ISONIC EXPERT FILLET Technology

- Straight and skewed fillet welds
- TKY welds
- Full and partial penetration
- Scanning above the web or inner flange surface with wedged linear array probe along the fusion line:
  - Manual
  - Mechanized
  - Automatic
- 100% raw data capturing
- True-to-Geometry imaging:
  - Top View (C-Scan)
  - Side View
  - End View
  - 3D-View
- FMC/TFM Protocol for the data acquisition and imaging
- Comprehensive postprocessing

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Item	Order Code (Part ##)
Inspection SW Application for ISONIC 3510T, ISONIC 3510 - **Phased Array Modality: Expert FILLET - Inspection of Fillet, Tee- , TKY - welds, and the like with PA Probe placed either on flange or web surface**	SWA 3510014
Inspection SW Application for ISONIC 2010 / ISONIC 2010 EL - Phased Array Modality: **Expert FILLET - Inspection of Fillet, Tee- , TKY - welds, and the like with PA Probe placed either on flange or web surface**	SWA 910814
Inspection SW Application for ISONIC 2009 UPA-Scope - Phased Array Modality: **Expert FILLET - Inspection of Fillet, Tee- , TKY - welds, and the like with PA Probe placed either on flange or web surface** ⇨ 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 Toolkit 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-Scan data → 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	SWA 909814

Shear wave inspection of the fillet weld – probe placement on the inner side of the flange

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Toggling S-Scan with Live FMC/TFM

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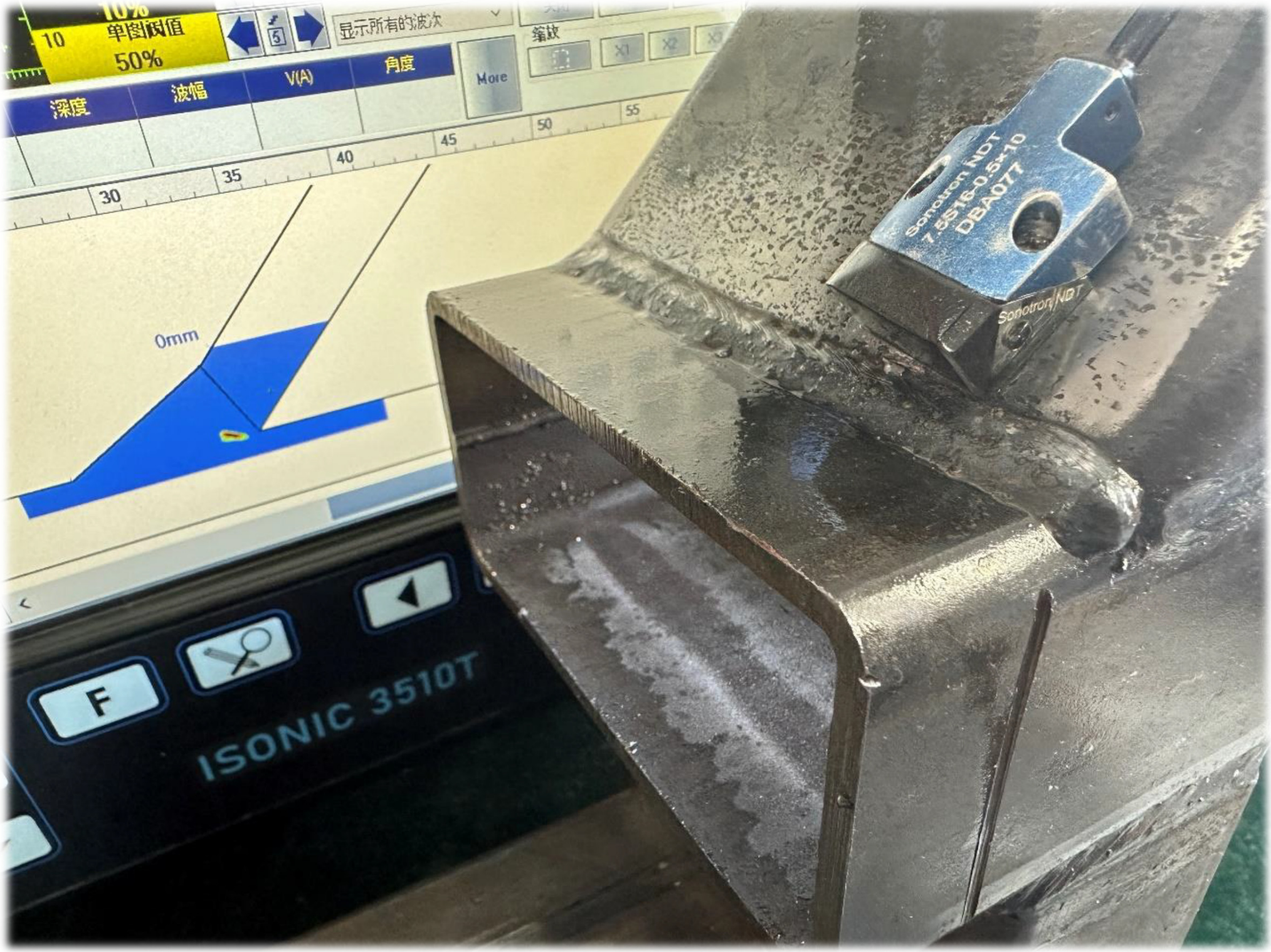

Structural skewed fillet weld between thin wall rectangle cross-section profiles

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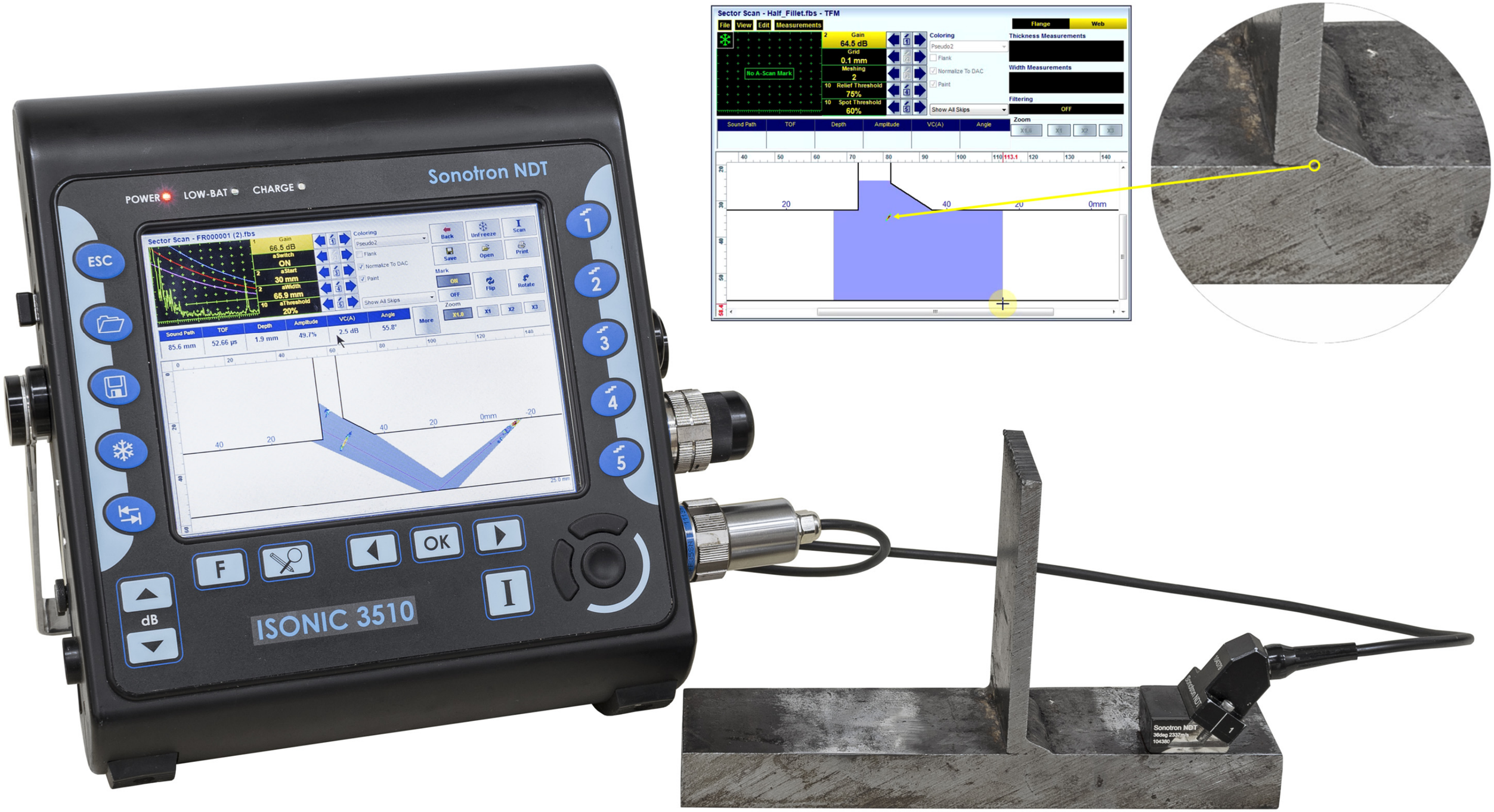

Determining the partial penetration of the one side welded fillet

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Shear wave inspection of the fillet weld – probe placement on the inner side of the flange

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Shear wave inspection of the fillet weld – probe placement on the inner side of the flange

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Shear wave inspection of the fillet weld – probe placement on the inner side of the flange

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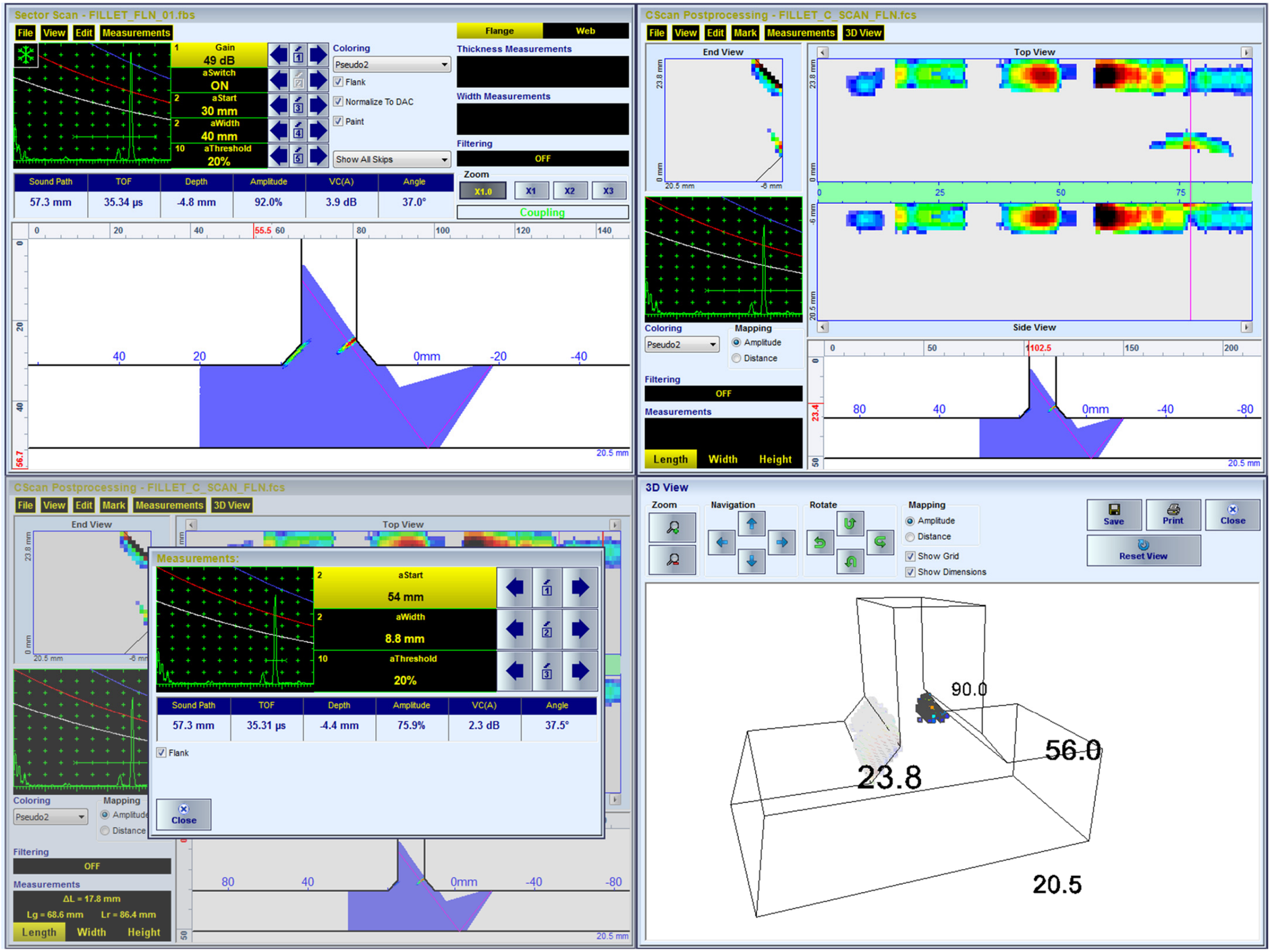
Typical Postprocessing Screenshots



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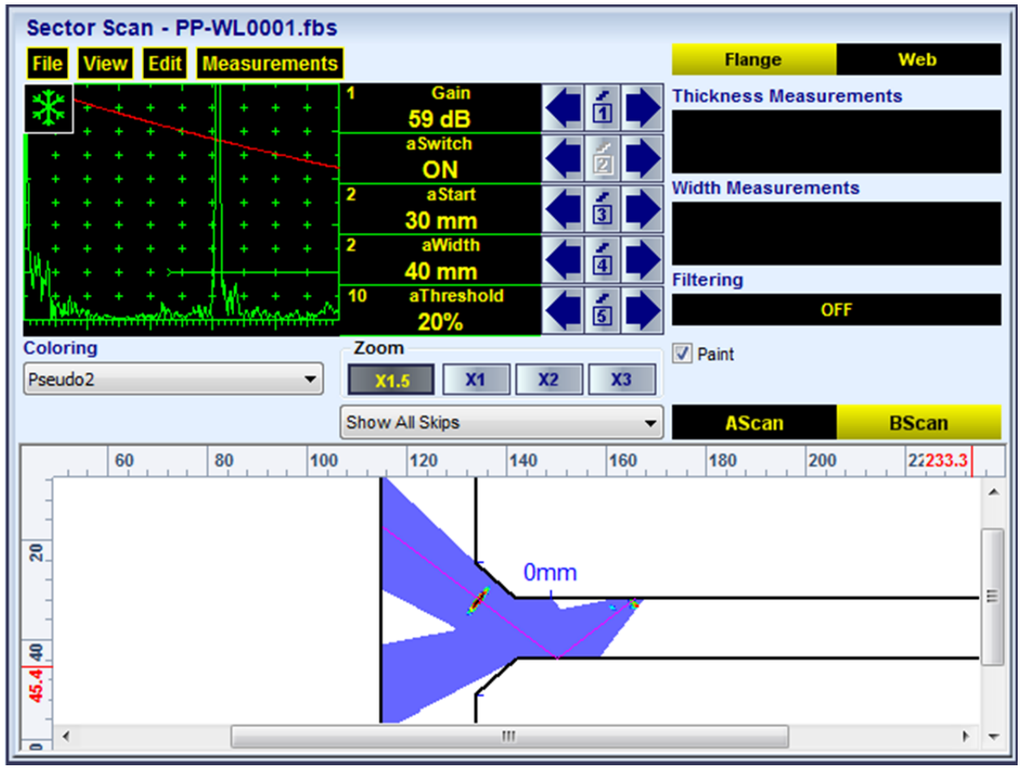
Shear wave inspection of the fillet weld – probe placement on the web



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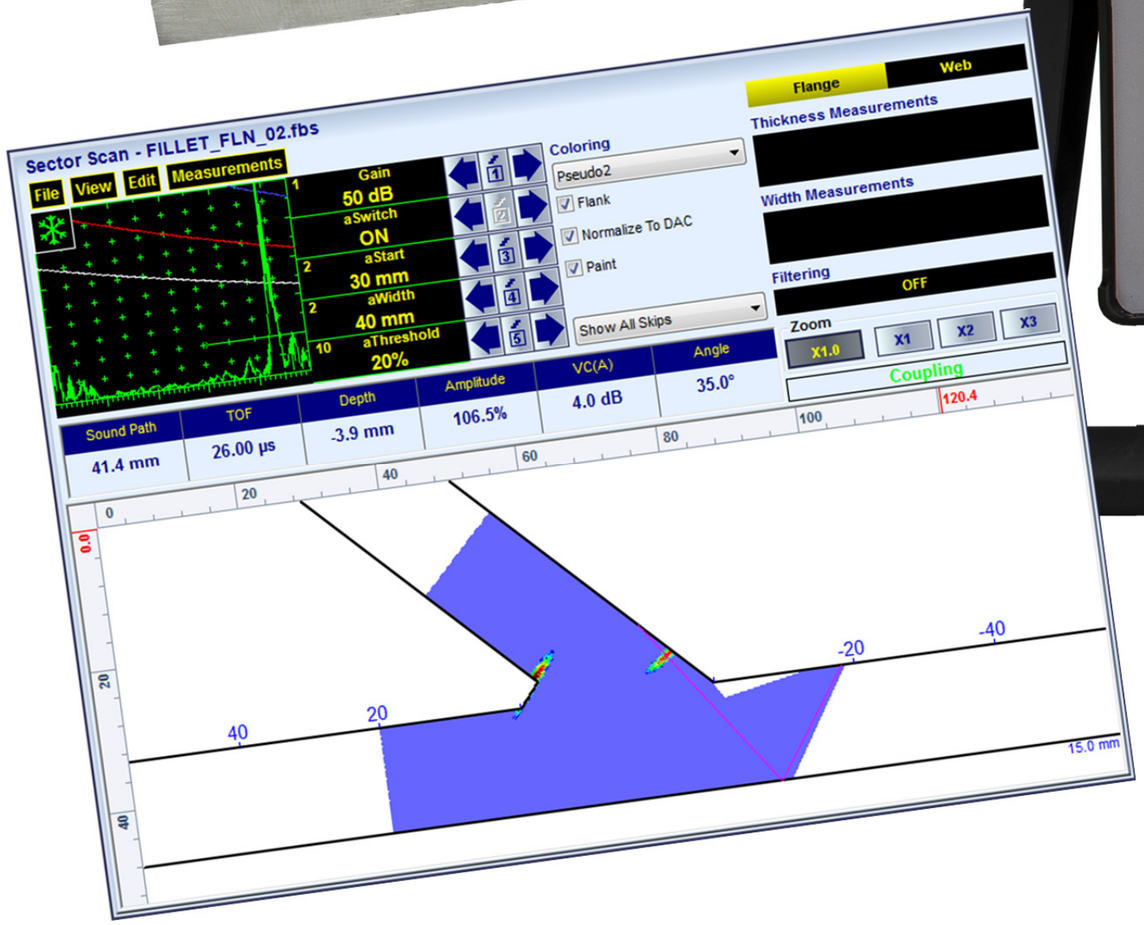
Shear wave inspection of the skewed fillet weld (performance demonstration block) – probe placement on the inner side of the flange



Shear wave inspection of the fillet weld – probe placement on the web

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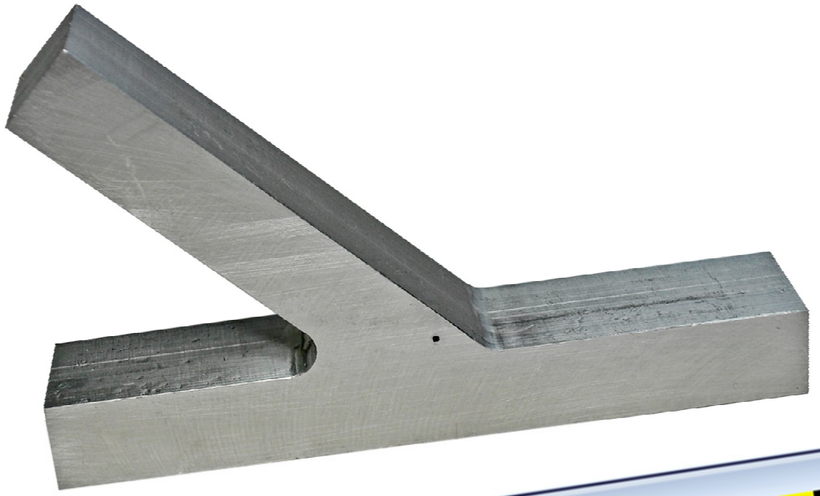
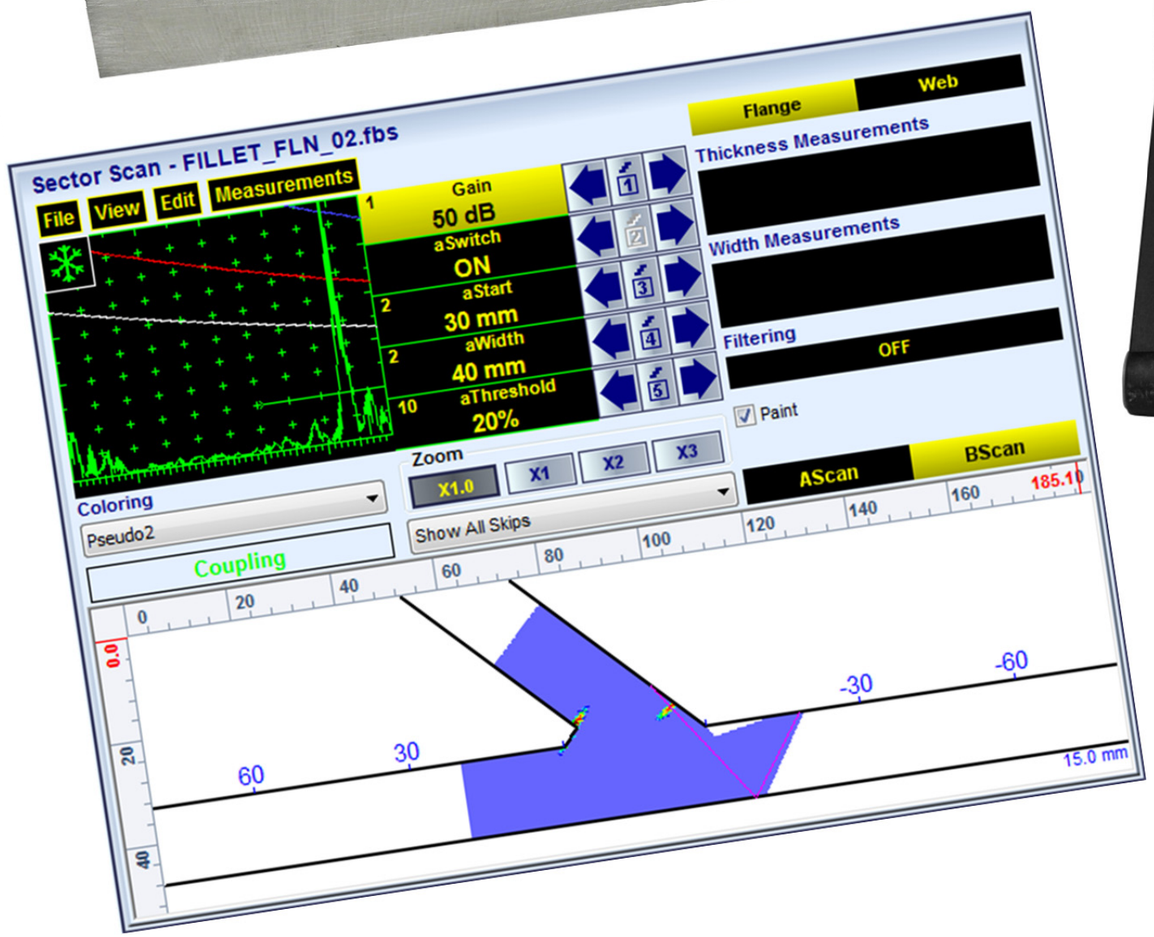
Shear wave inspection of the skewed fillet weld (performance demonstration block) – probe placement on the inner side of the flange





Shear wave inspection of the fillet weld – probe placement on the web

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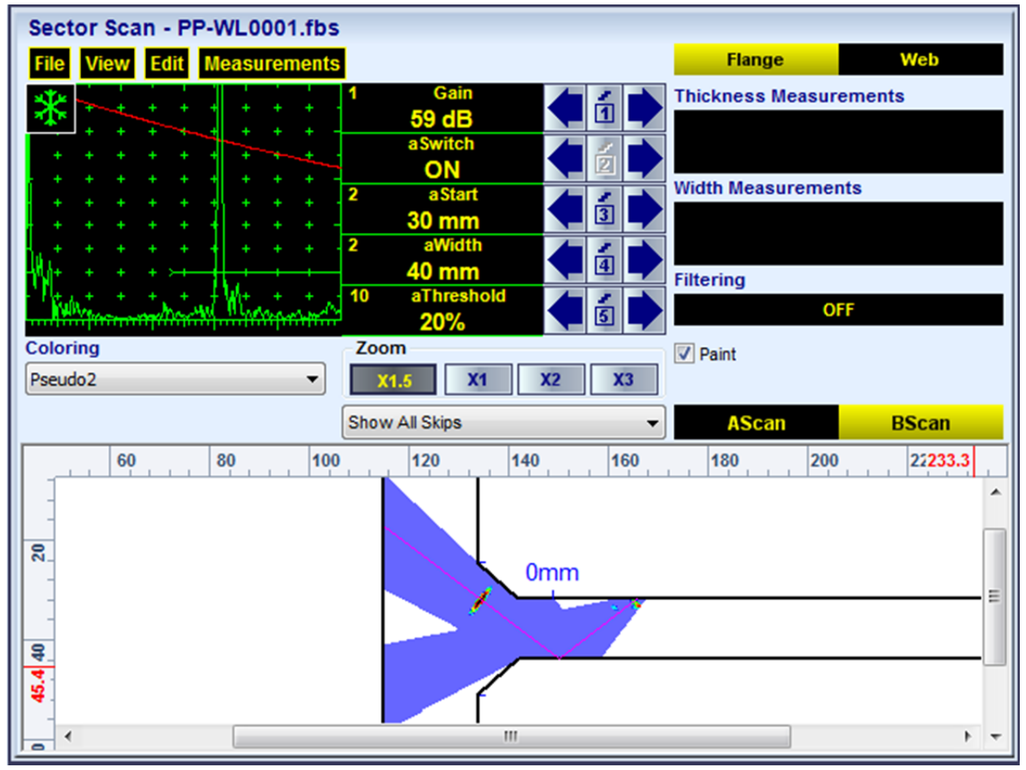
Shear wave inspection of the fillet weld – probe placement on the web



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