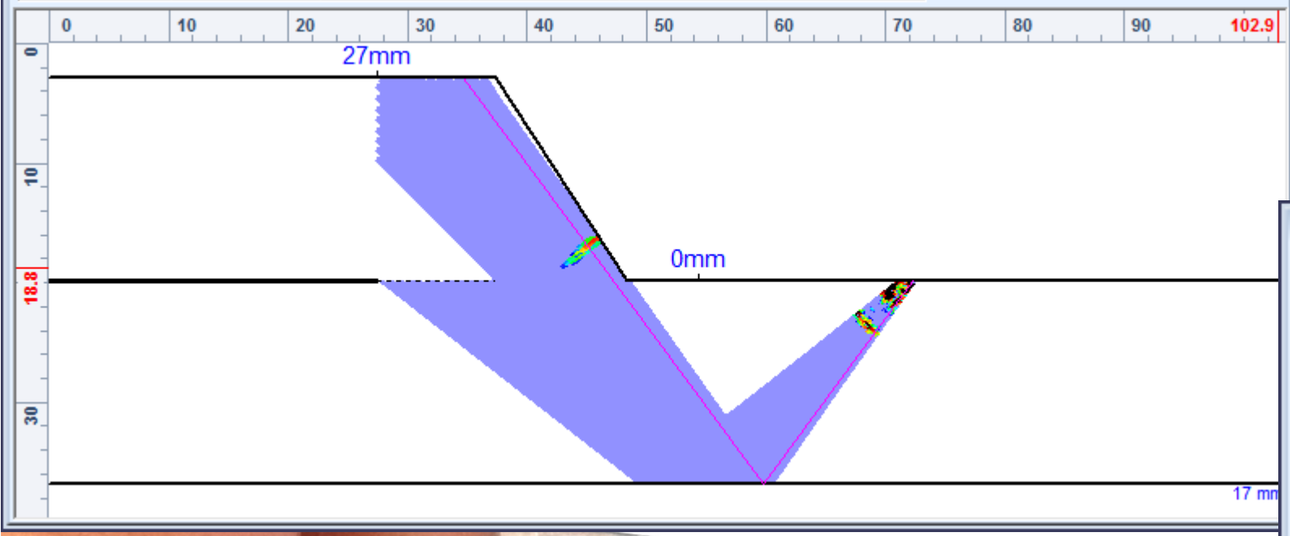


1 Gain 68 dB
aSwitch ON
2 aStart 30 mm
2 aWidth 40 mm
10 aThreshold 20%

Coloring: Pseudo2
Flank
Normalize To DAC
Paint
Show All Skips

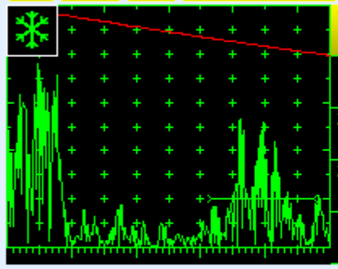
Thickness Measurements
Width Measurements
Filtering: OFF
Zoom: X1.0 X1 X2 X3

Sound Path	RSD	Depth	Amplitude	VC(A)	Angle
46.1 mm	9.4 mm	-3.1 mm	44.2%	-3.4 dB	36.5°



Sector Scan - LAP_JOINT3.lab

File View Edit Measurements

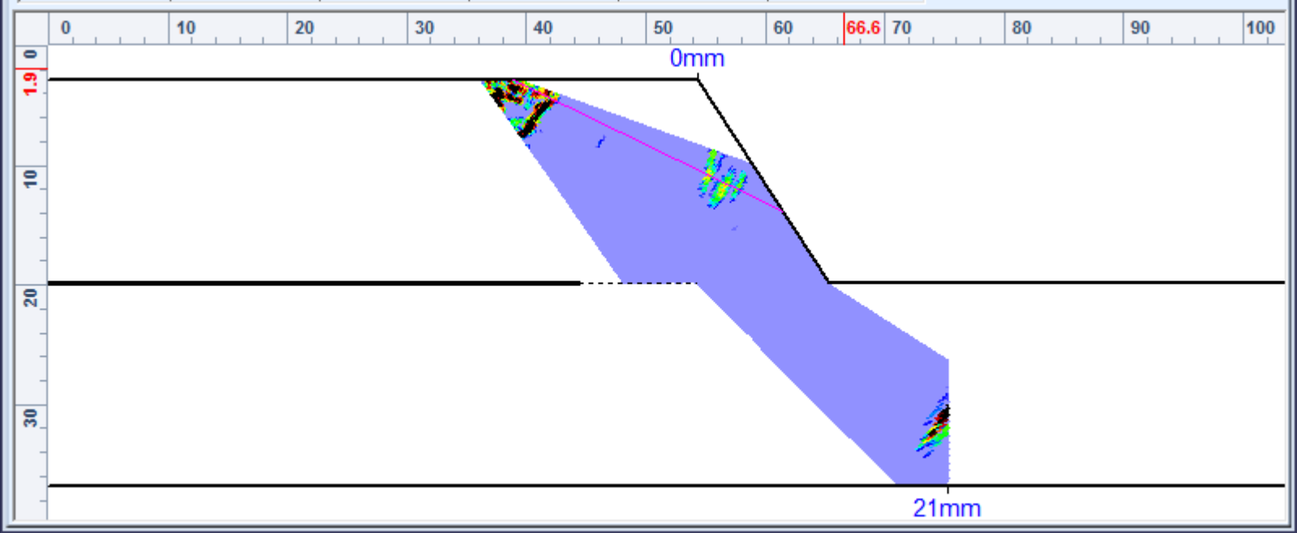


1 Gain 68 dB
aSwitch ON
2 aStart 16 mm
2 aWidth 8 mm
10 aThreshold 20%

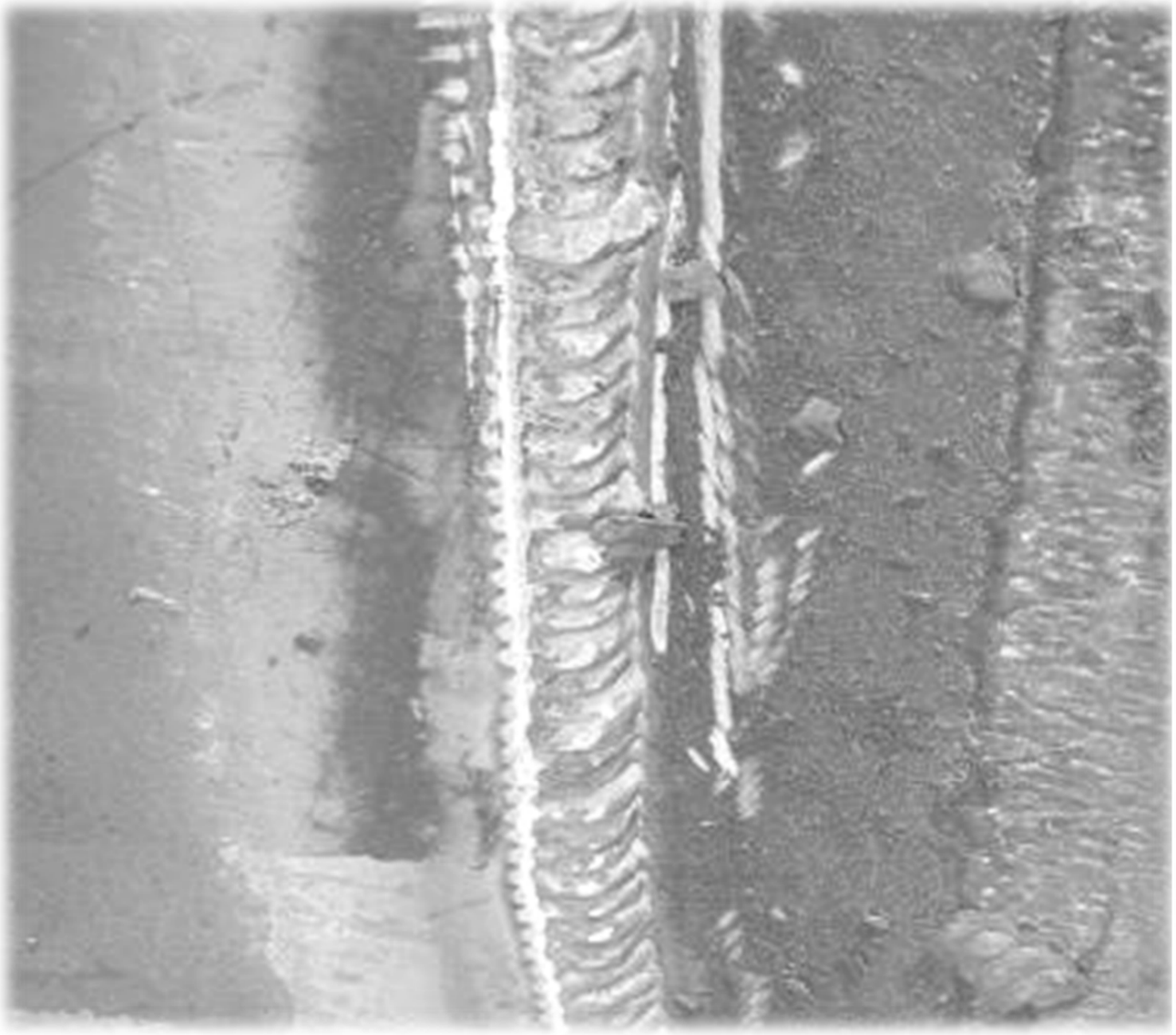
Coloring: Pseudo2
Flank
Normalize To DAC
Paint

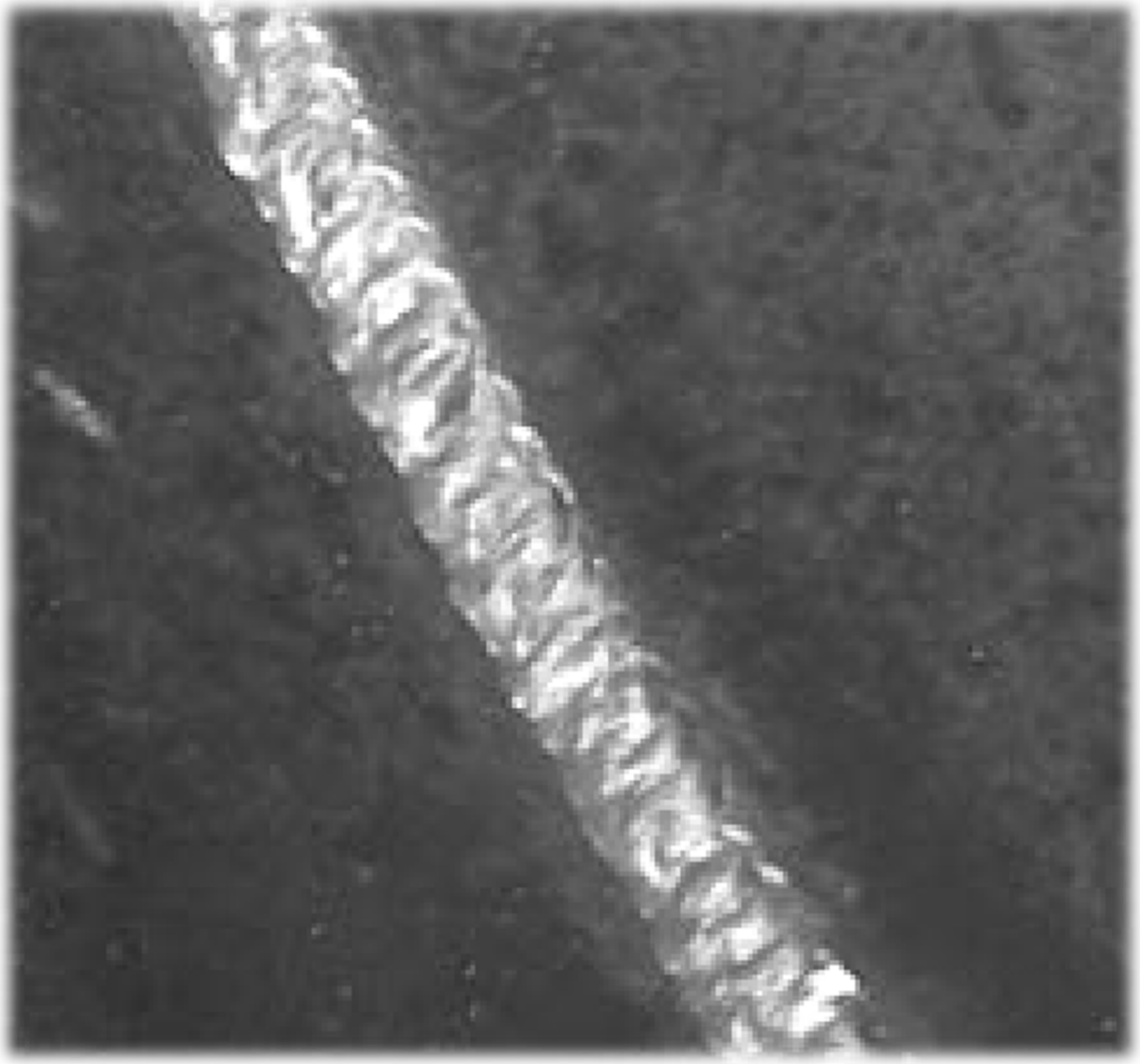
Thickness Measurements
Width Measurements
Filtering: OFF
Zoom: X1.0 X1 X2 X3

Sound Path	RSD	Depth	Amplitude	VC(A)	Angle
18.2 mm	0.8 mm	8.0 mm	53.2%	-4.0 dB	64.0°



SONOTRON NDT
4, Pekeris st., Rabin Science Park, Rehovot, 7670204, Israel
Phone: +972-(0)8-9311000, Fax: +972-(0)8-9477712
www.sonotronndt.com





SONOTRON NDT

4, Pekeris st., Rabin Science Park, Rehovot, 7670204, Israel
Phone: +972-(0)8-9311000, Fax: +972-(0)8-9477712
www.sonotronndt.com