

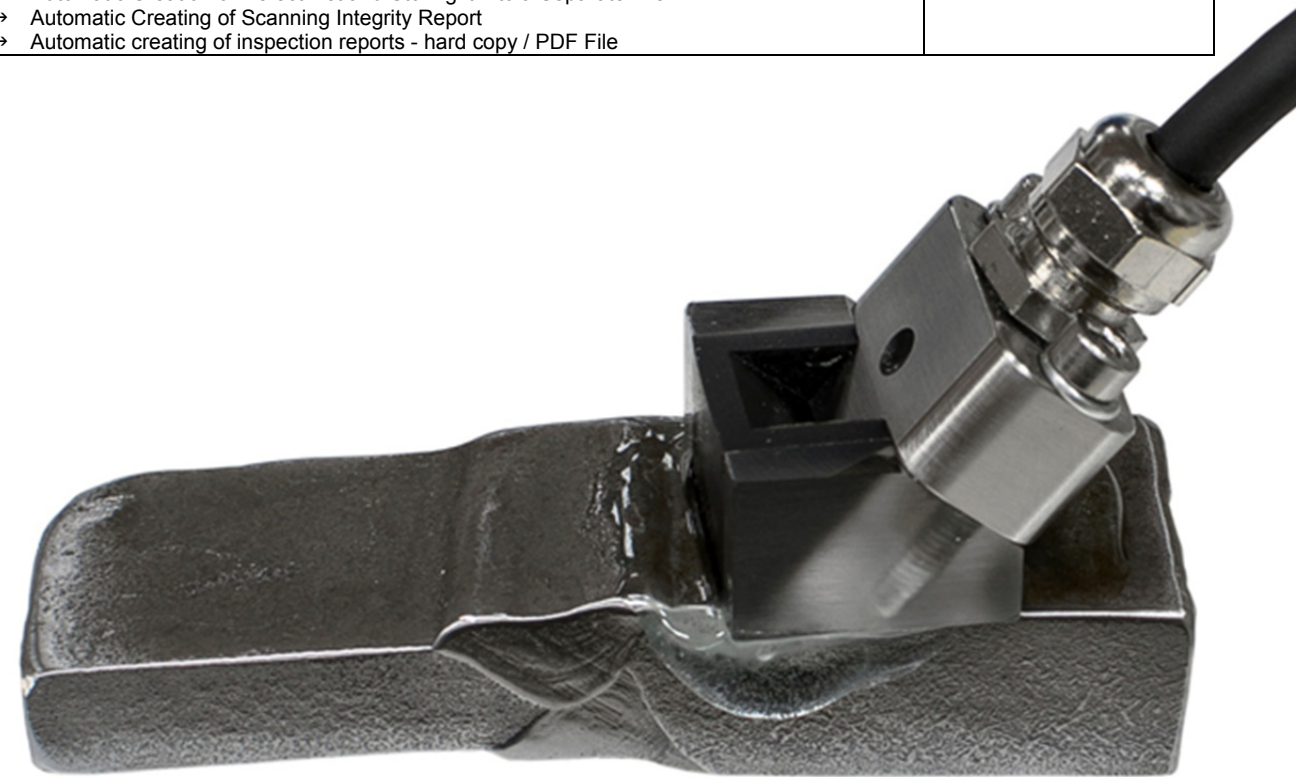
ISONIC EXPERT A

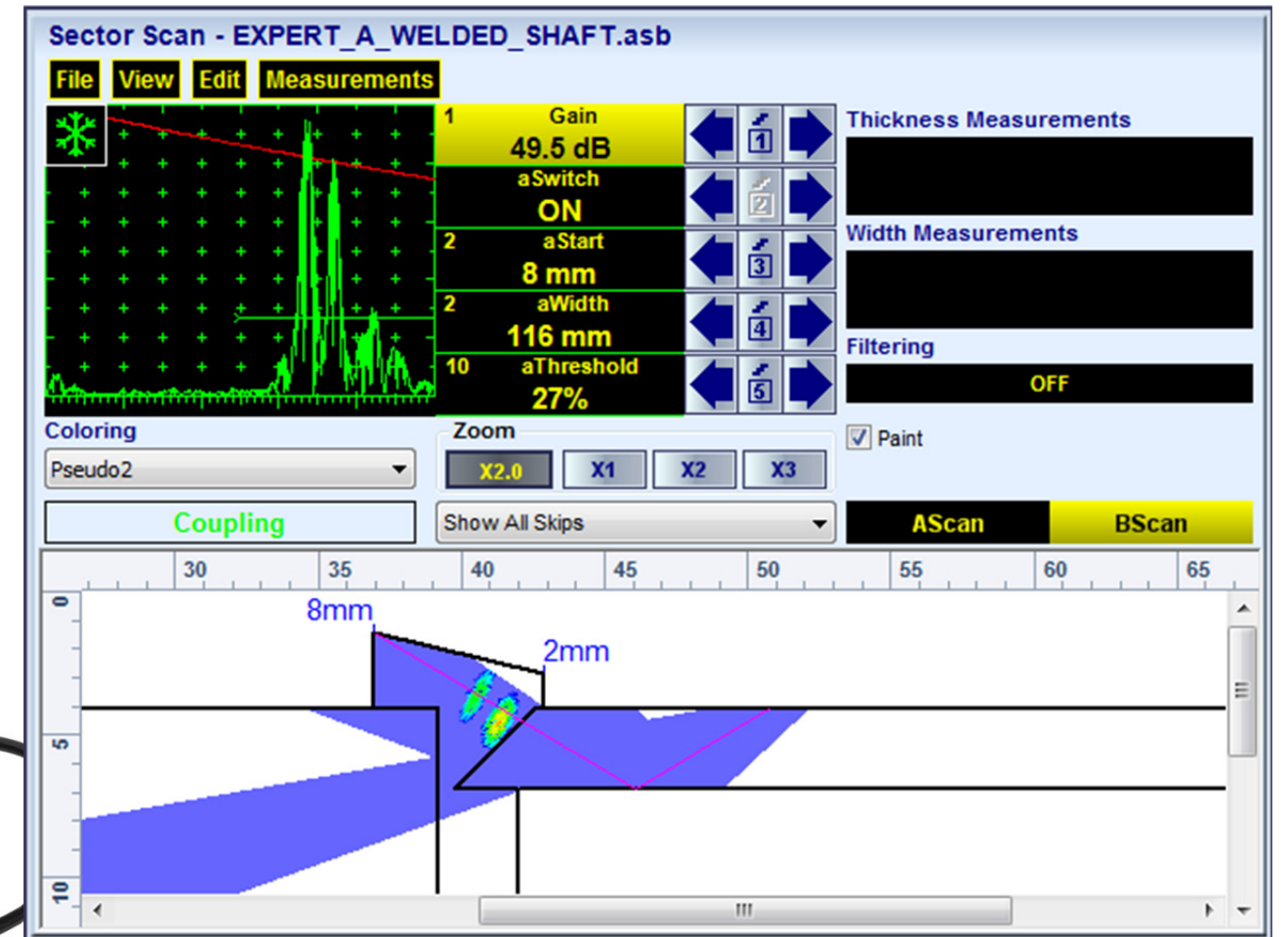
Ultrasonic Phased Array Inspection
of Planar and Circumferential Butt Welds
with Symmetrical and Asymmetrical bevel,
Unbeveled, Misaligned, Socket Welds, etc



Inspection of the asymmetrical cross section butt weld between the rings with the different wall thickness – heavy machinery industry

Item	Order Code (Part #)
Inspection SW Application for ISONIC 3510T, ISONIC 3510 - Phased Array Modality: Expert A - Weld Inspection - planar and circumferential butt welds with symmetrical and asymmetrical bevel, unbeveled, misaligned, socket welds, and the like	SWA 3510025
Inspection SW Application for ISONIC 2010 / ISONIC 2010 EL - Phased Array Modality: Expert A - Weld Inspection - planar and circumferential butt welds with symmetrical and asymmetrical bevel, unbeveled, misaligned, socket welds, and the like	SWA 910825
Inspection SW Application for ISONIC 2009 UPA-Scope - Phased Array Modality: Expert A - Weld Inspection - planar and circumferential butt welds with symmetrical and asymmetrical bevel, unbeveled, misaligned, socket welds, and the like	SWA 909825
<ul style="list-style-type: none"> ⇒ True-To-Geometry Weld Overlay Volume Corrected Imaging - Cross Sectional and Top (C-Scan) - / Side- / End- View and 3D ⇒ Sector-Scan and B-Scan (Linear 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 Postprocessing Including: <ul style="list-style-type: none"> → 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 	





Inspection of the asymmetrical wall tube to cast ring circumferential asymmetrical weld

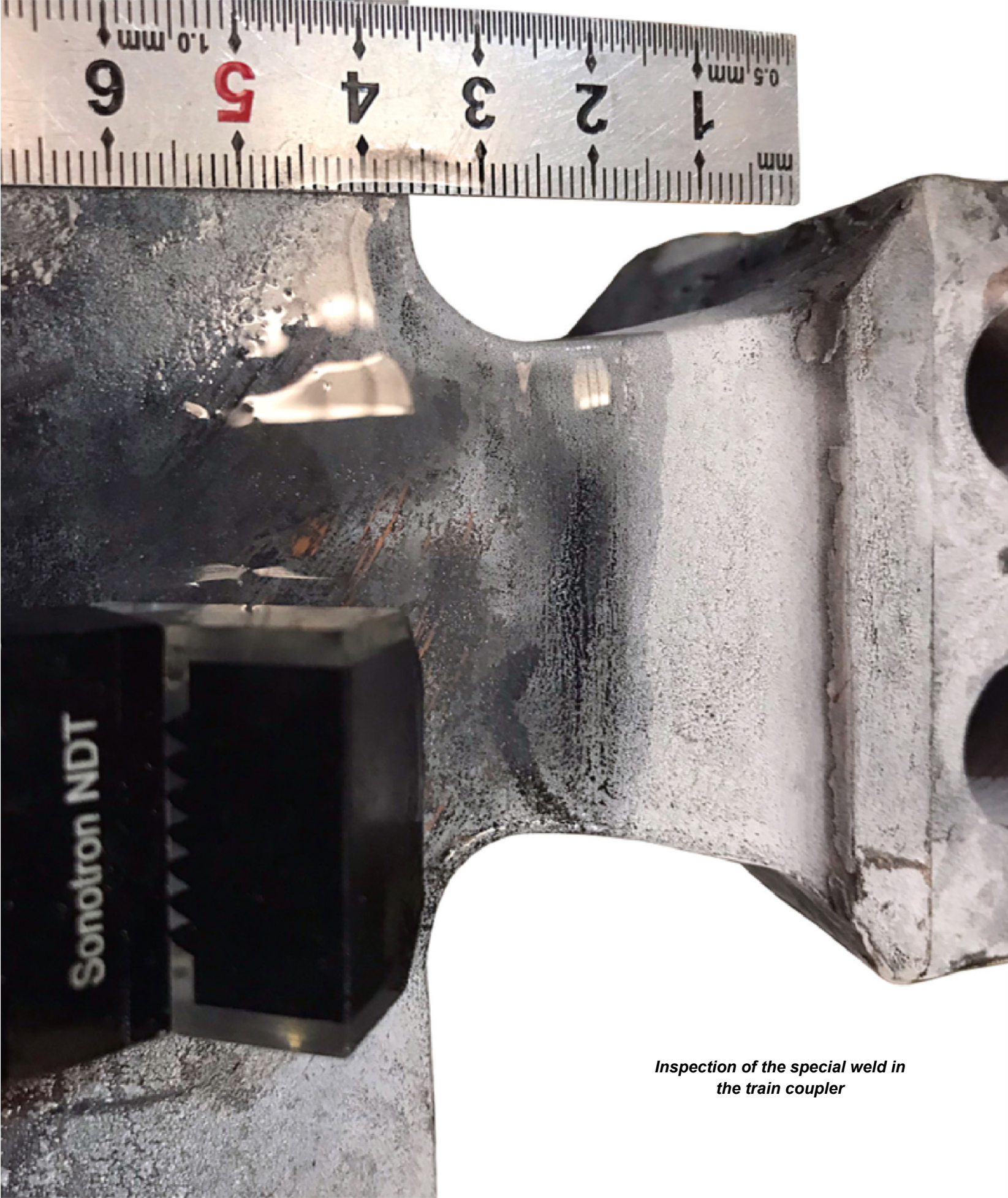


Toggling S-Scan with Live FMC/TFM

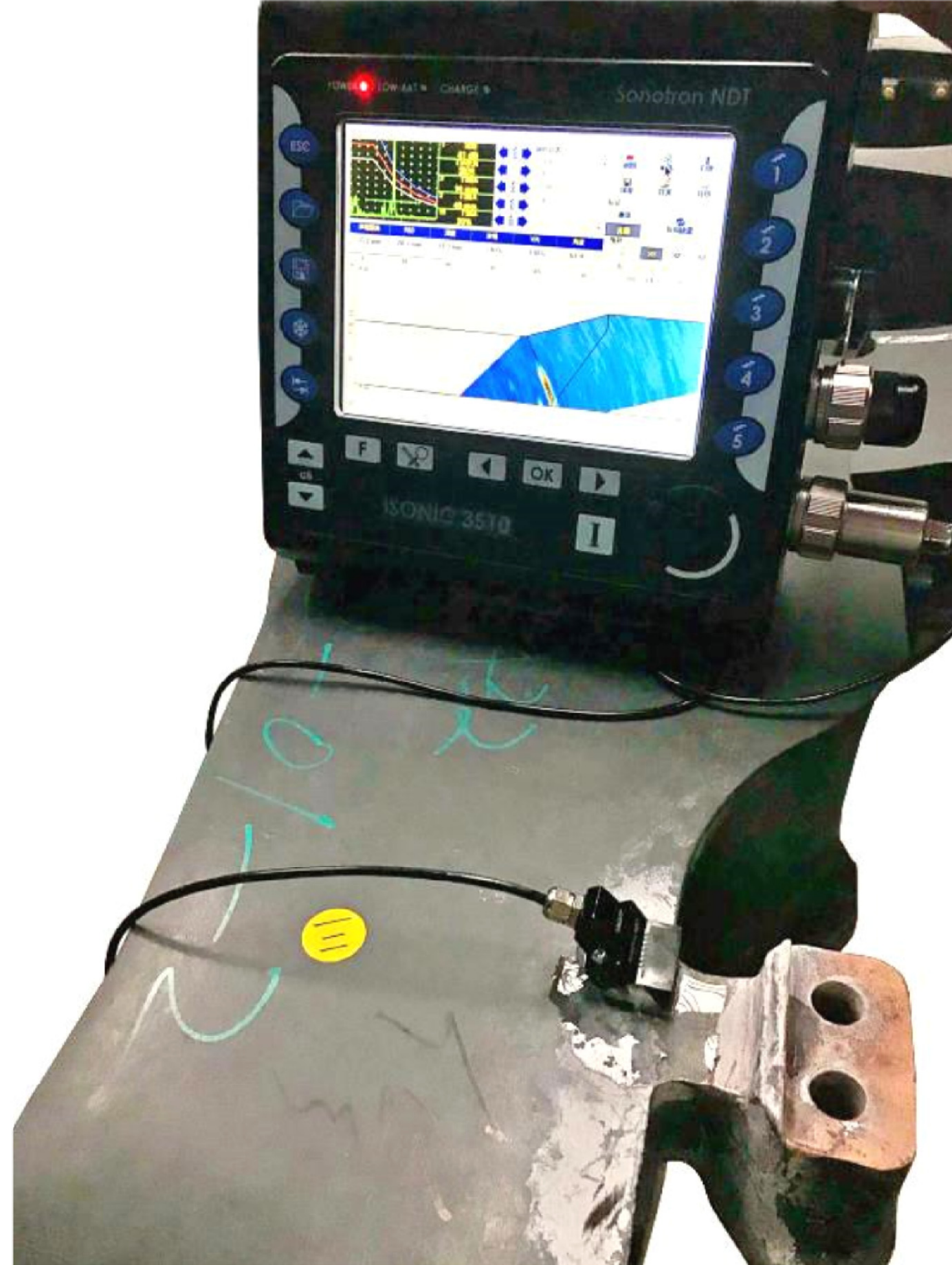


Inspection of the special weld in the train coupler



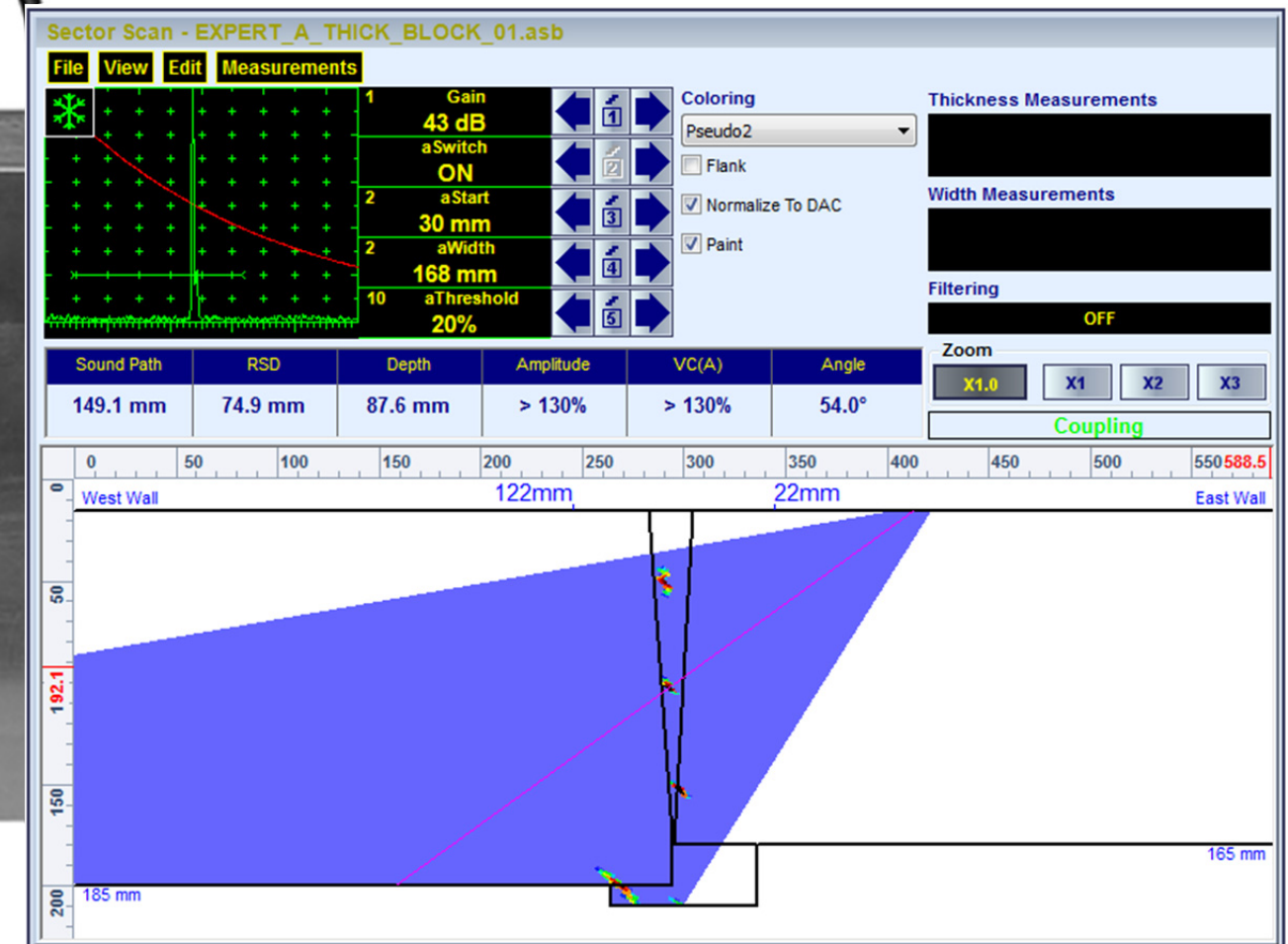


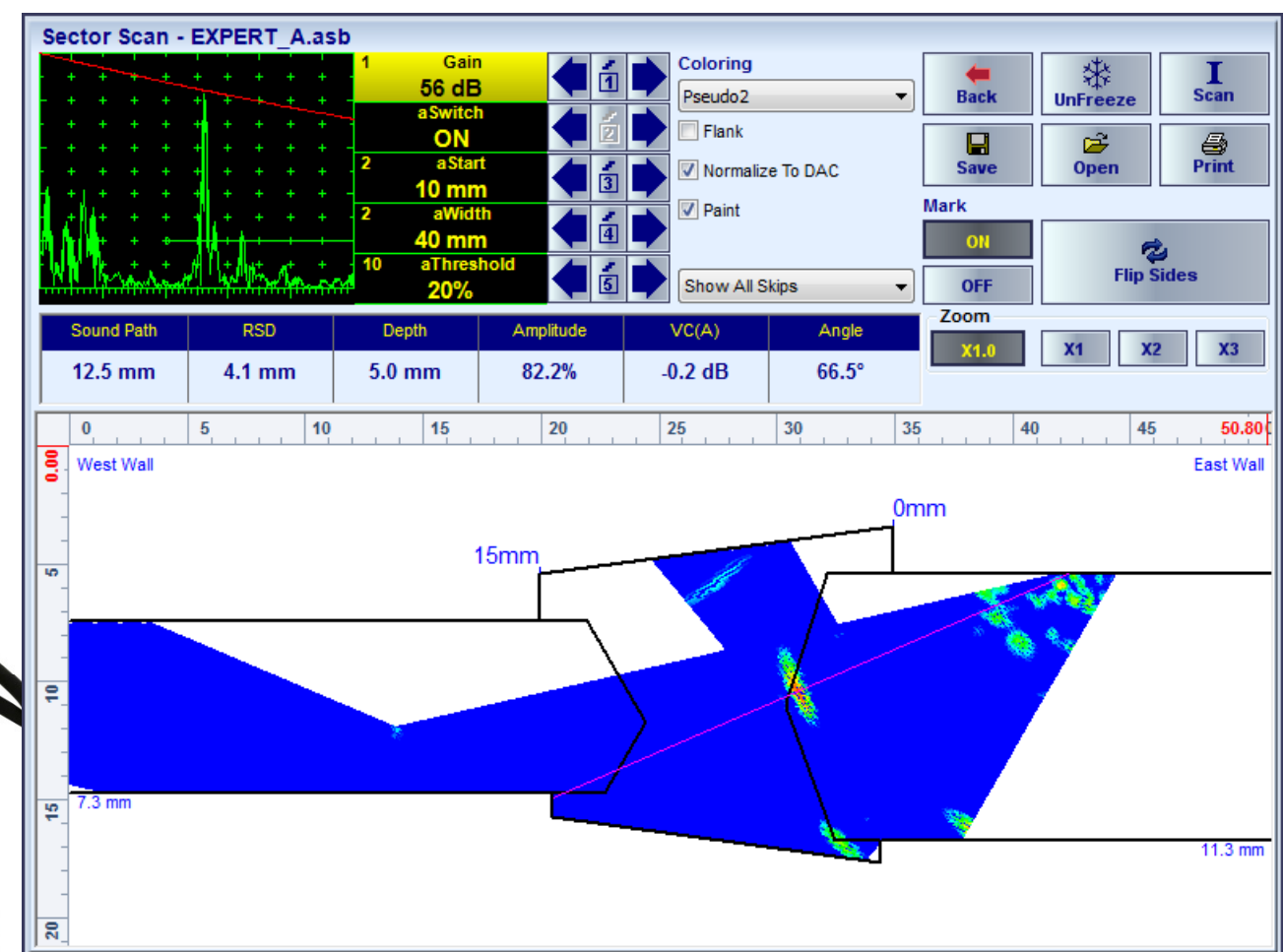
Inspection of the special weld in the train coupler





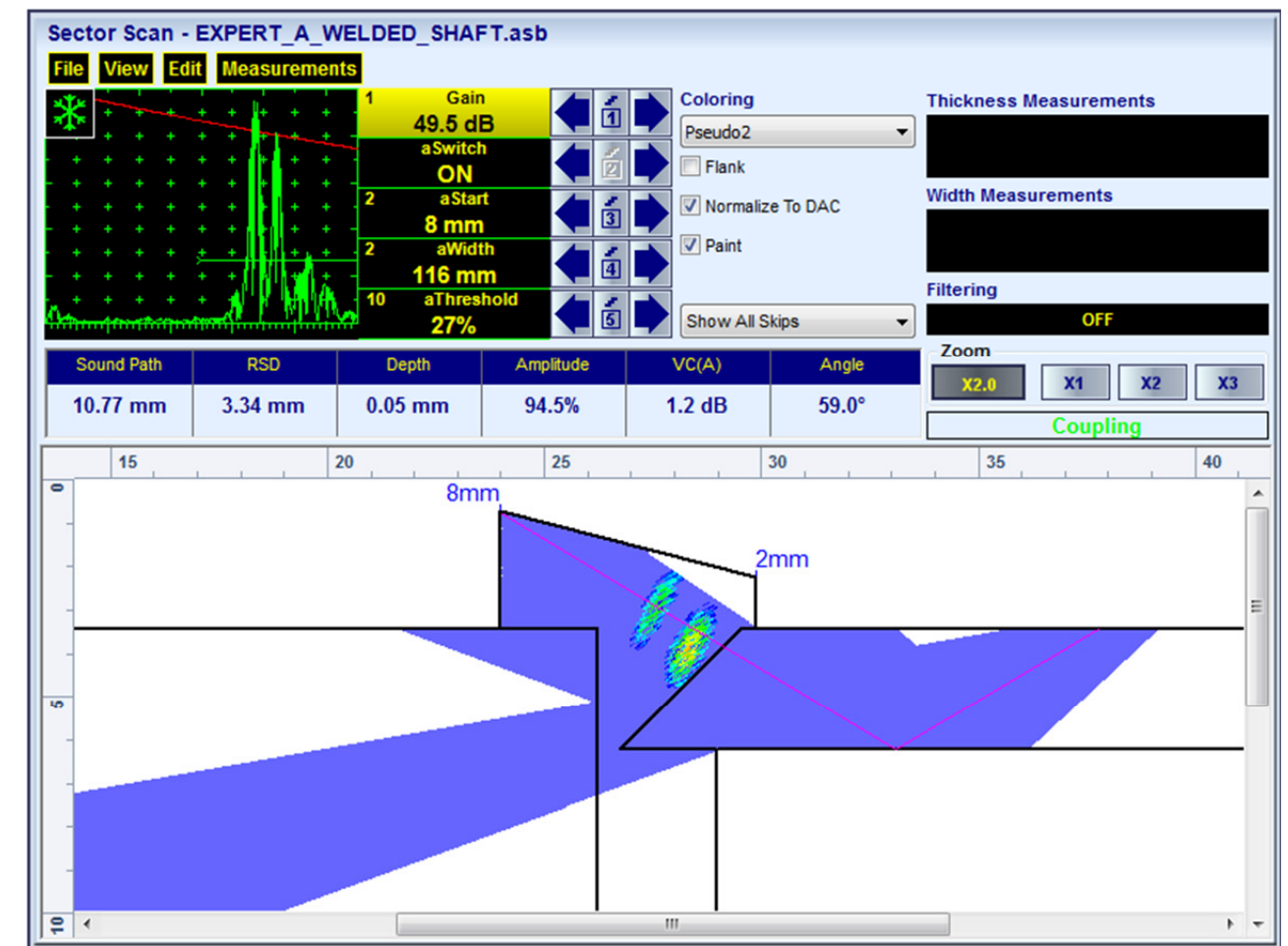
Inspection of heavy thickness narrow gap butt welds – calibration / performance demonstration block



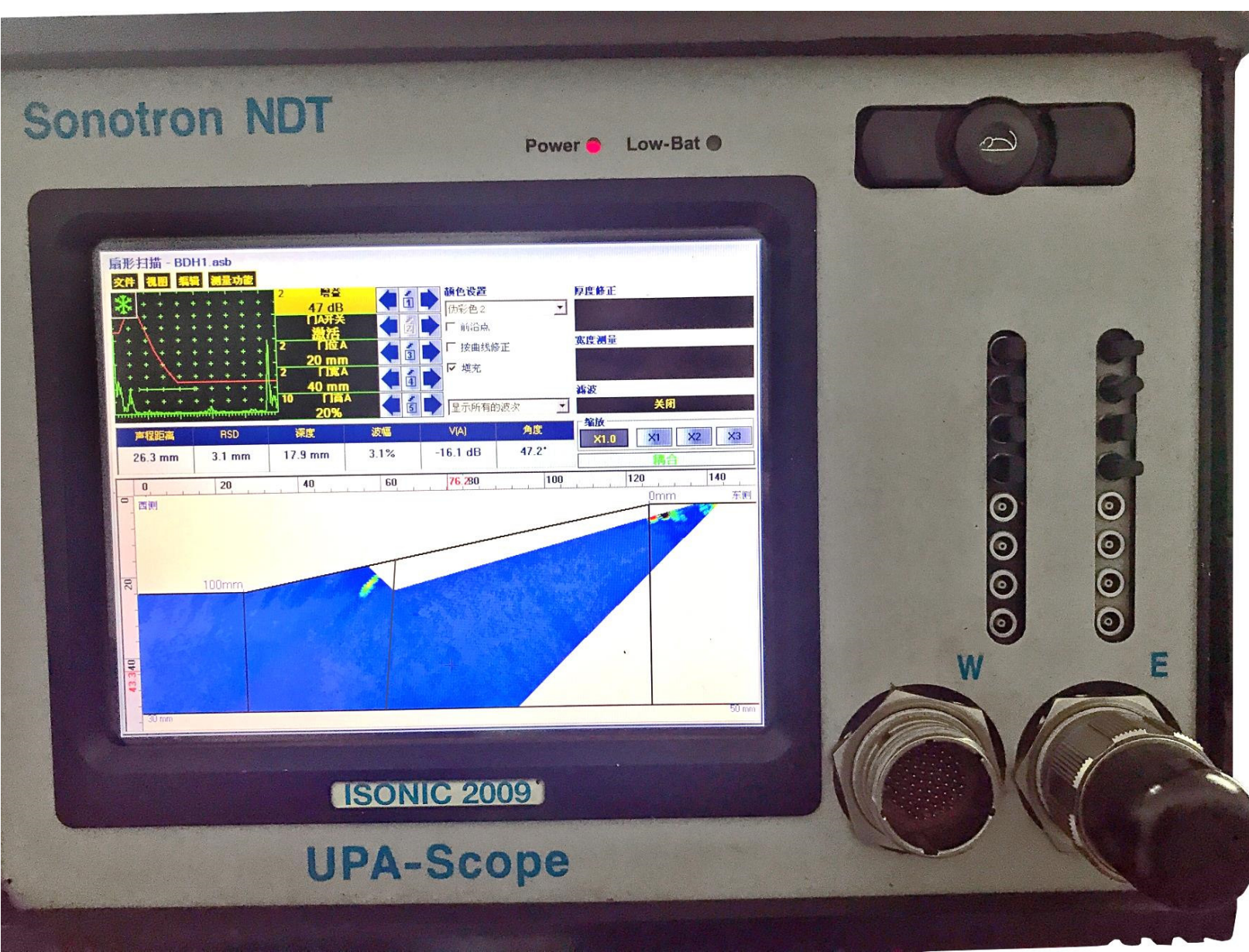
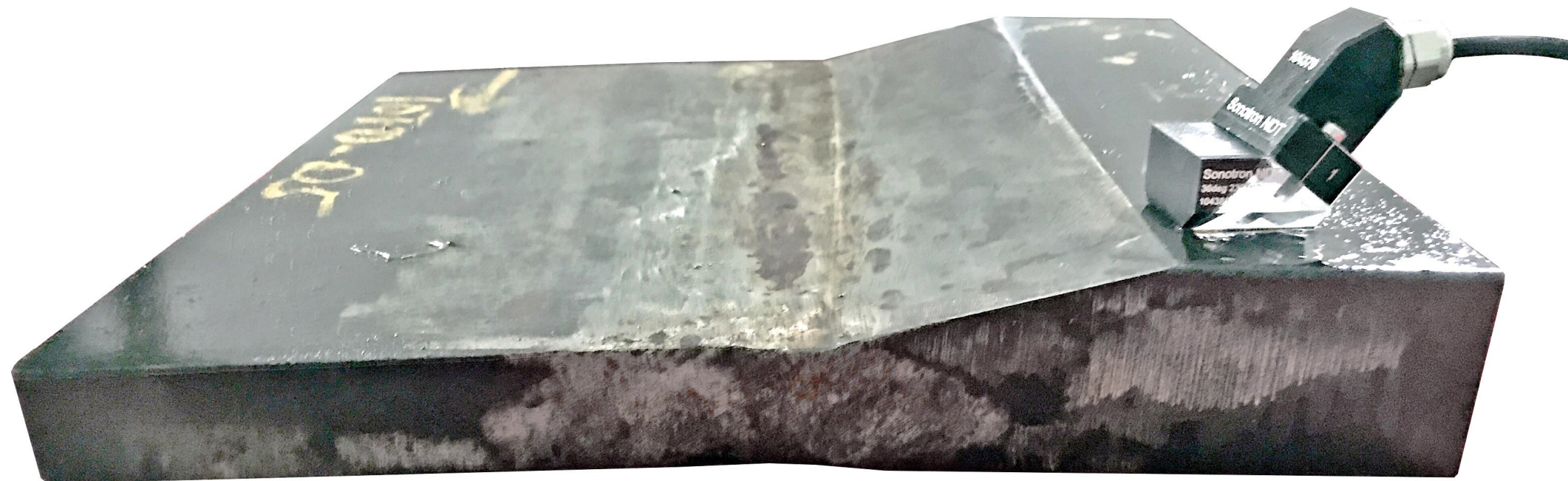


Inspection of the asymmetrical cross section butt weld between the rings with the different wall thickness – heavy machinery industry





Inspection of the asymmetrical wall tube to cast ring circumferential asymmetrical weld



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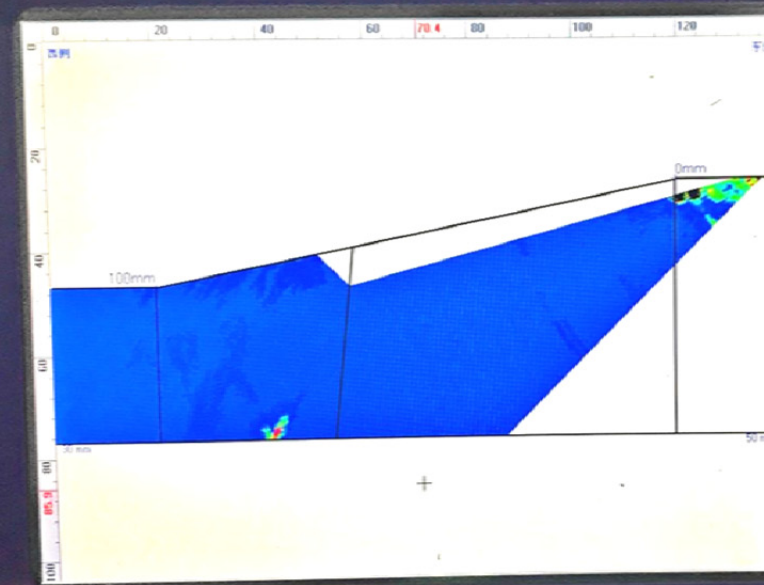
UPA-Scope

W

E

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ISONIC 2009

UPA-Scope

W

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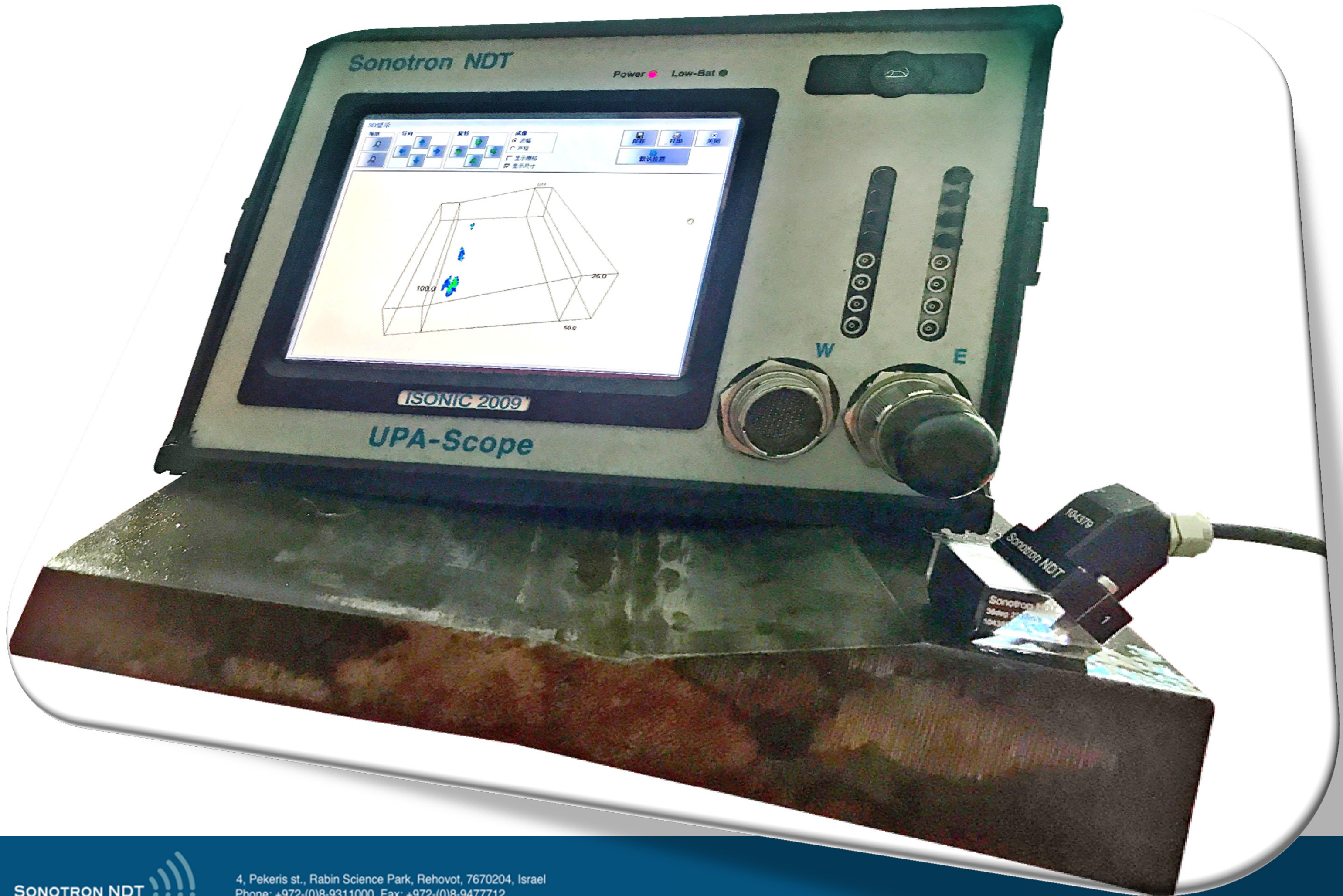
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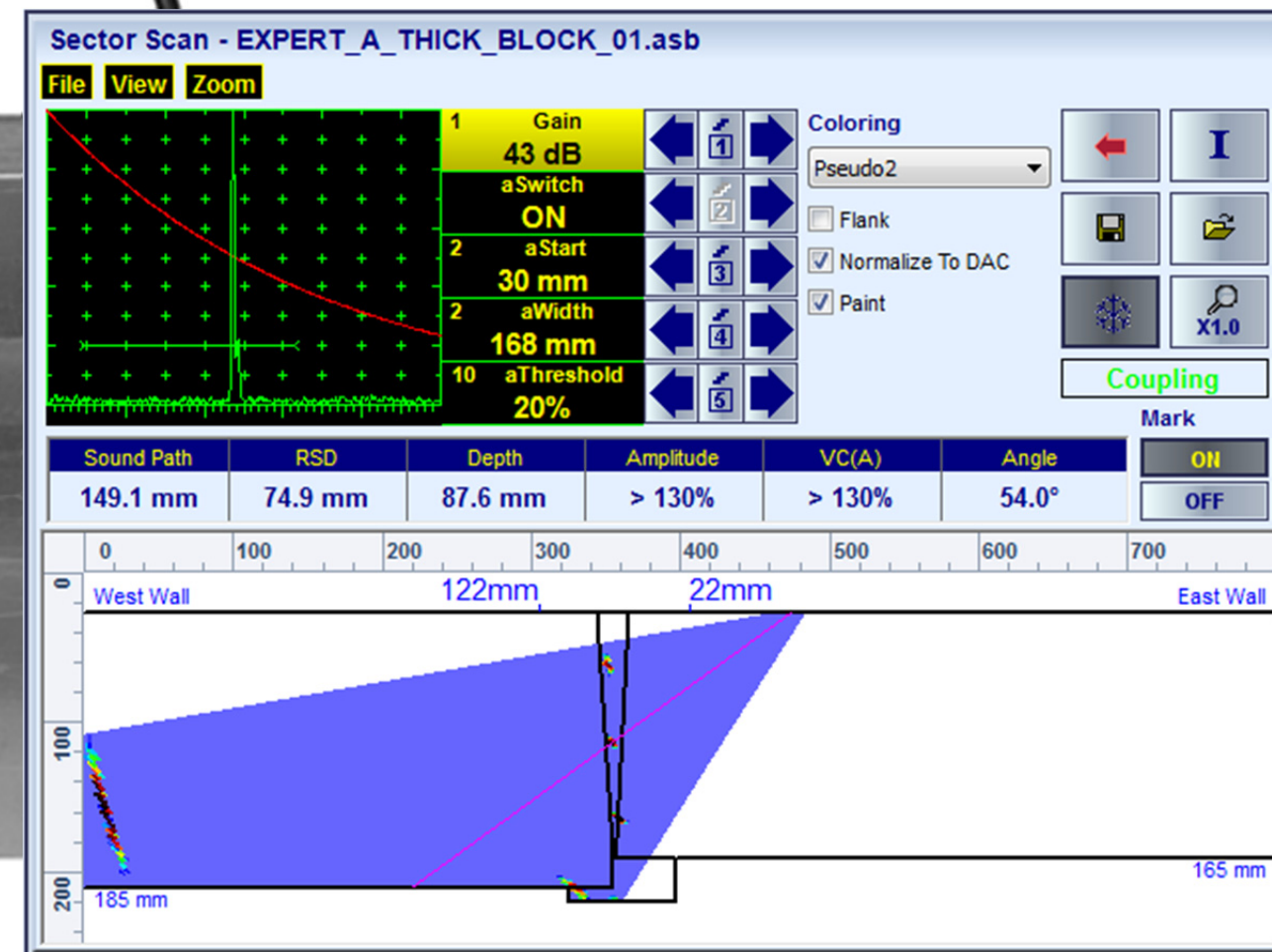
УПА-scope

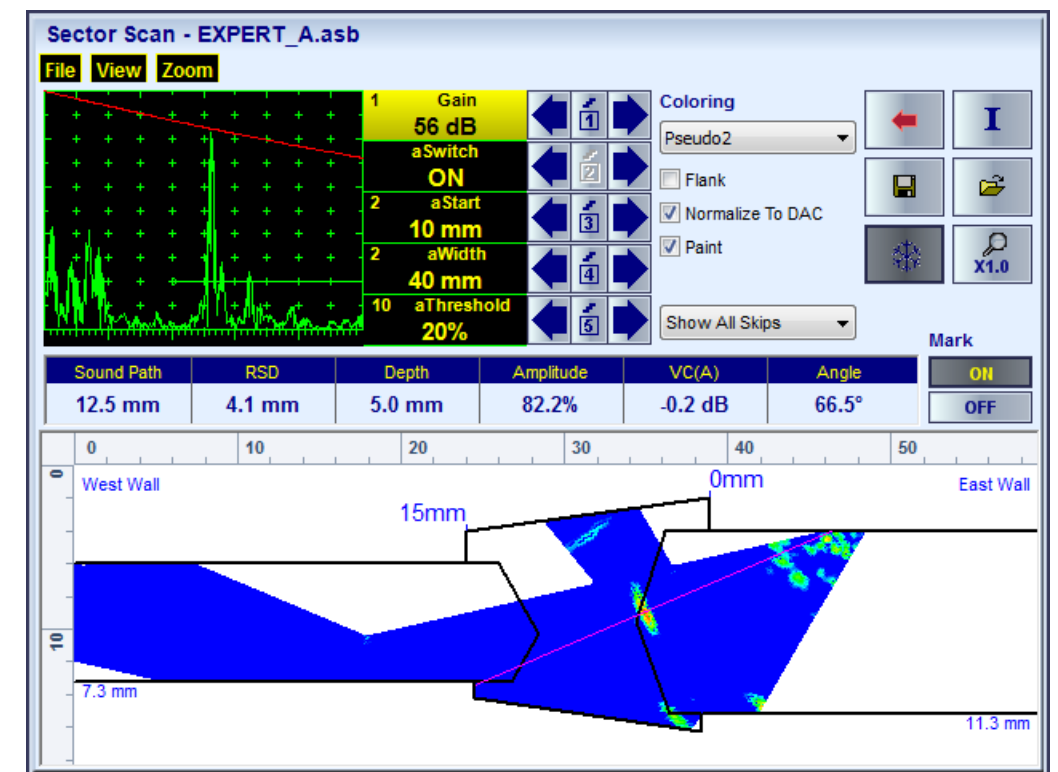
ISONIC 2009



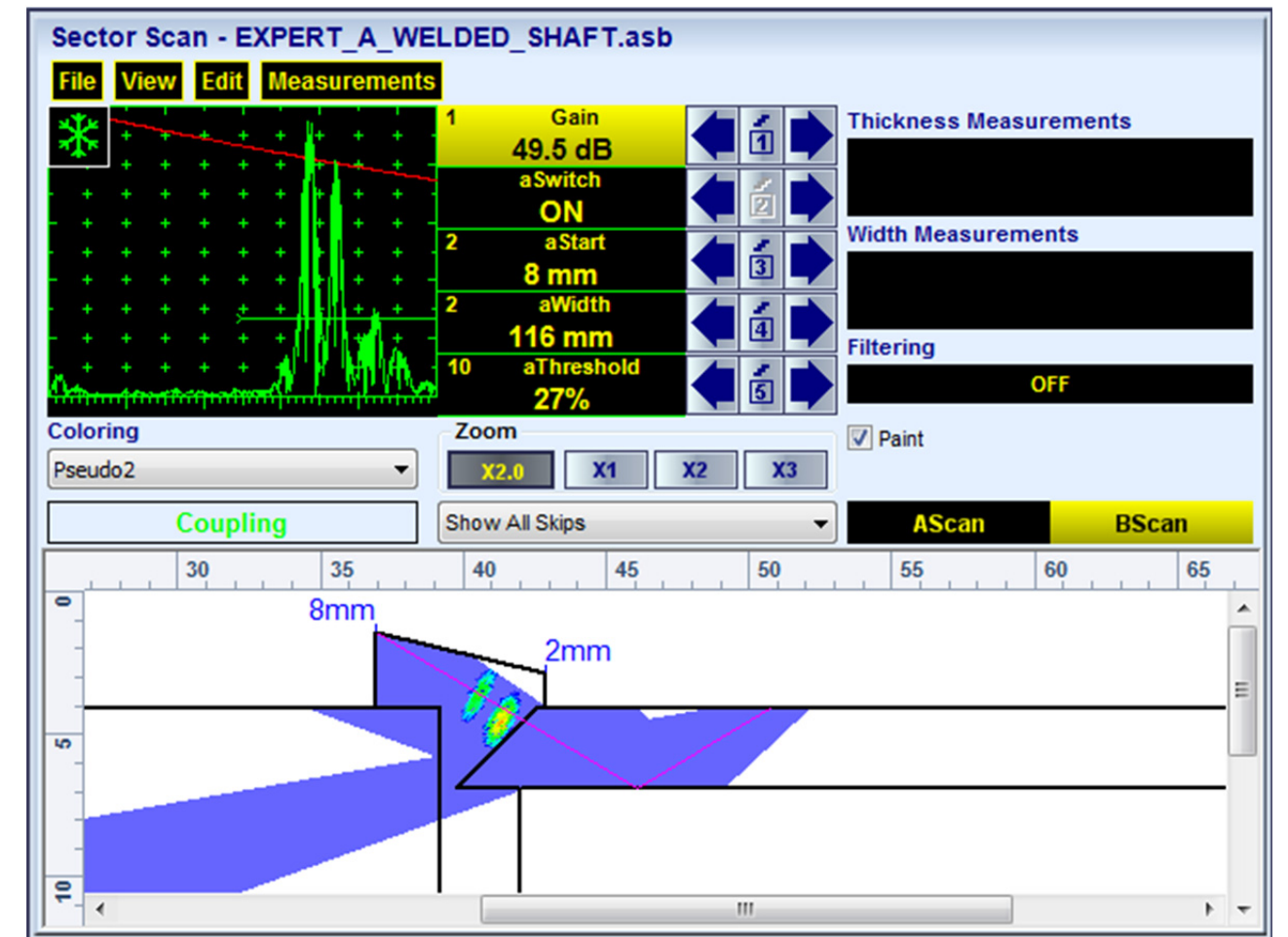
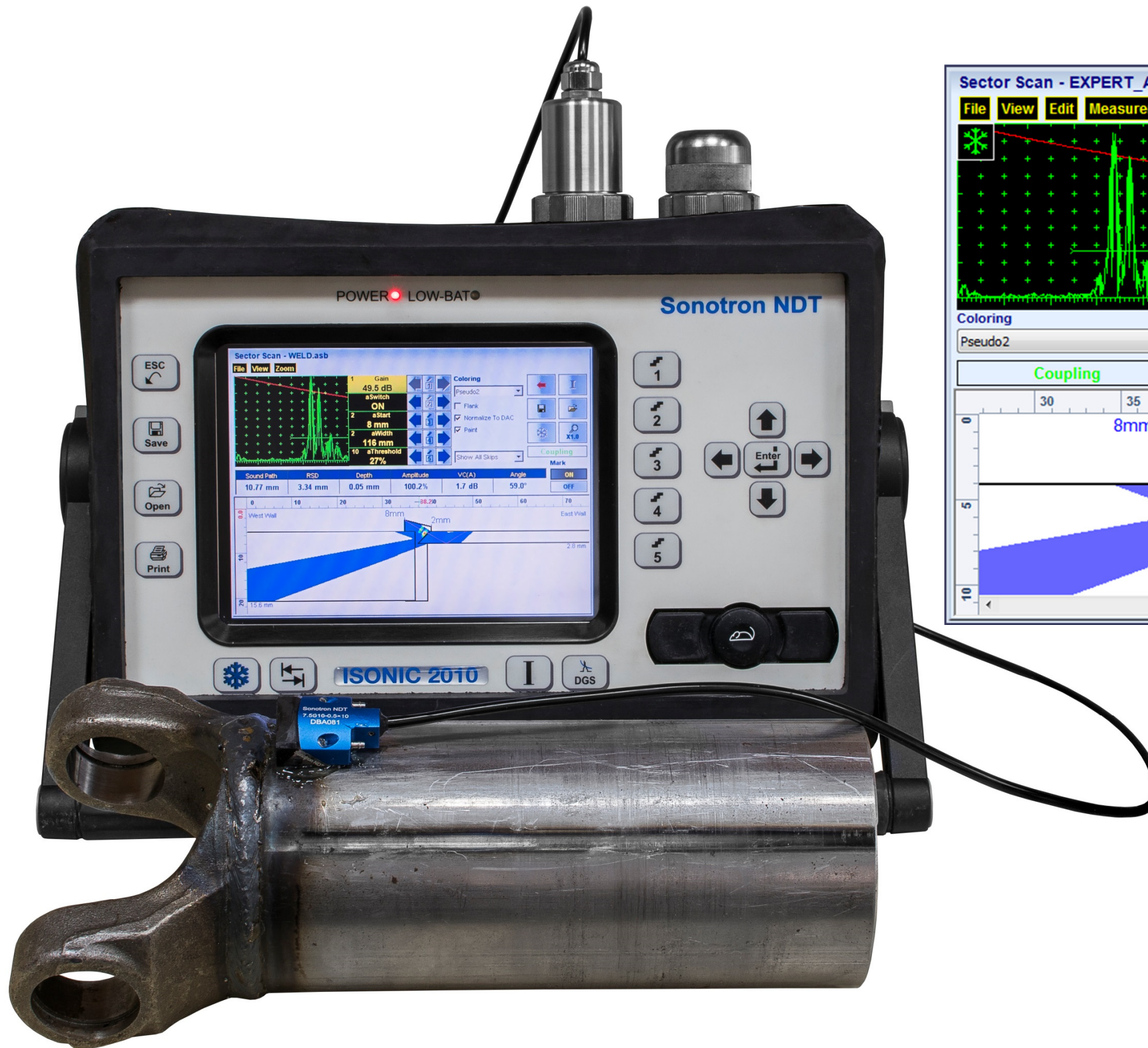


Inspection of heavy thickness narrow gap butt welds – calibration / performance demonstration block





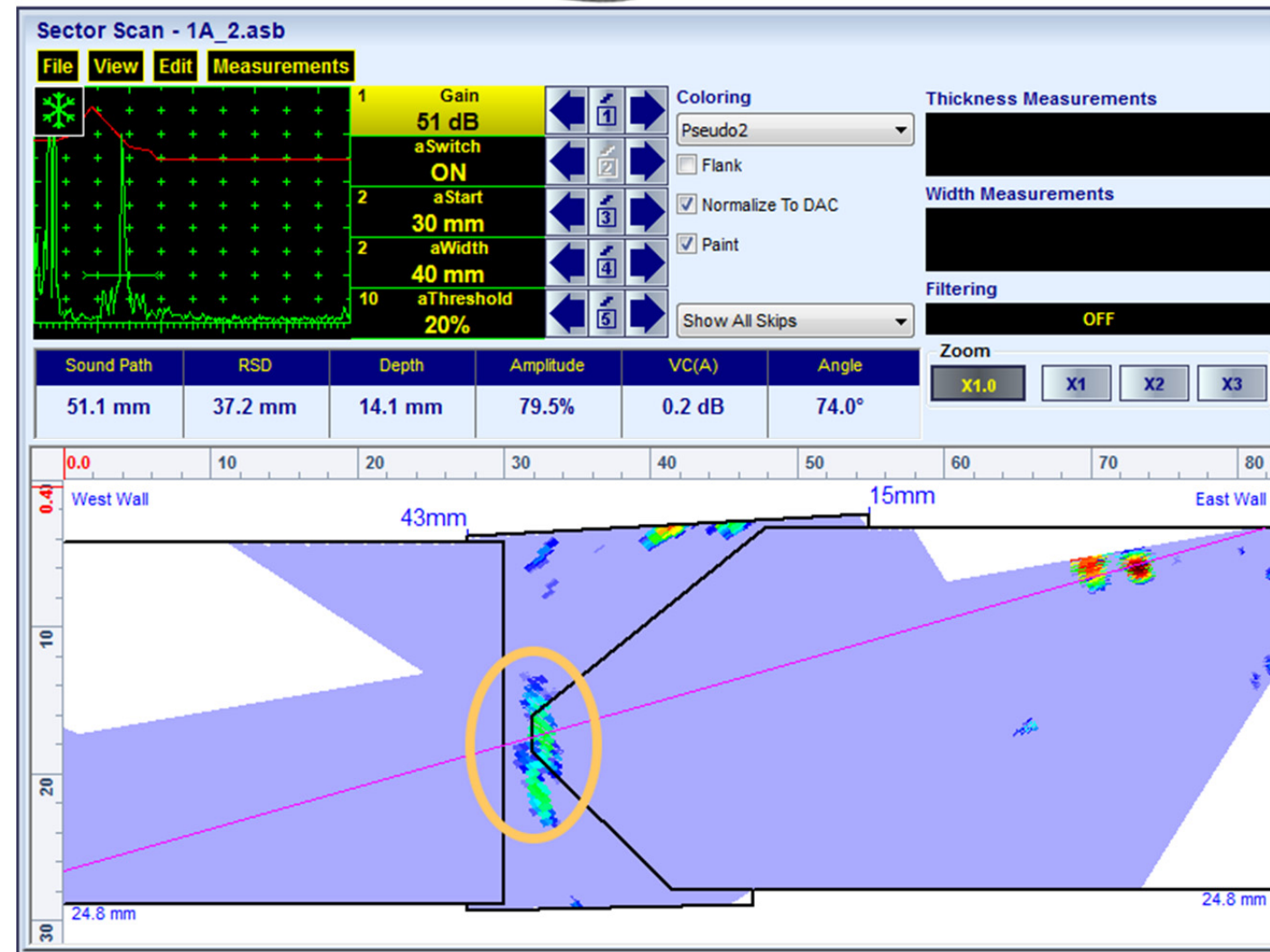
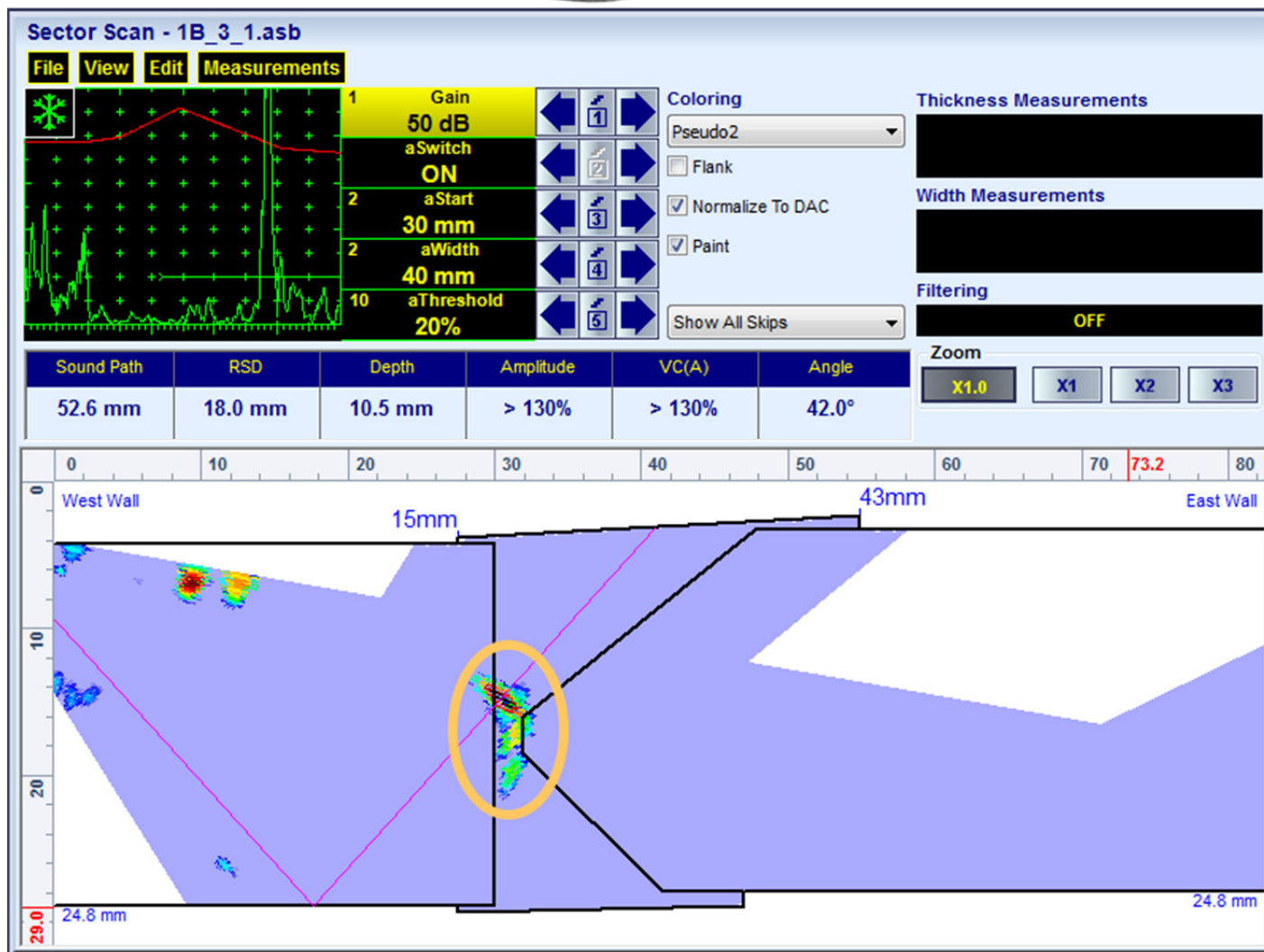
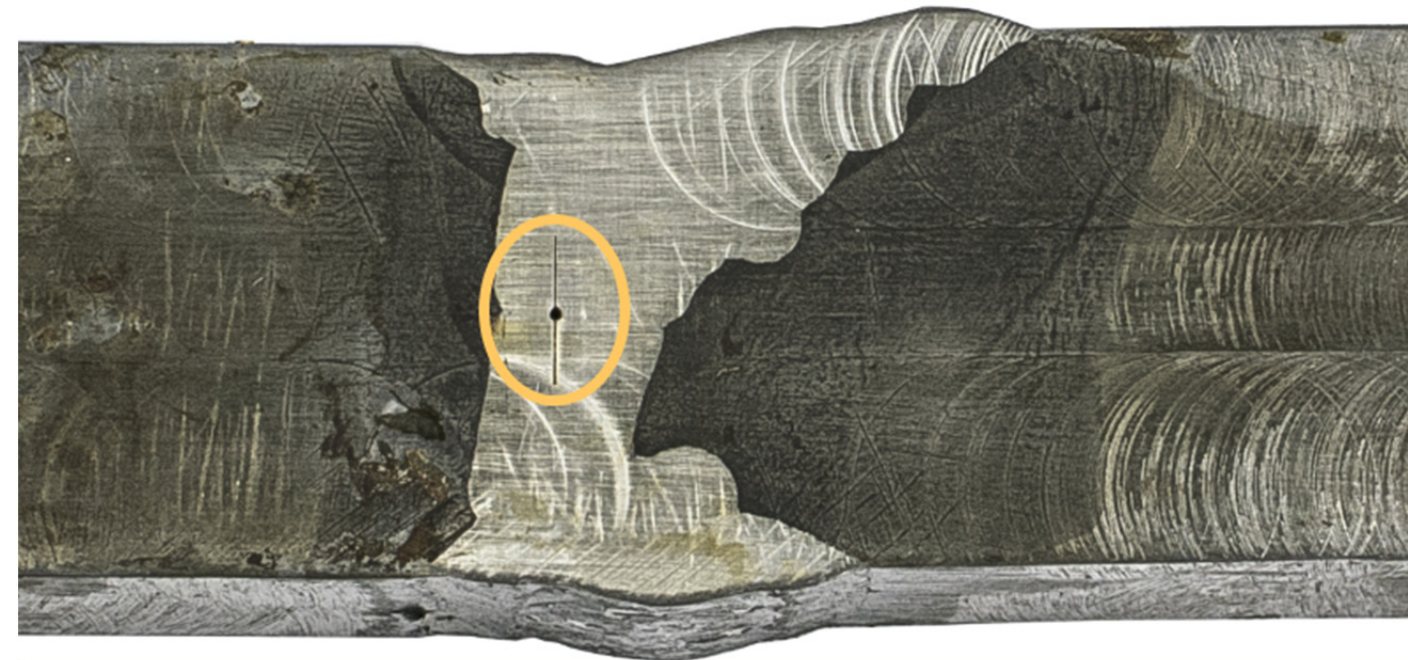
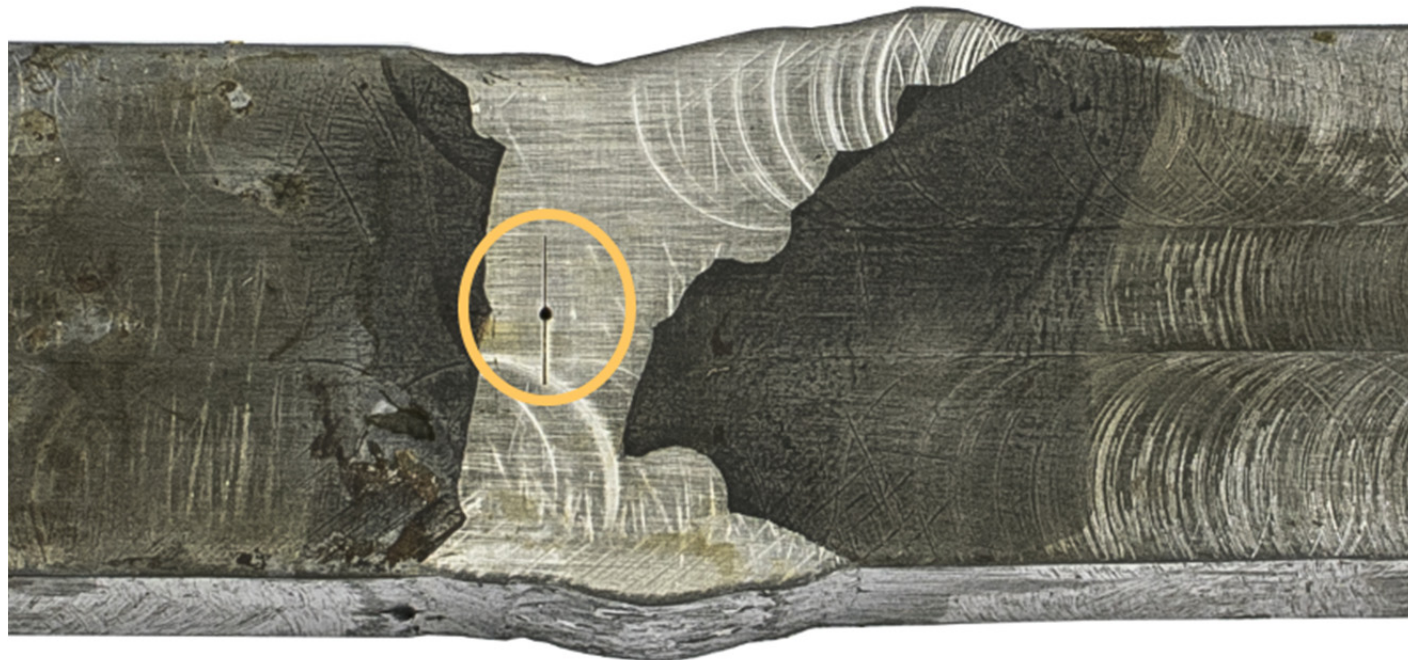
Inspection of the asymmetrical cross section butt weld between the rings with the different wall thickness – heavy machinery industry

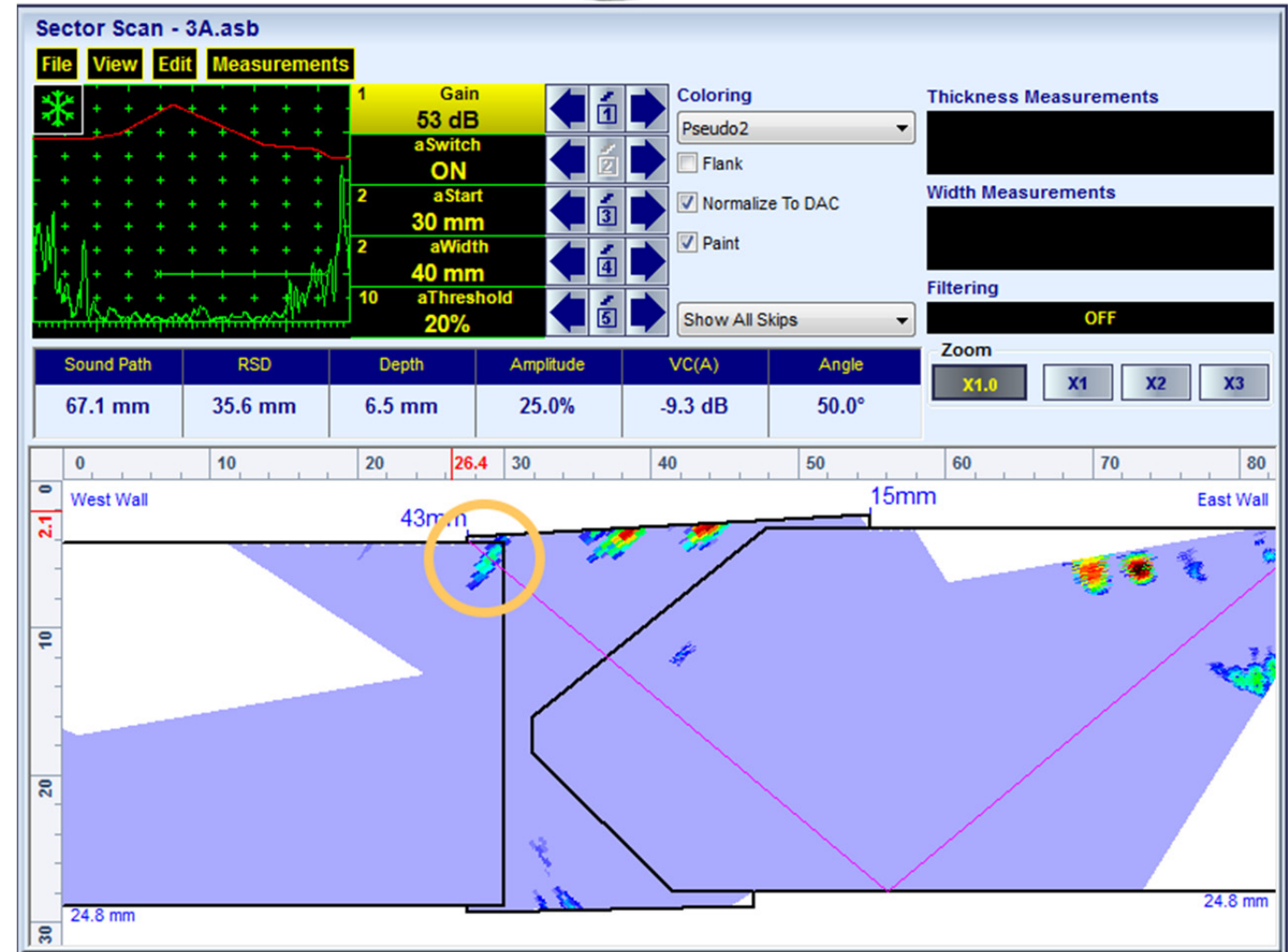
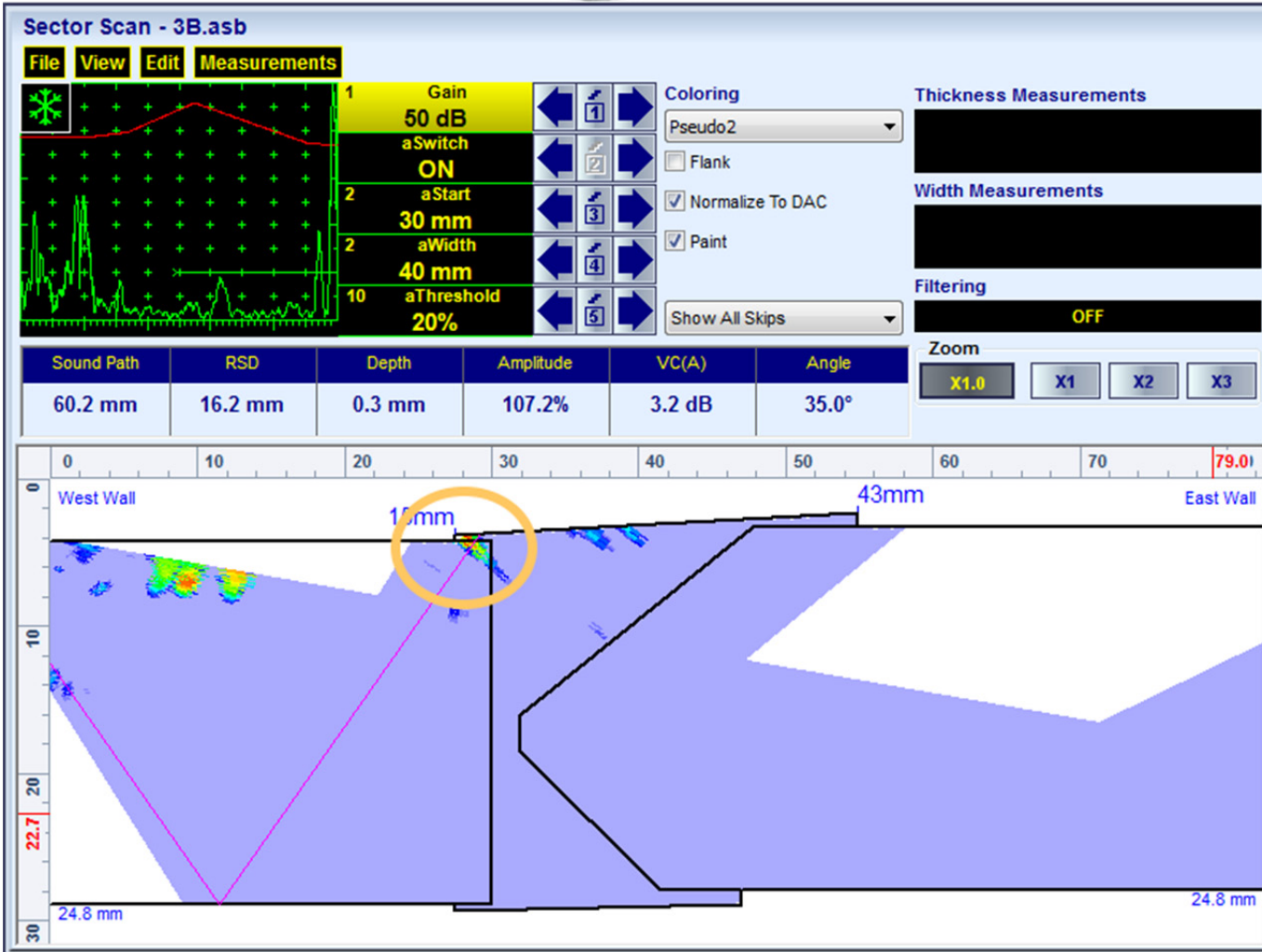


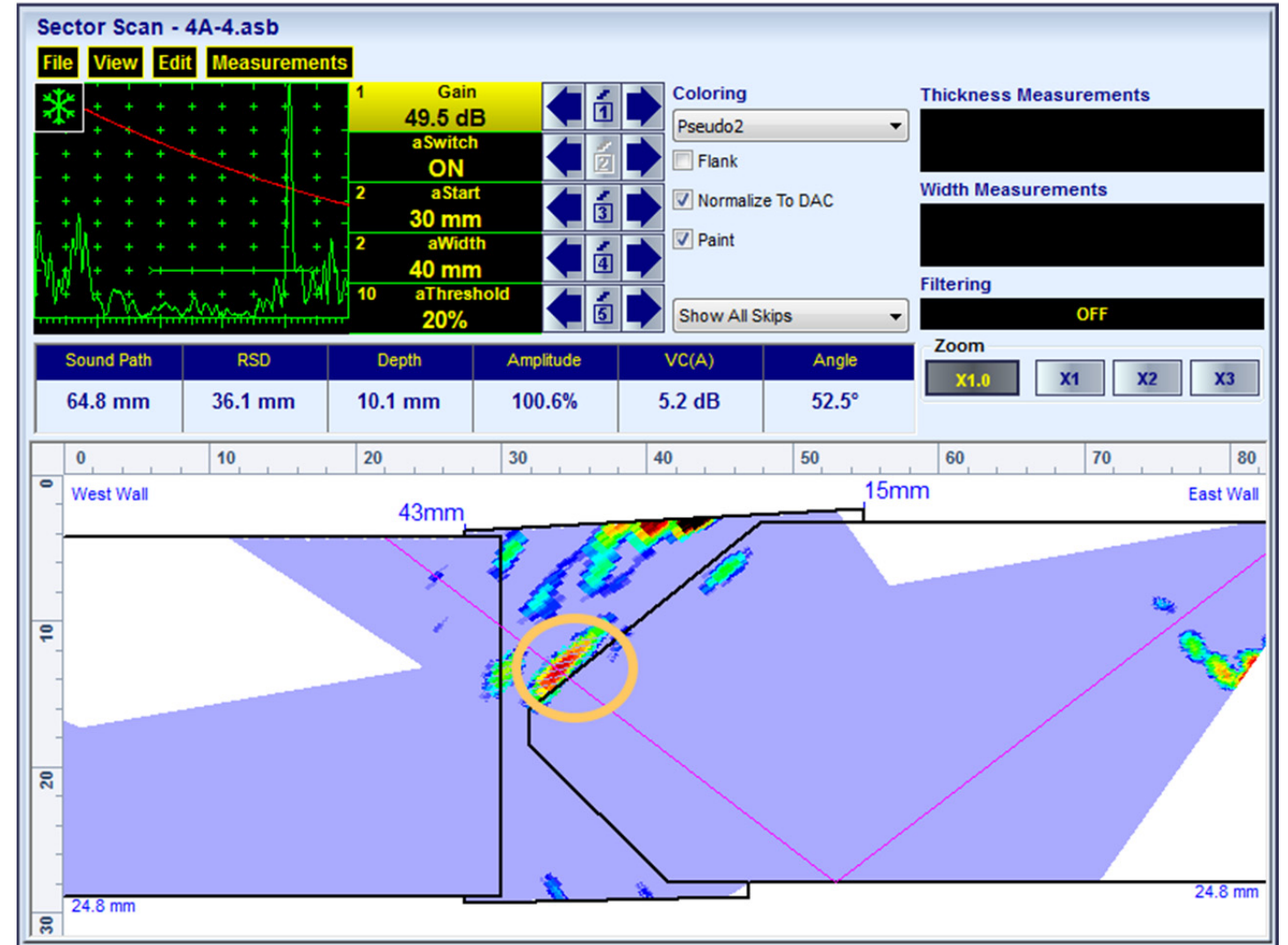
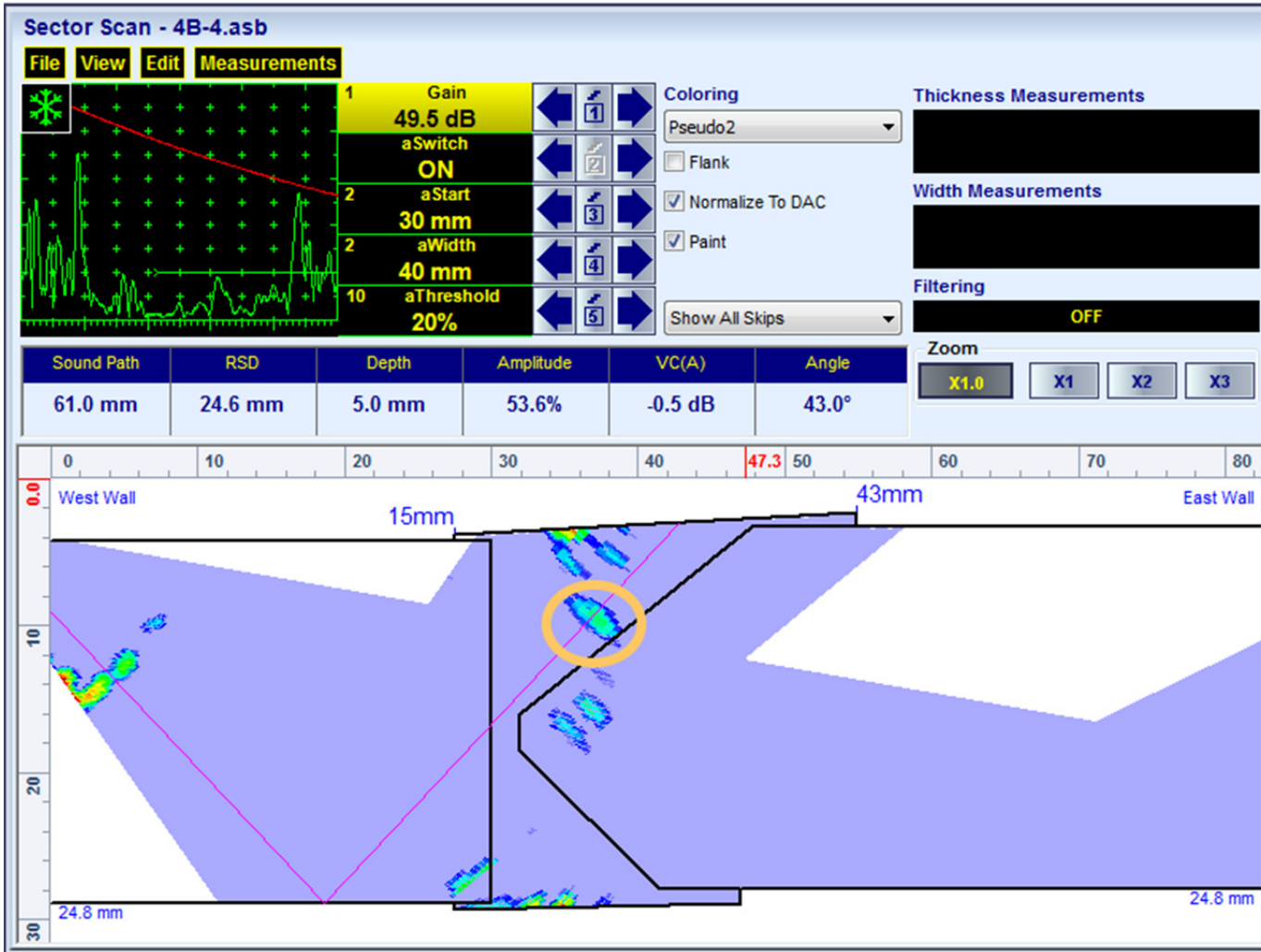
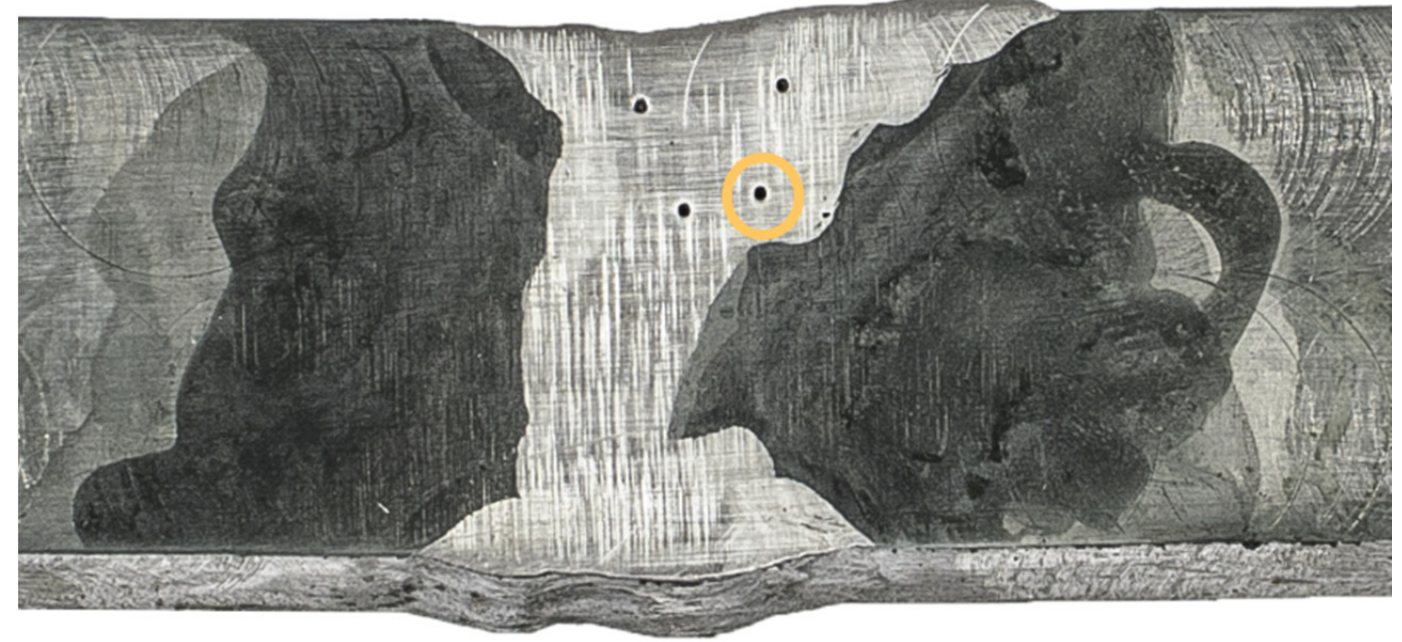
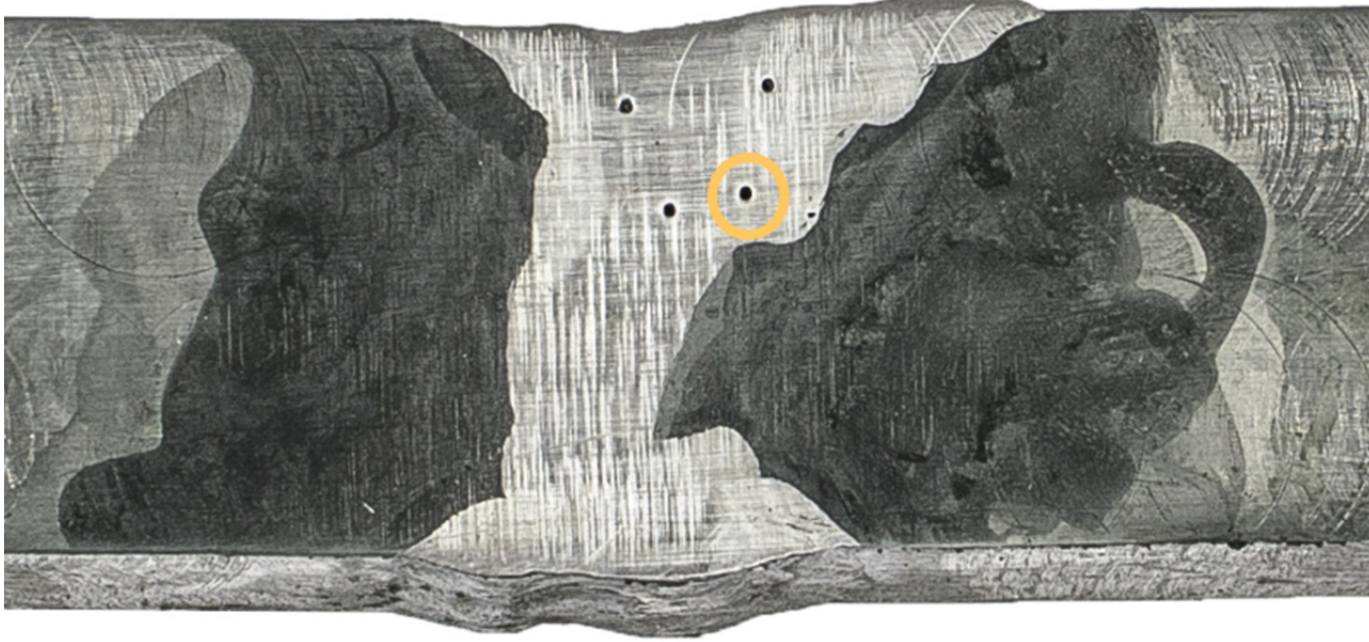
Inspection of the asymmetrical wall tube to cast ring circumferential asymmetrical weld

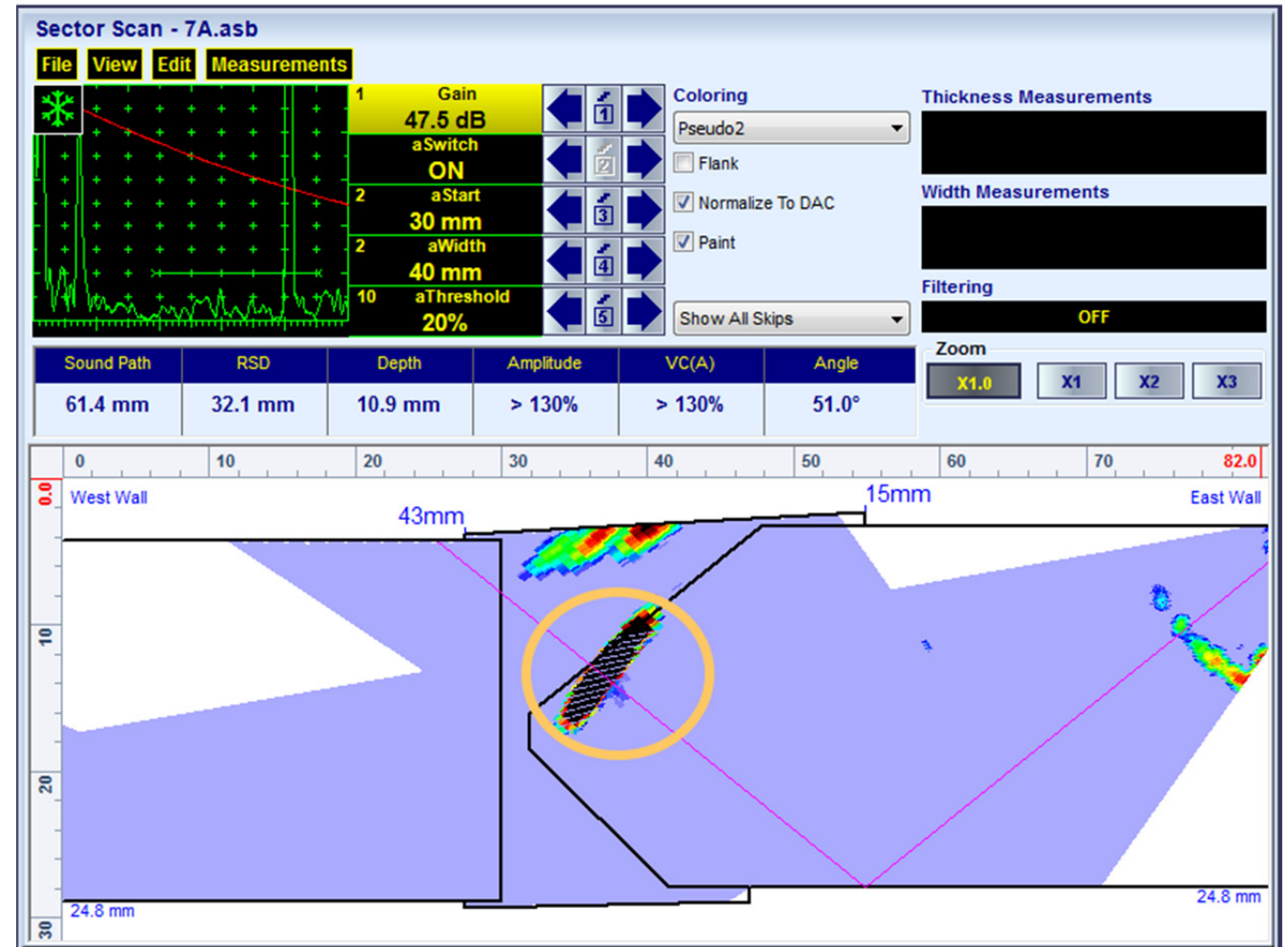
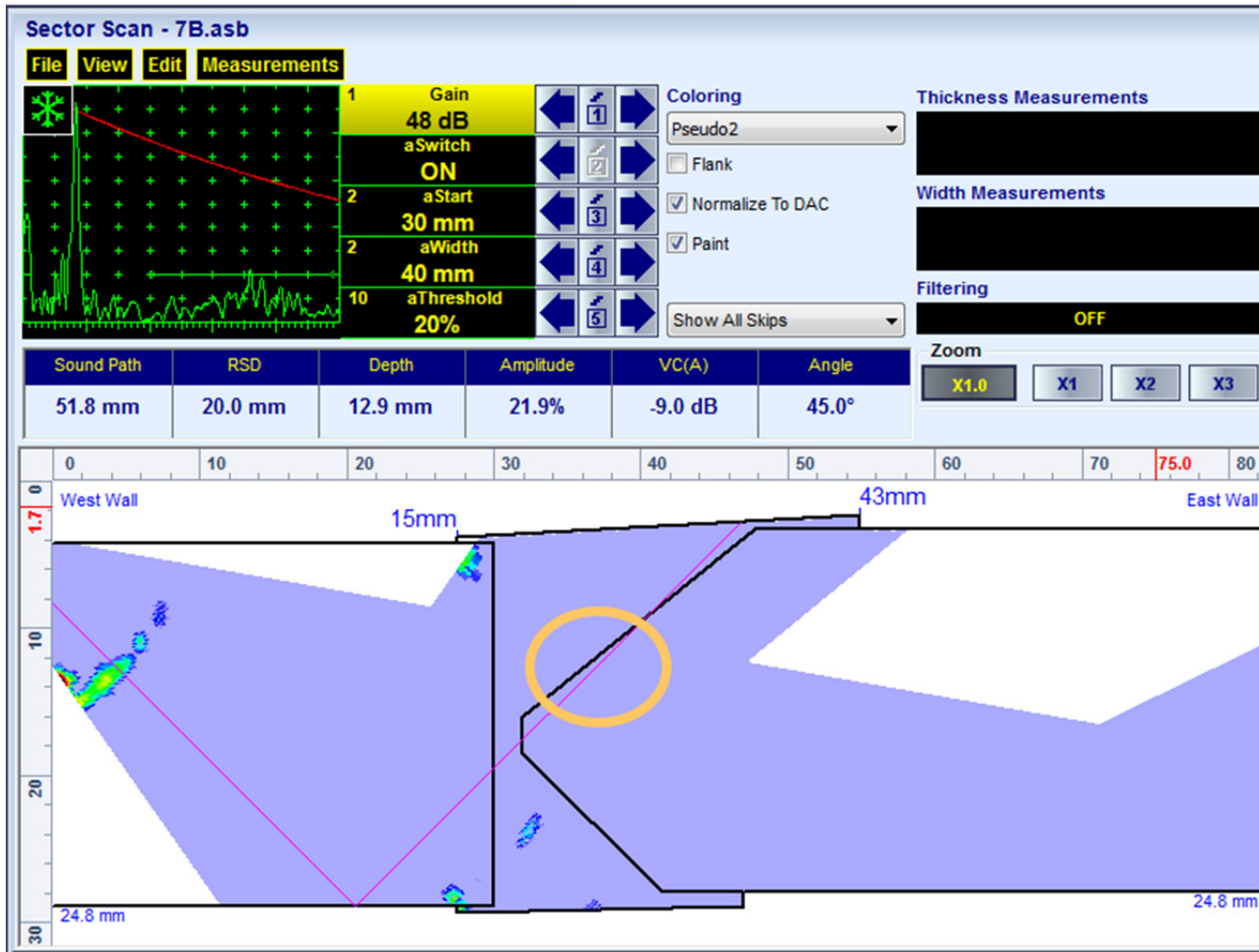
Typical Expert A cross-sectional views for some discontinuities in the asymmetrical welds

Vertical Crack

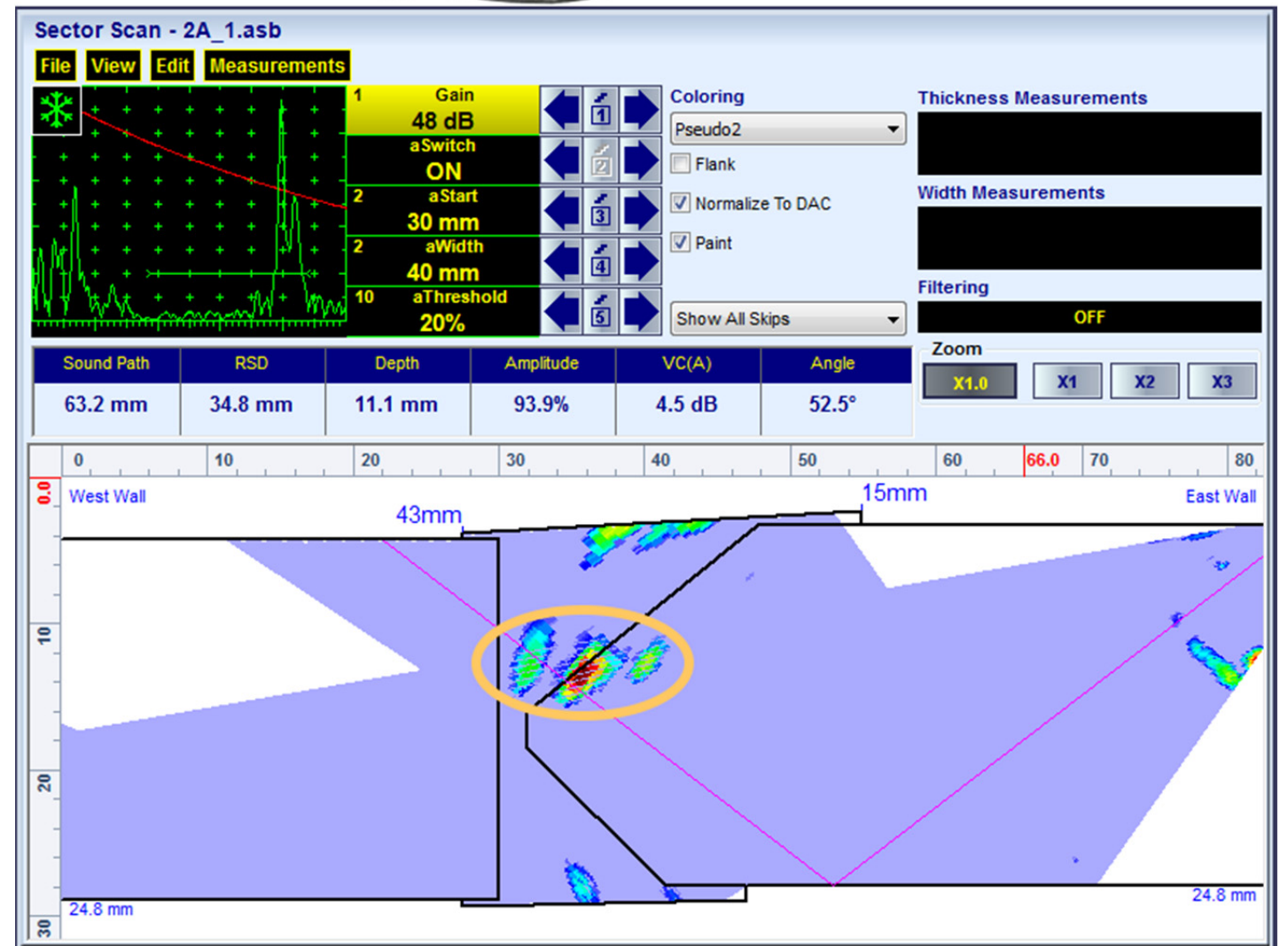
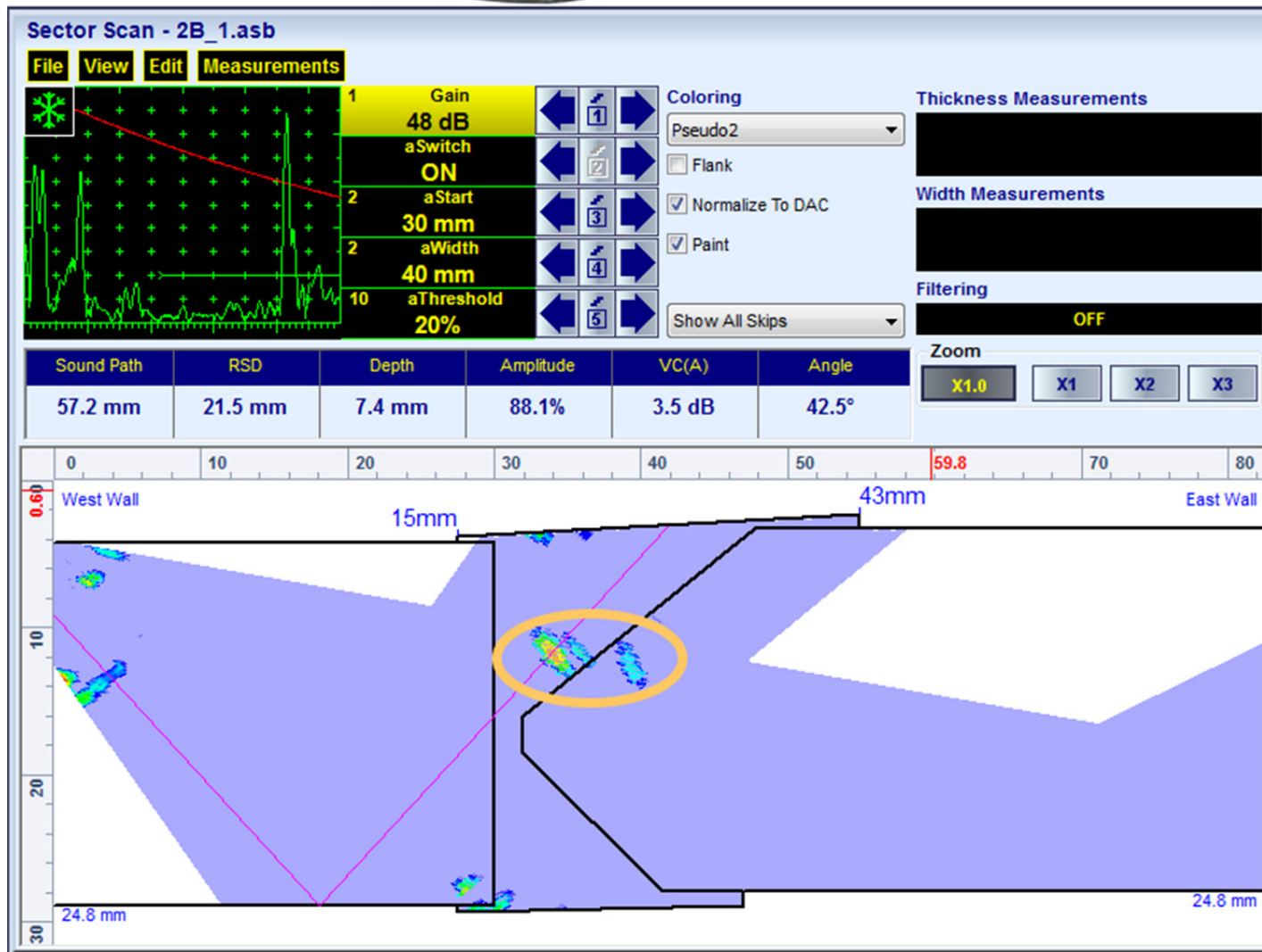
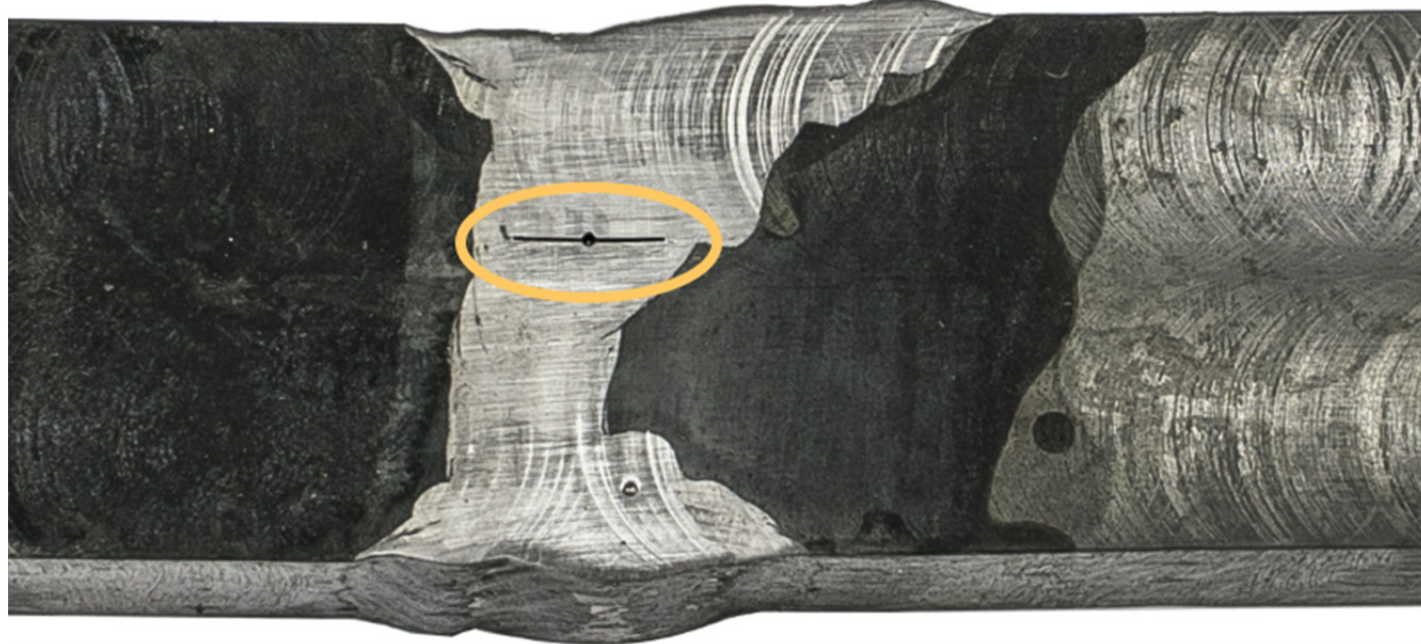








Horizontal Crack



Lack of Root Penetration

