

What's New in VEO Version 3.2.5 R1

Eric Dusablon

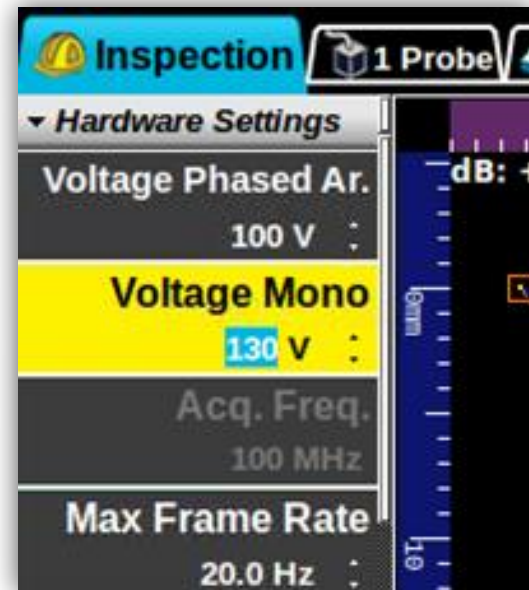
24/06/2012

Unique to 16:128 features

- 130 Volts Pulser
- 5 & 6 Concurrent Scans Capability

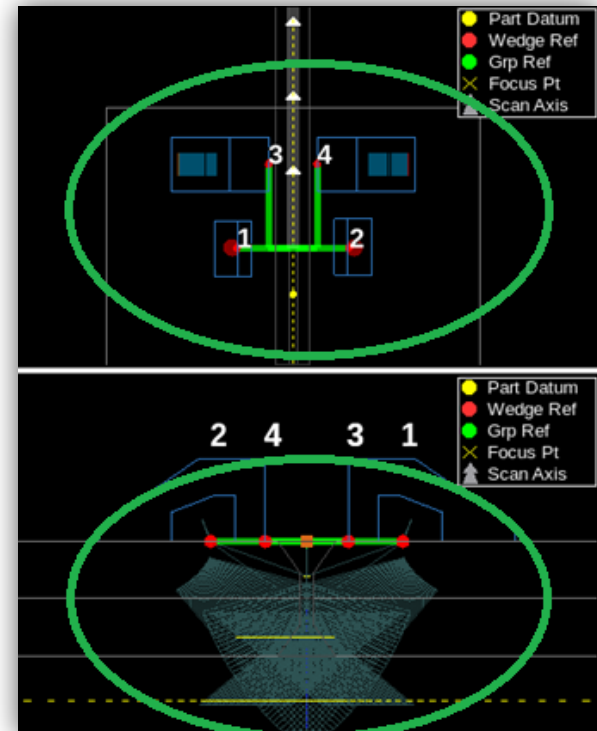
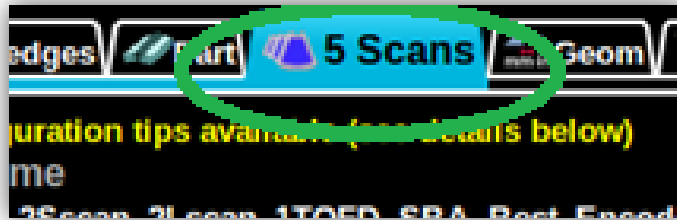
130 Volts Pulser

- *Improved penetration on:*
 - *thick part*
 - *high attenuation material*

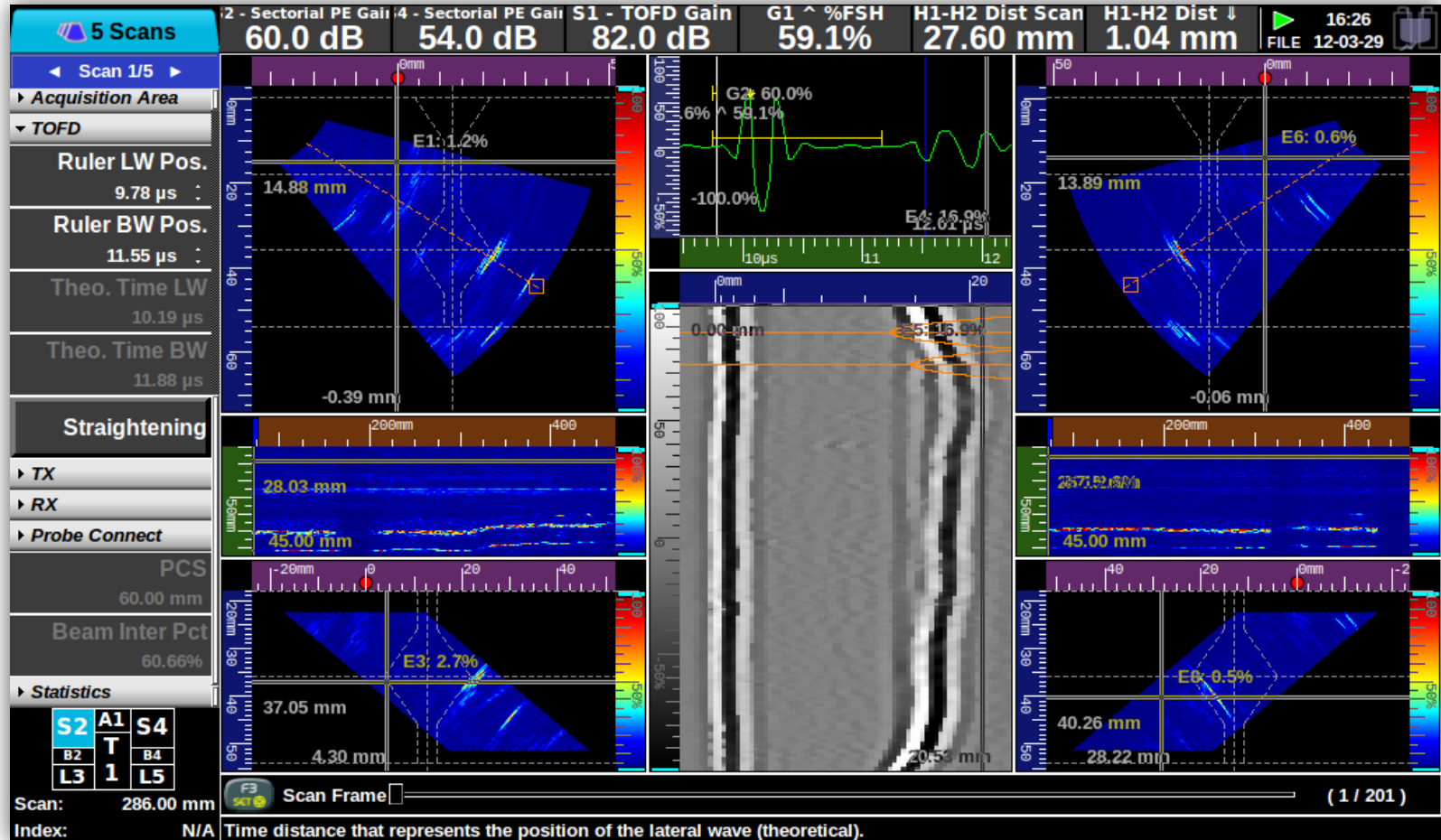


5 & 6 Scans Setup

- *Extend Multi-Scan and Multi-Probe capability*
- *Improve recording process with a single pass including multiple scans*



5 & 6 Scans layouts (4)



New Features Available on 16:64 and 16:128

Sensitivity/ACG by section

- *Isolate reflector from reflection created by normal part geometry*



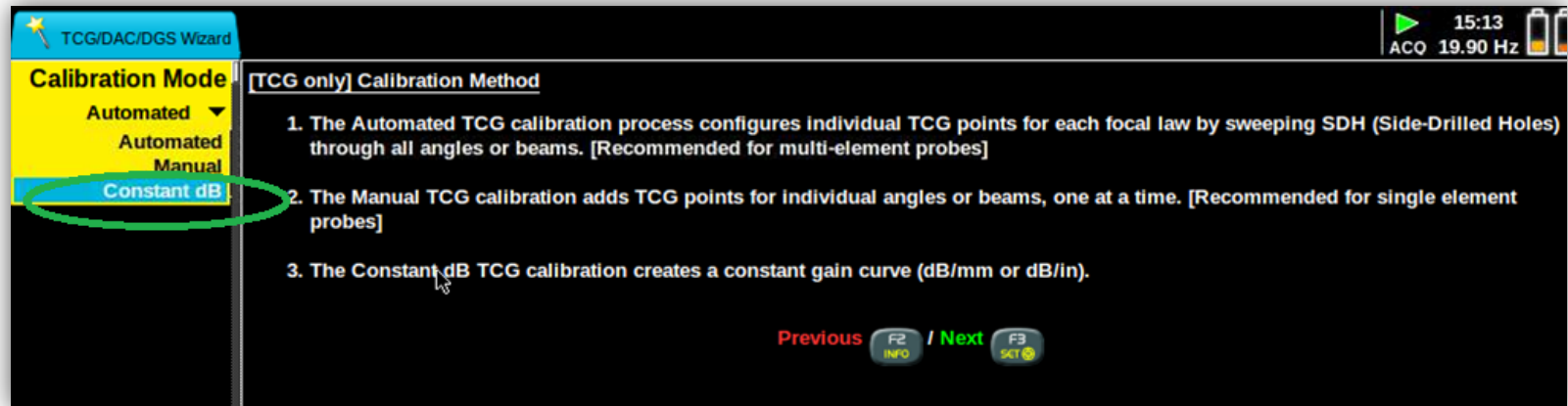


TCG enhancement

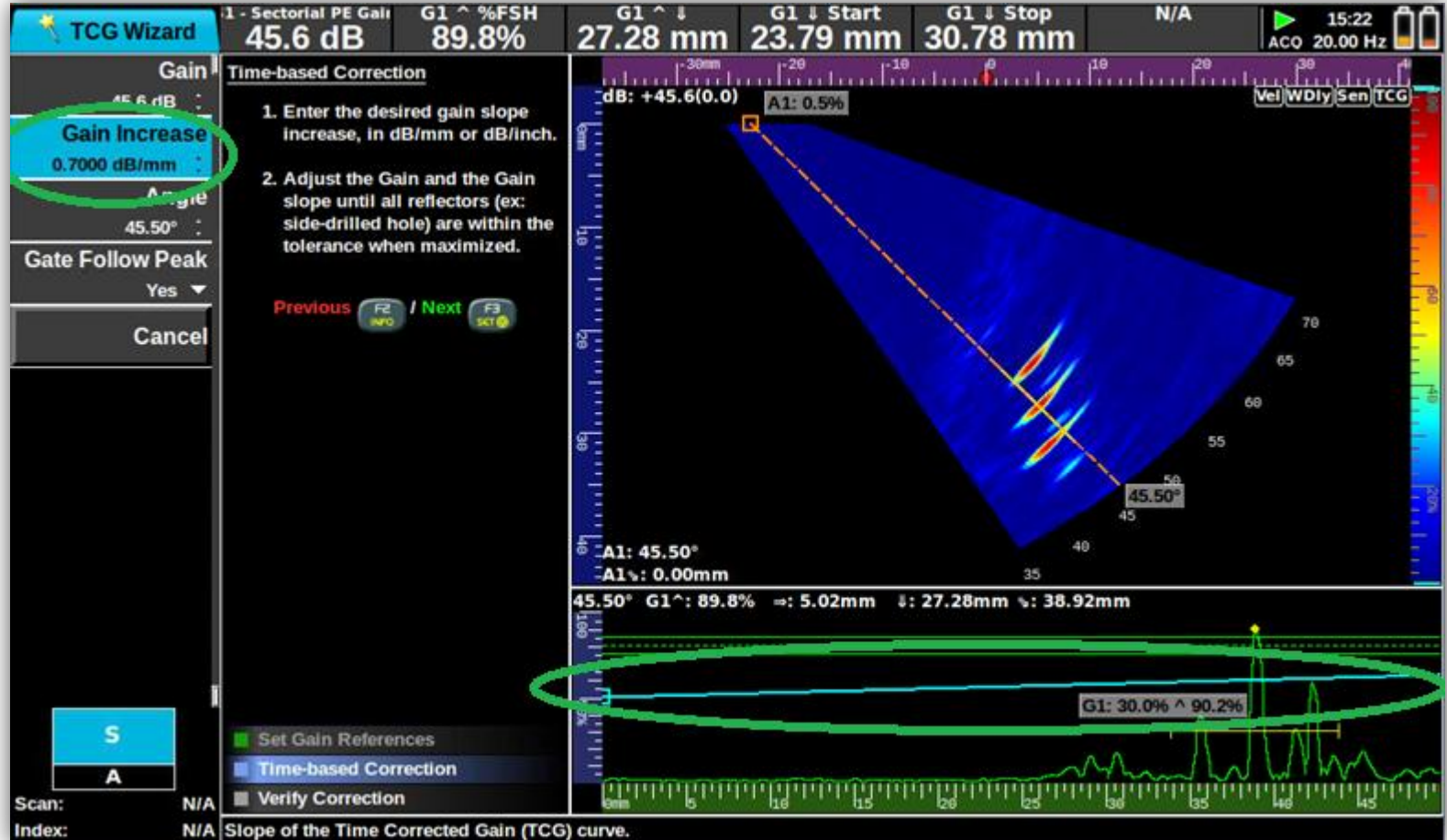
- *Create a TCG curve with a “constant dB” generation mode (Theoretical dB/mm or dB/inch)*
- *Edit the TCG curve generated by the “constant dB” function*
- *Allow TCG on RF signal*
- *Convert the TCG to DAC to TCG*

Create a TCG curve with “Constant dB” generation mode

- *When material attenuation is known, this mode can accelerate TCG calibration*
- *Create a good starting point for TCG curve customization*

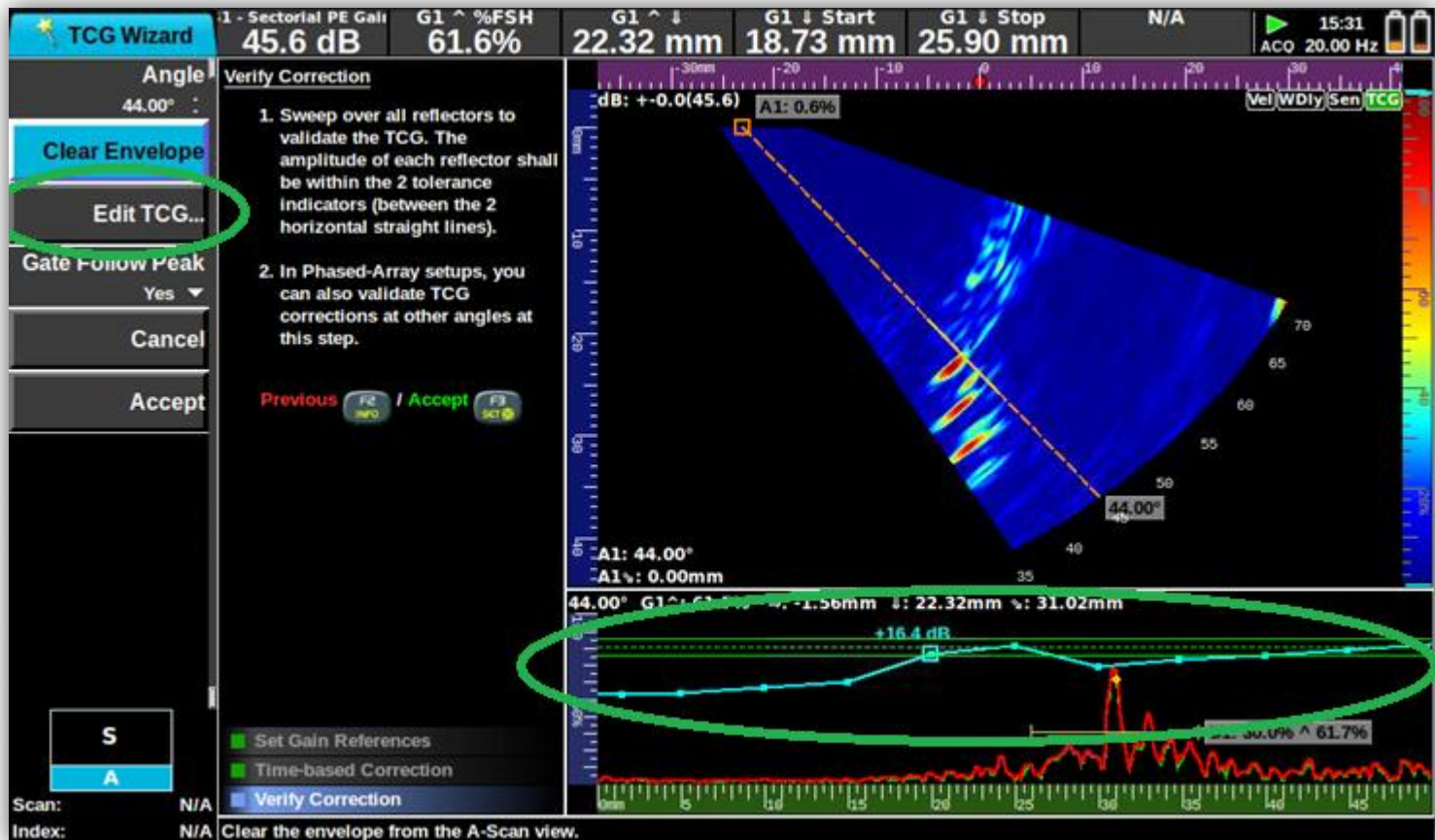


Create a TCG curve with "Constant dB" generation mode



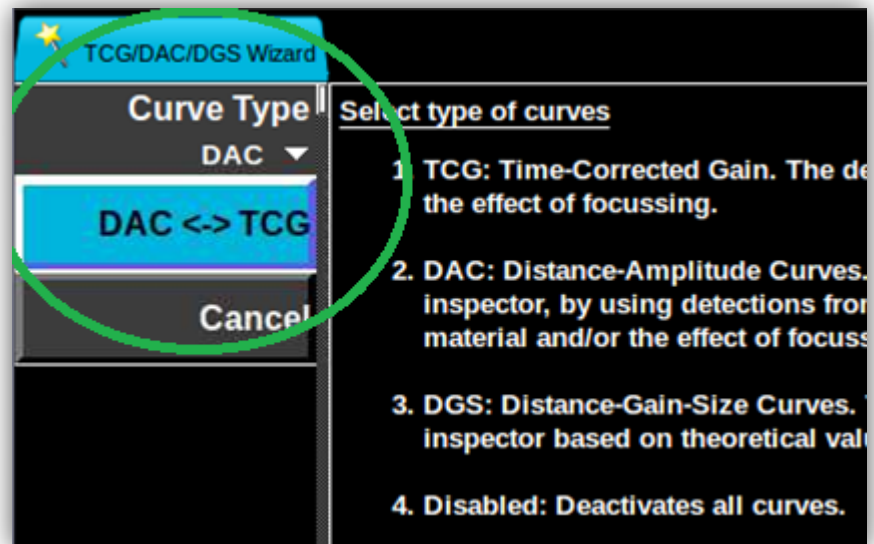
Edit the TCG curve generated by the “constant dB” function

- *Customize the curve to your needs*

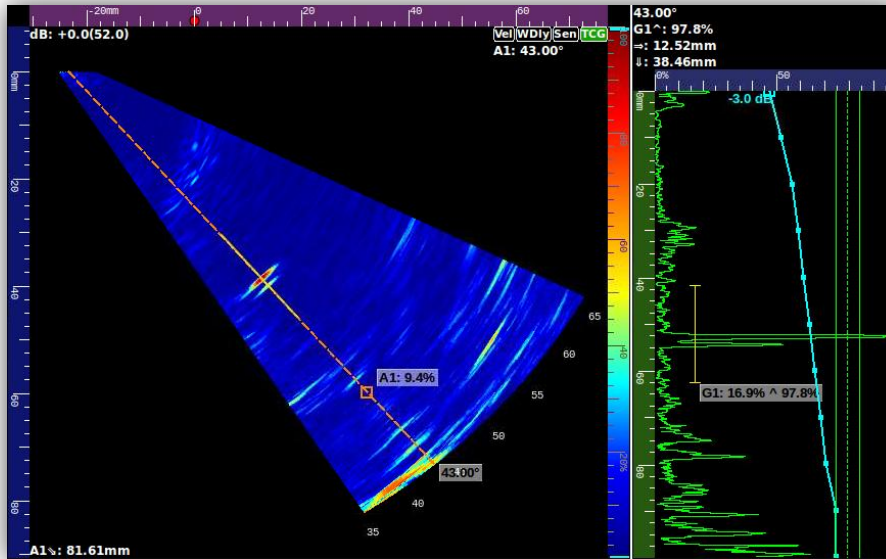


Convert the TCG to DAC to TCG

- ***Switch between DAC and TCG mode***
- ***Detect with the TCG mode, measure with the DAC mode***



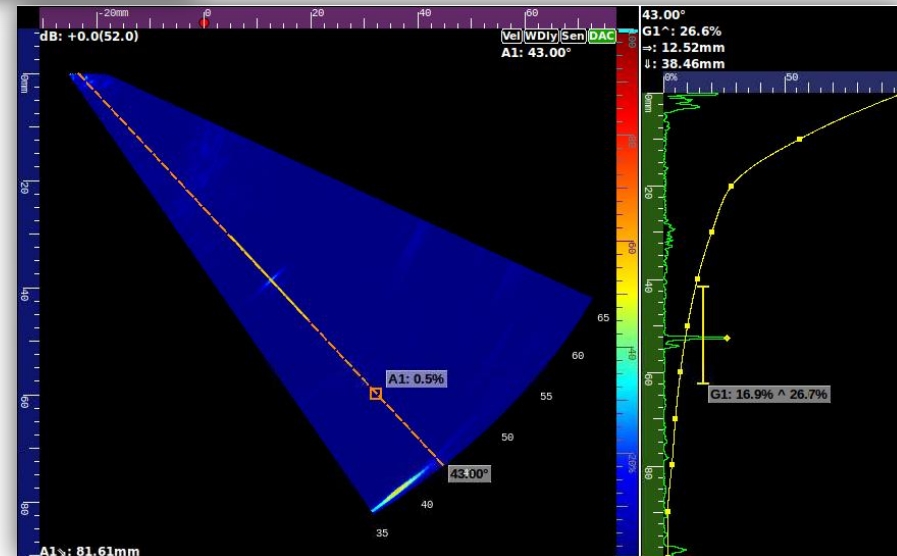
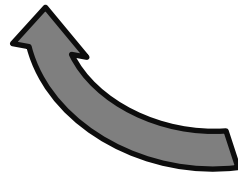
Convert the TCG to DAC to TCG



TCG to DAC

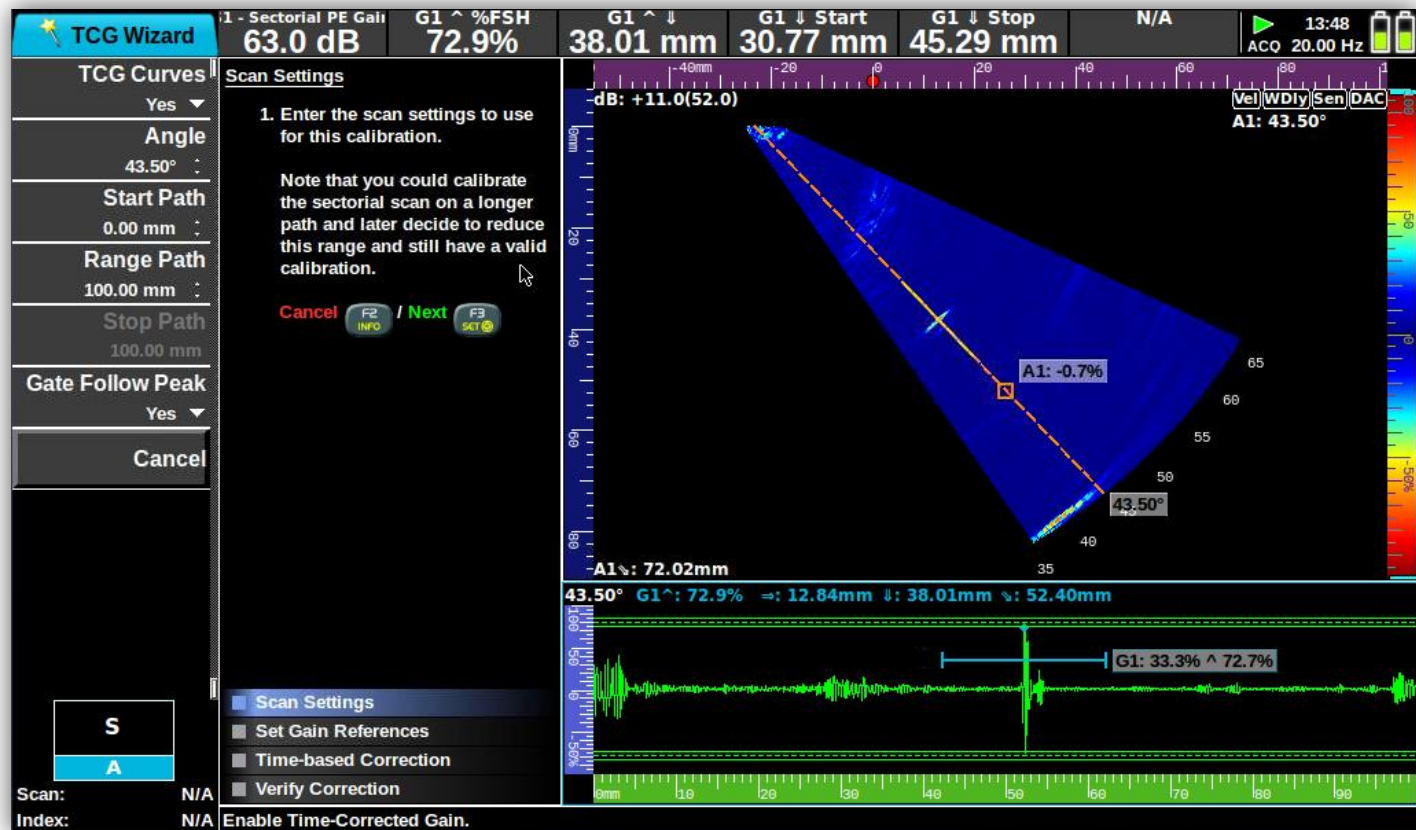


DAC to TCG



TCG on RF signal

- Ease “Sonatest Wheel Probe” calibration
- TCG on composite material can be realized with a RF signal

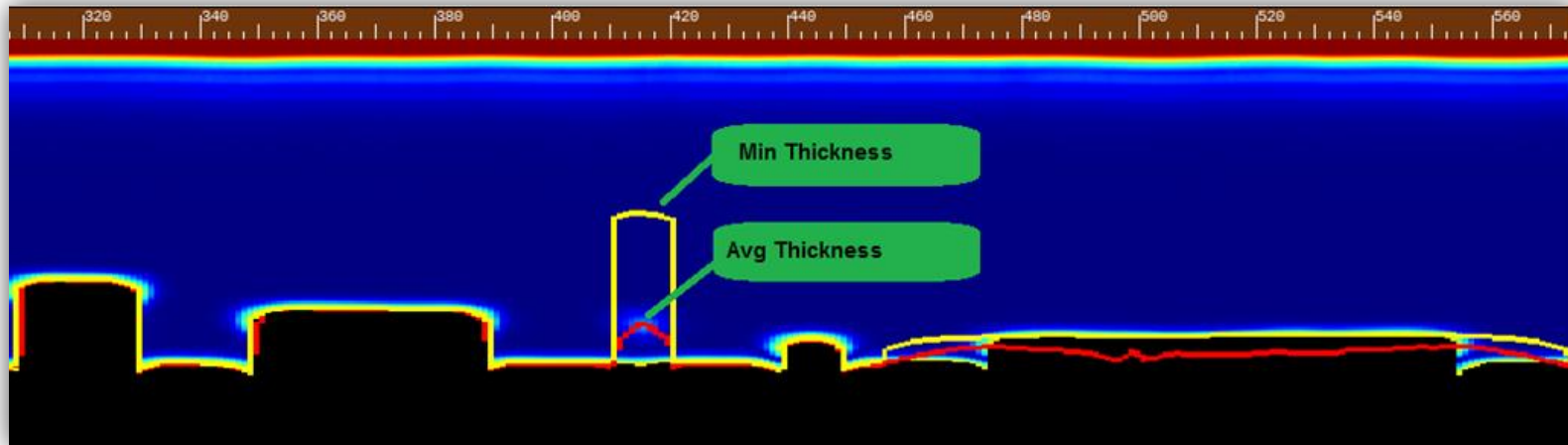


New B-LOG type view (in analysis on device)

- *Complete new feature*

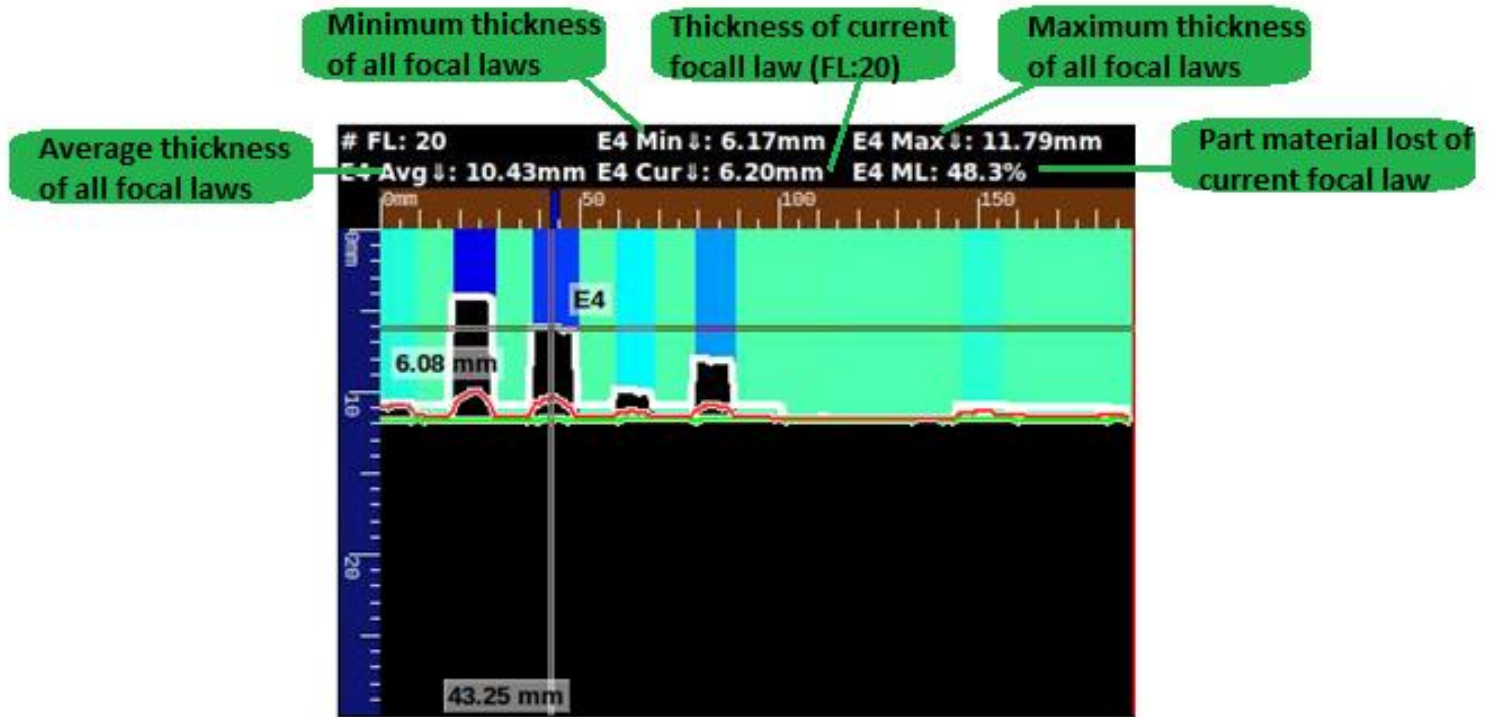
B-Log view (in Phased Array analysis mode)

- *Extract Data from gates to render a B-Scan from selected a beam*
- *Render minimum, average, and maximum part thickness extracted from multiple beams of an L-Scan*
- *Amplitude and Depth view using flank or peak as reference.*



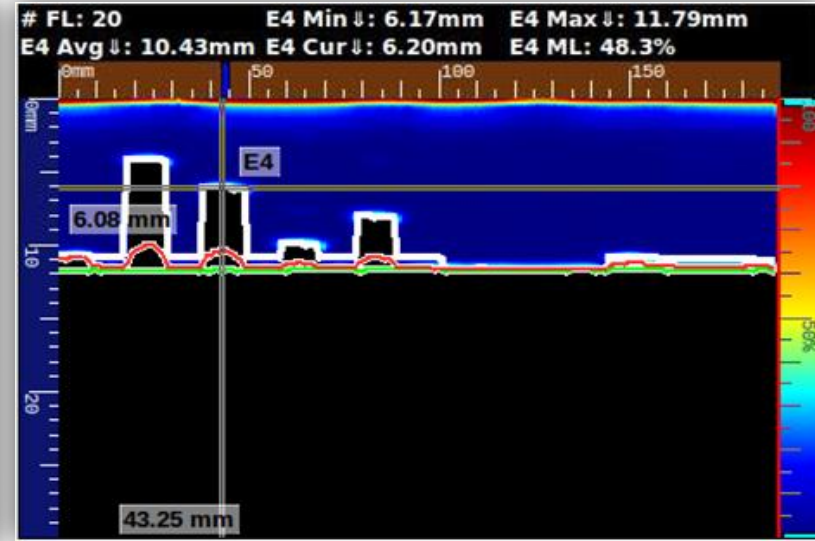
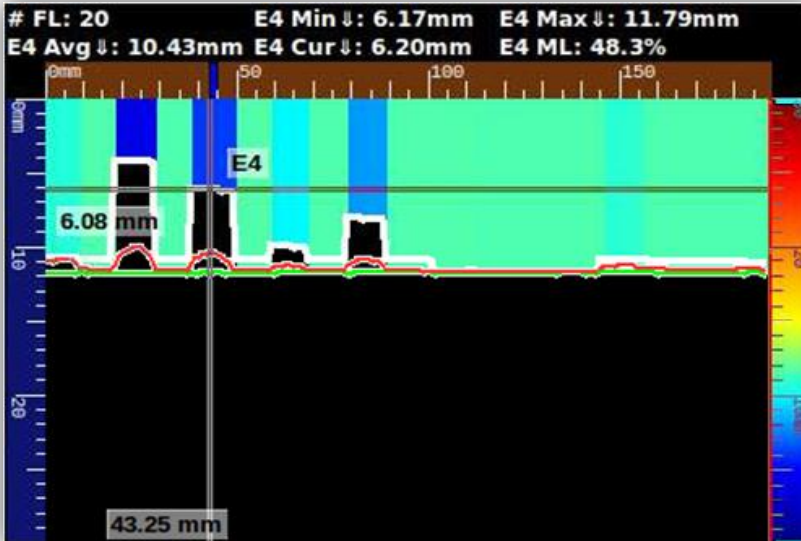
Limitation: Only support probes at 0 degree. Average, Minimum and Maximum thickness is extracted from a single scan axis C-SCAN (not a merged C-Scan)

B-Log Measurements



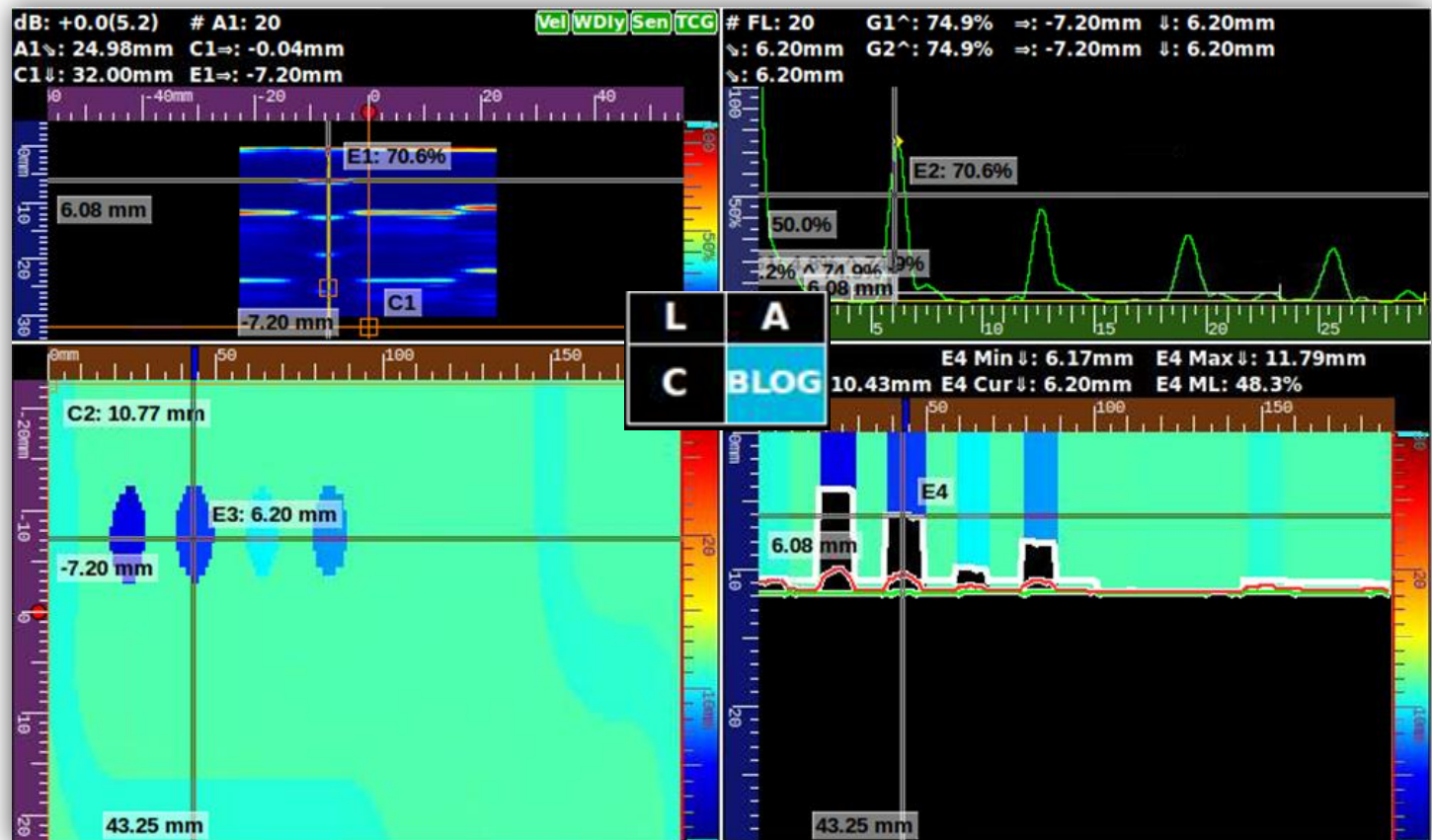
B-Log options

- *B-Log view support zoom*
- *Options are available in view tab (when B-Log view is selected), data can be filtered using reference gate (optional) and data gate. (IFT, G1/, G1^,...)*
- *Depth (Time of Flight) or Amplitude mode*



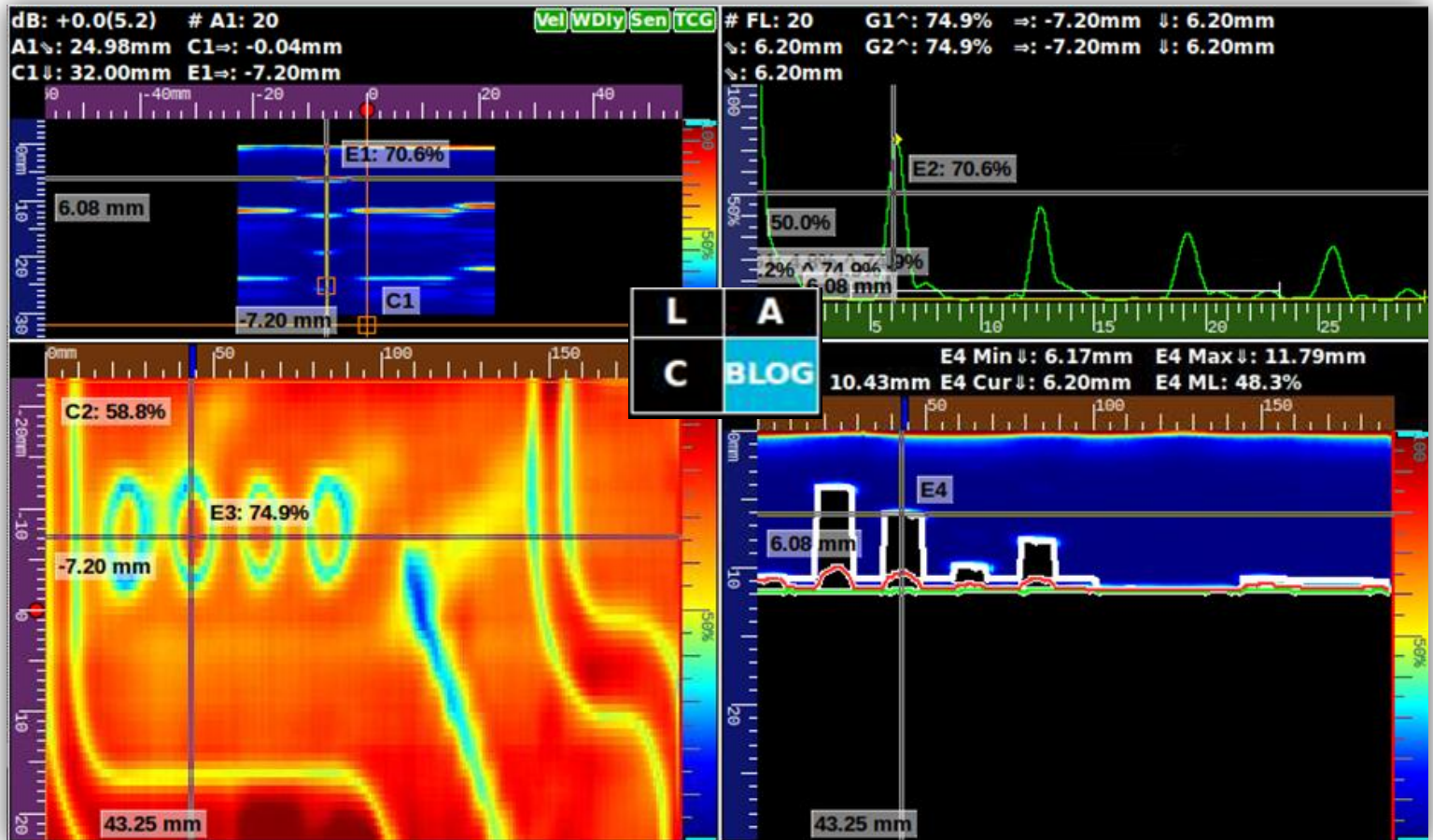
Depth C-Scan and B-Log

- *B-Log complement to C-Scan view*



Limitation: Only support probes at 0 degree

Amplitude C-Scan and B-Log



Several B-Log layout



Inspection 1 Probe 1 Wedge Part 1 Scan Geom Enc Cal Meas Prefs Cur View FILE 12-06-27 15:01

Hardware Settings

Voltage Phased Ar. 100 V

Voltage Mono 100 V

Acq. Freq. 100 MHz

Max Frame Rate 20.0 Hz

Report Info

Job/Customer

Site

Operator

Qualification none

Procedure Ref

Compliant

Scan: 0.00 mm

Index: 0.00 mm

Current Layout:

| | |
|----|----|
| L | A |
| MC | MC |

| | |
|----|----|
| L | A |
| MC | MC |

Cancel



TOFD enhancement

- *Edit the PCS directly with the new “Geometry menu” for paired probe*
- *Calibrate your TOFD scan with 1 parameter “Ruler LW Position”*
- *Added feature: Lateral Wave Removal*

Edit the PCS directly with the new "Geometry menu" for paired probe

- Rapidly configure your probe with the "follows" option, allowing to locate with one parameter : PCS

The screenshot displays the Sonatest software interface for configuring a paired probe. The top menu bar includes options like 'Inspection', '2 Probes', '2 Wedges', 'Part', '1 Scan', 'Geometry', 'Enc', 'Cal', 'Meas', and 'Prefs'. The 'Geometry' menu is active, showing the following configuration:

- File Name:** Example_TOFD_5.0M_Phoenix_ISL_60.utcfg
- Inspection:** Inspection (1000 B per frame)
- Encoder:** Encoder (1D Encoded, Expected File Size : 391.60 KB)
- Probe / Wedge:**
 - Probe 1 (Mono Circular, 5.00 MHz)
 - Model (Phoenix ISL 5M)
 - Wedge 1 (Angular, Planar, Refracted Angle 60.00°)
 - Model (Phoenix ISL 60)
 - Probe 2 (Mono Circular, 5.00 MHz)
 - Model (Phoenix ISL 5M)
 - Wedge 2 (Angular, Planar, Refracted Angle 60.00°)
 - Model (Phoenix ISL 60)

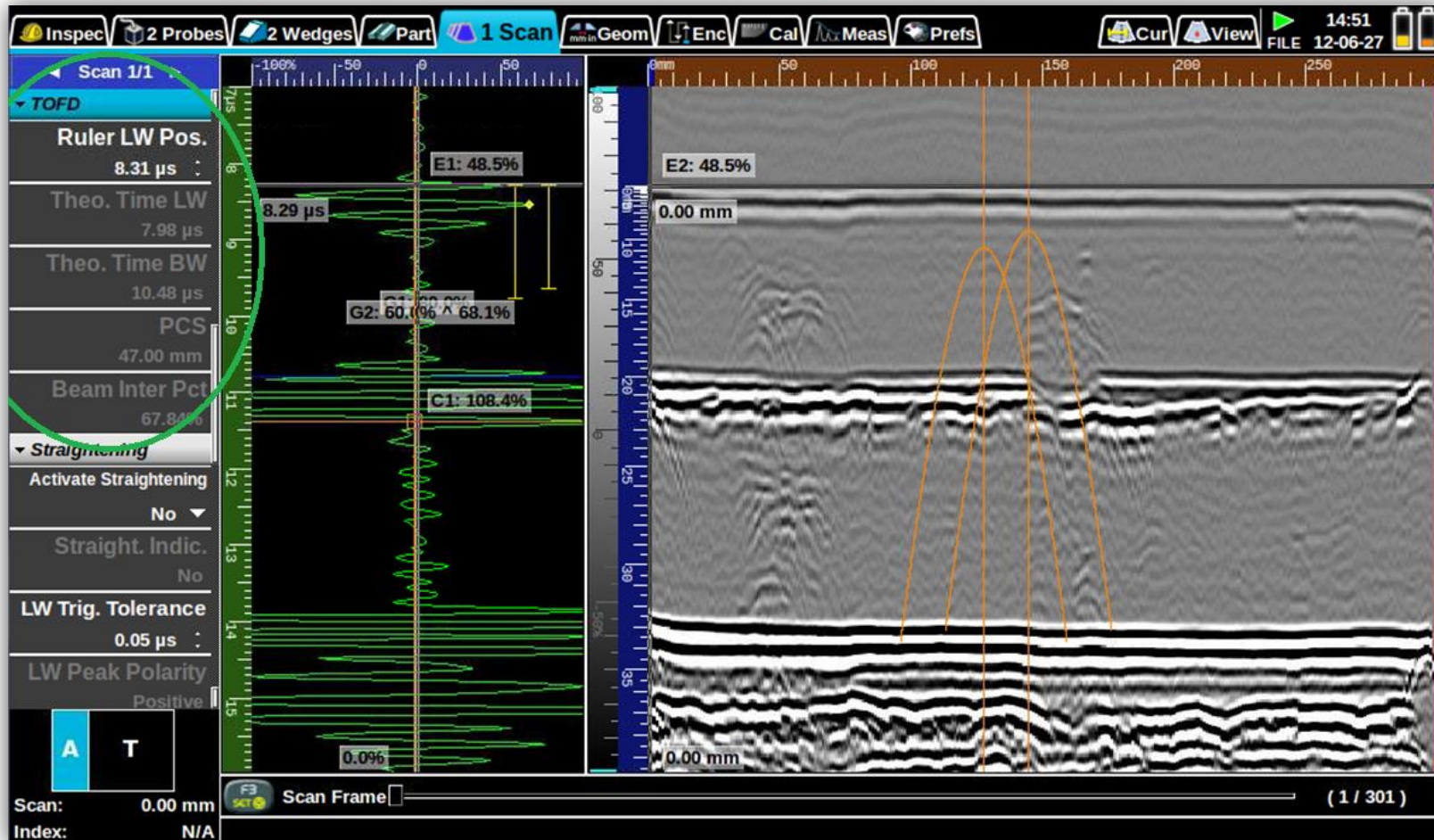
In the left sidebar, the 'Follows' dropdown for 'Probe/Wedge 1' is set to 'None', and for 'Probe/Wedge 2' it is set to 'P1 - Mo...A TX/RX'. The 'Spacing/PCS' option is highlighted in blue, with a value of 40.00 mm. A green circle highlights this option.

The bottom section of the interface shows the 'Probe Center Spacing (TOFD)' parameter. It includes a diagram illustrating the PCS between two probes. The diagram shows two blue trapezoidal shapes representing the probe beams, with a green line indicating the distance between their centers, labeled 'PCS'. Below the diagram, the text reads: 'Distance between interface center of each associated probe. This is a result of the chosen Geometry: Index Offset parameters of each probe.'

The right side of the interface shows a 3D view of the probe setup. A vertical axis is labeled '12', and a horizontal axis is labeled '180' and '98.270'. A legend in the top right corner identifies symbols for Part Datum (yellow circle), Wedge Ref (red circle), Grp Ref (green circle), Focus Pt (yellow X), and Scan Axis (blue arrow).

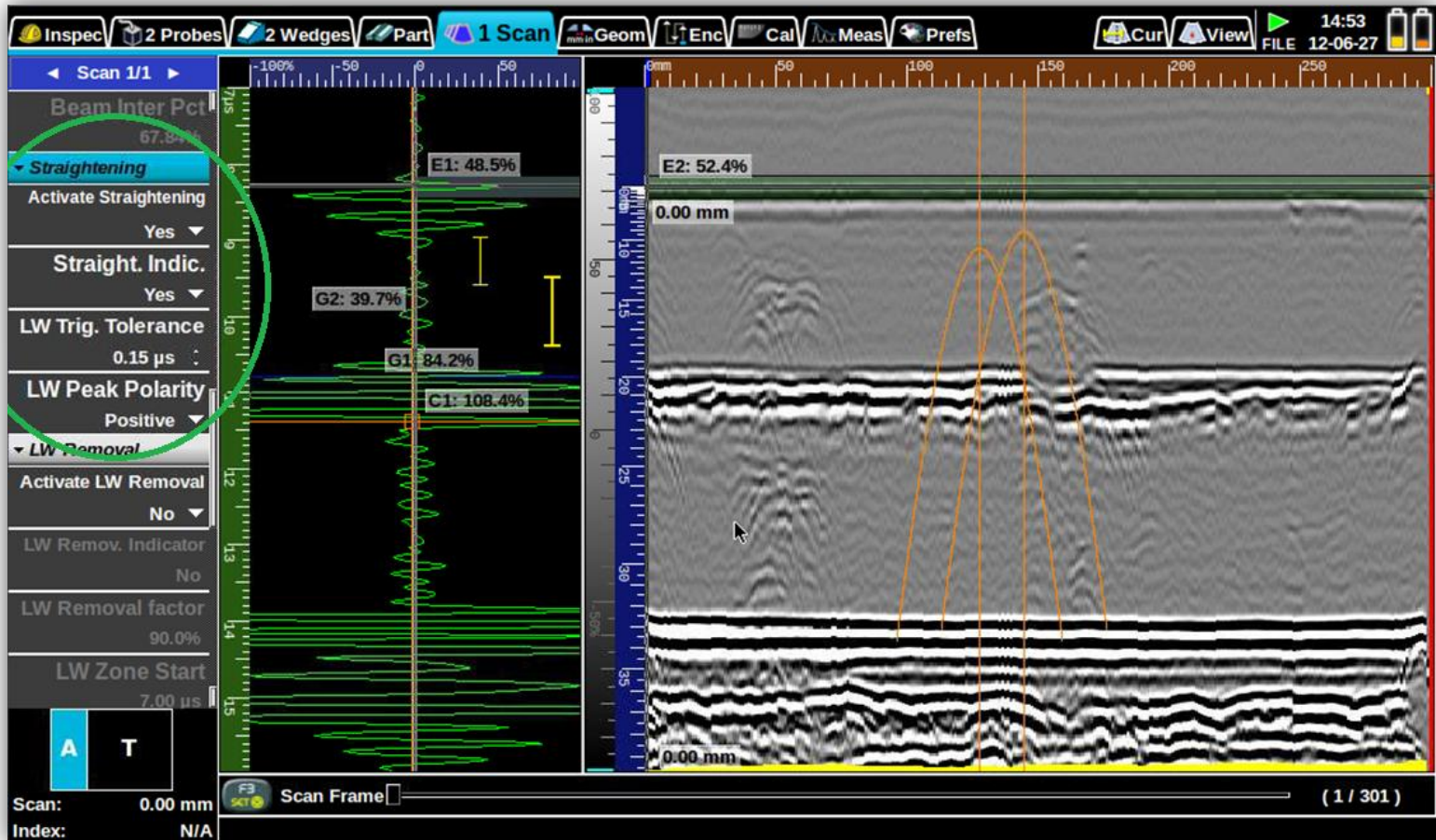
Calibrate your LW position with "Ruler LW Position" only

- Lock the parameter "Ruler BW Position" to avoid misleading calibration



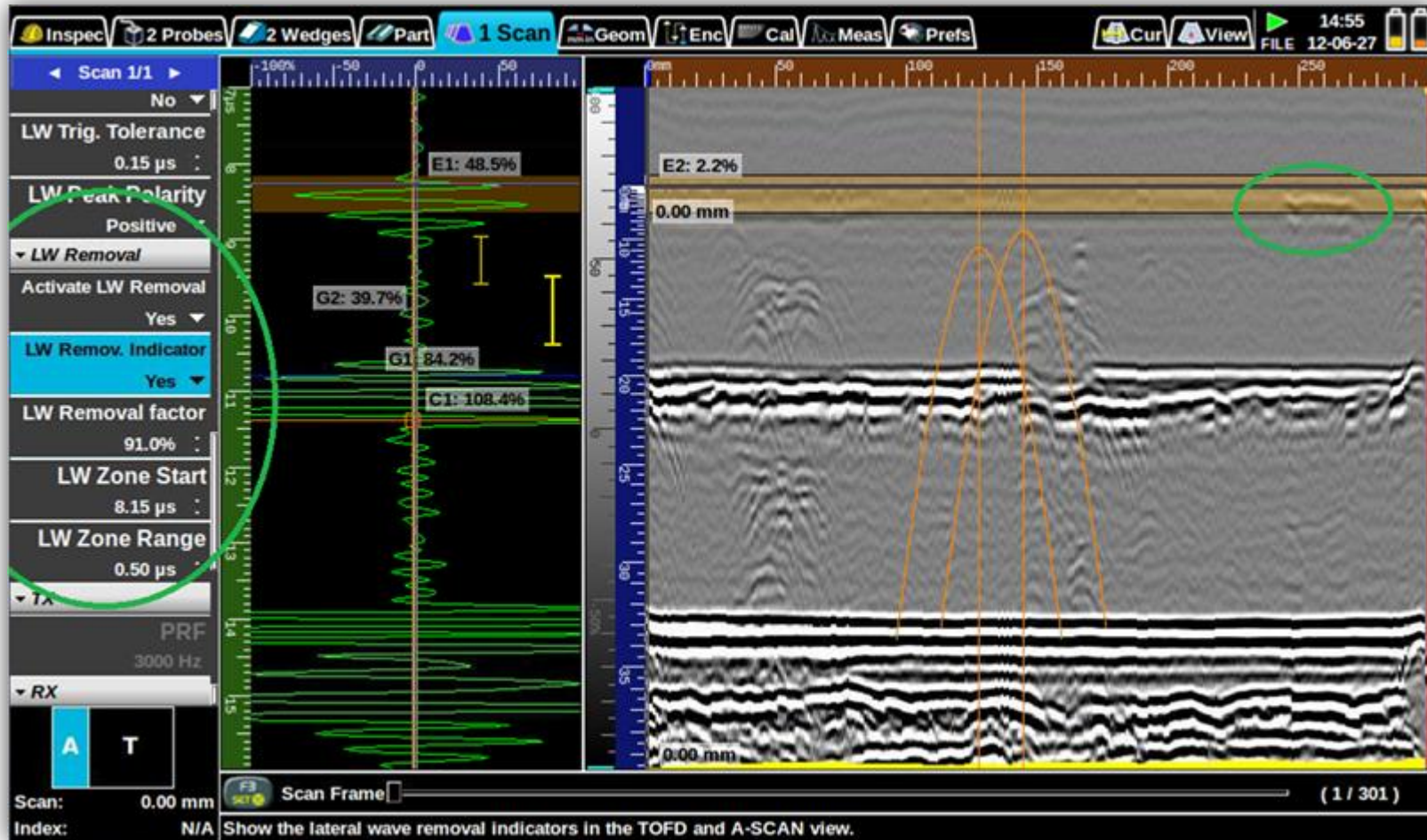
Enhanced Straightening

- Lock the parameter "Ruler BW Position" to avoid misleading calibration



Added feature: Lateral Wave Removal tool

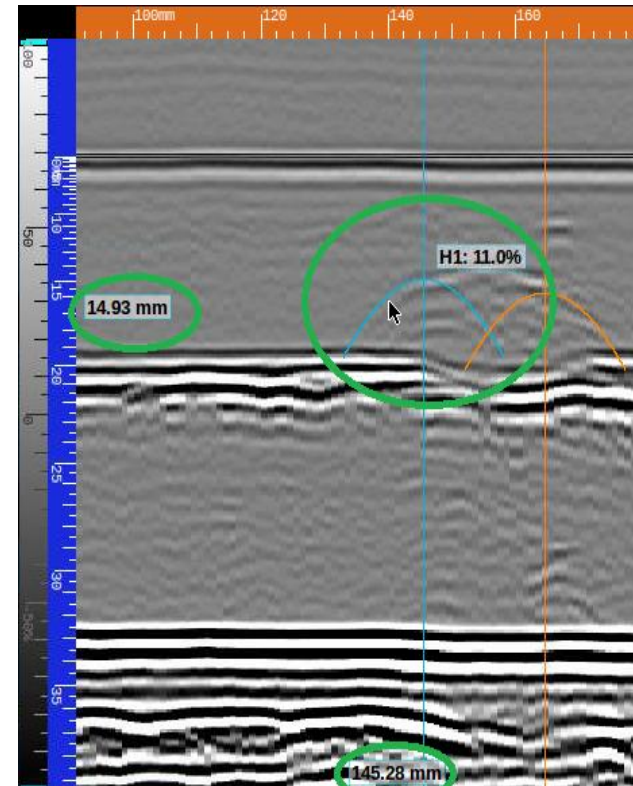
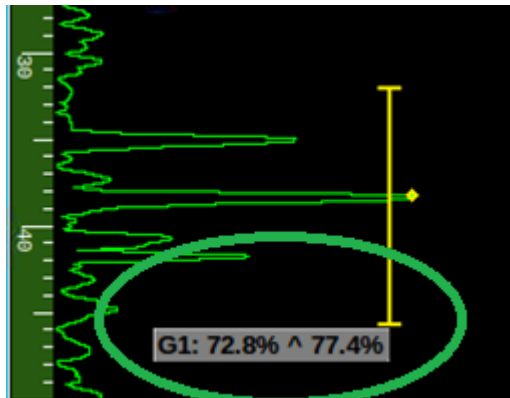
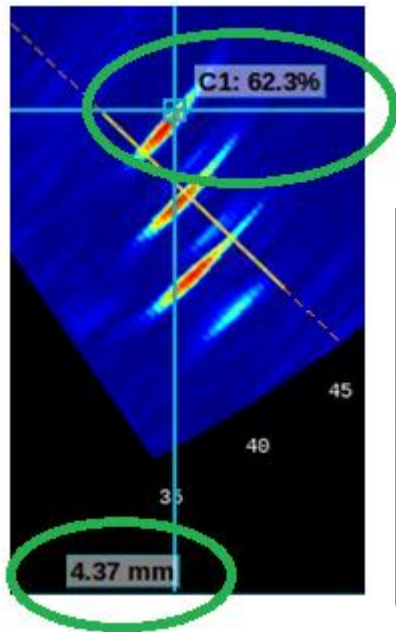
- Find near surface defect by removing the “Lateral Wave”



And MORE...

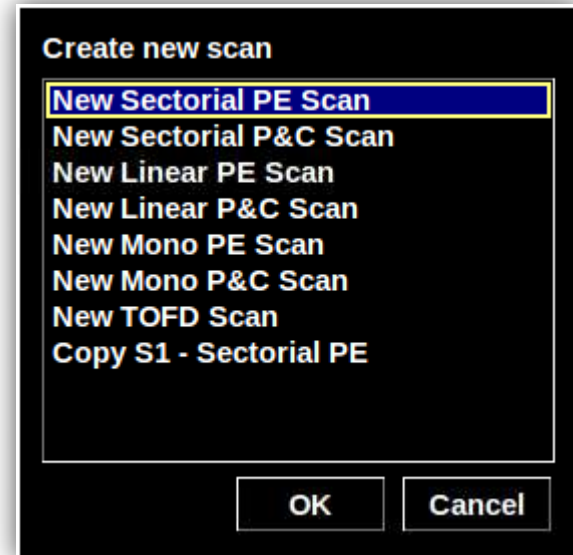
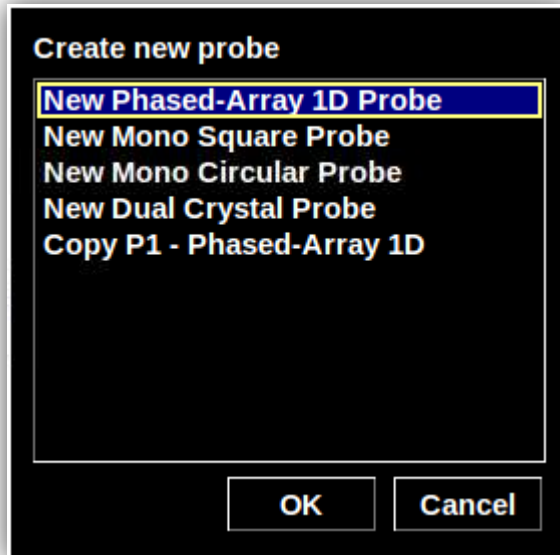
Measurement overlay enhancement for readability

- *Easier to read measurement,*
- *Not hiding scan data*



Copy existing probe/scan

- ***Copy Probe, Wedge and Scan***
- ***Easier to add a new scan to your setup***



Ruler considering skip cursor (weld overlay)

- Ruler are adapted to weld overlay
- Proper gate information can be displayed in measurement view

