

WeldSight Software

Advanced Weld and Corrosion Inspection and Analysis



Complete code-compliant phased array ultrasonic testing

Customizable data displays

Easy data merging and file stitching

Optimized workflows for rapid analysis

Advanced, customizable reporting

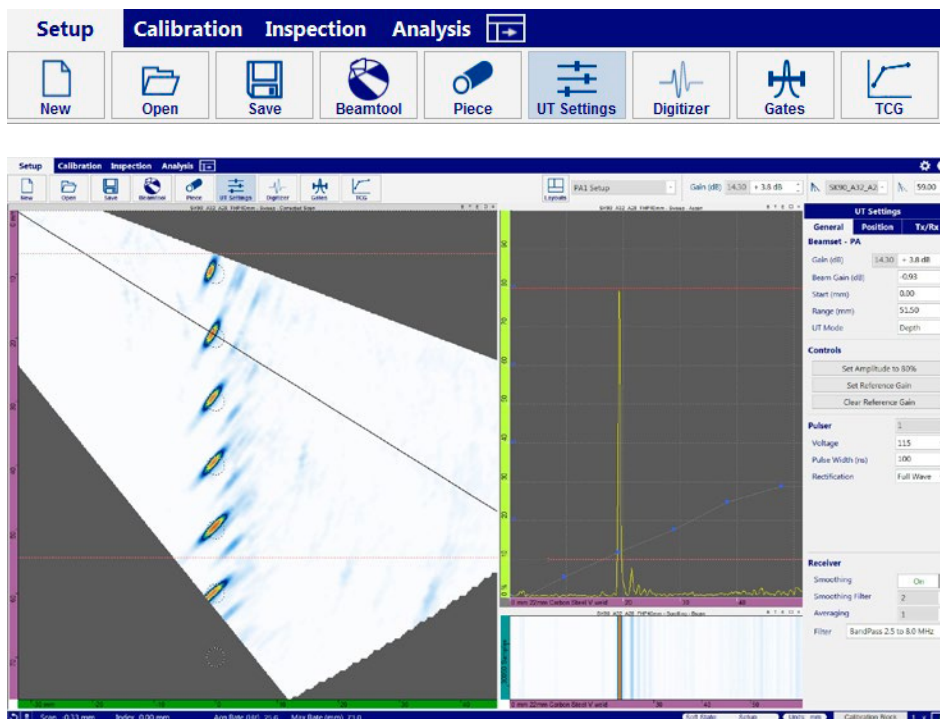
Complete Inspection Solution Phased Array and Ultrasonic Testing

WeldSight™ software's comprehensive acquisition and analysis tools enable you to engineer compliant and repeatable advanced phased array (PA), ultrasonic testing (UT), and time-of-flight diffraction (TOFD) weld inspections. Pushing flaw characterization and sizing further, WeldSight software's tools enable inspectors to conduct thorough analyses that comply with strict validation requirements of international or internal standards.

Olympus provides complete inspection solutions including WeldSight software, our OmniScan™ X3 flaw detector or FOCUS PX acquisition units (up to 4), mechanical scanners, phased array probes, wedges, and accessories.



Efficient Workflow for Welds and Corrosion



Workflow steps

- Beam set creation
- UT configuration
- Calibration
- Data collection
- Analysis
- Reporting

Advanced software functionalities

- Automatic wedge and probe element validation
- Improved time-corrected gain (TCG)
- Autofocusing on targets
- Drag-and-drop customizable displays
- Optimized TOFD tools
- Dynamic C-scan merge views
- 3D imaging and polar view
- Dual Linear Array™ (DLA)/Dual Matrix Array™ (DMA) probe support
- Strip charts for coupling and thickness monitoring
- Indication table recording and easily customized reports

Powerful Data Acquisition

Scalable and Portable Options

WeldSight™ software is fully compatible with FOCUS PX and OmniScan™ X3 flaw detectors, both high-performance phased array ultrasonic testing instruments. Depending on your inspection requirements and physical configuration needs, an economical solution can be built using these and other off-the-shelf devices from Olympus, including high-quality phased array probes and mechanical scanners. Custom solutions are available on request.

FOCUS PX Data Acquisition Unit

The powerful and scalable FOCUS PX acquisition unit is designed for harsh and demanding inspection conditions. Use the advanced scan plan, validation, and analysis tools of WeldSight software and up to four FOCUS PX units in parallel to enable advanced multiprobe configurations, increasing your inspection efficiency exponentially.



OmniScan X3 Flaw Detector

With the WeldSight Remote Connect app, phased array UT data acquired on the OmniScan™ X3 unit is transferred instantly to the WeldSight computer or laptop. The battery-operated unit enables greater setup configuration flexibility and increased portability. The optional protection door helps keep out dust and water splashes while the OmniScan X3 flaw detector is controlled via WeldSight software.



Flexible Access and Analysis

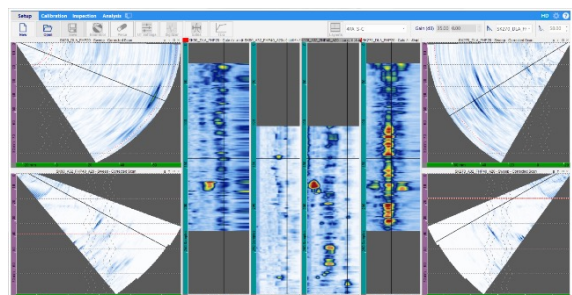
OmniScan Series Data Compatibility

Benefit from WeldSight software's advanced analysis tools to examine your OmniScan data thoroughly and efficiently. Data files (.opd) generated by OmniScan MX (MXU 2.0 and later), MX2, and SX flaw detectors can be loaded and reviewed, benefitting from the additional functionalities offered by the software.

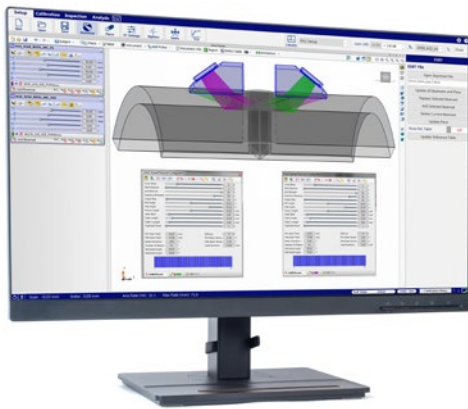
Complimentary Data Viewer

Using the Viewer version of WeldSight software, external stakeholders and collaborators can review OmniScan and FOCUS PX inspection data remotely. The free WeldSight Viewer enables you to:

- Visualize data using saved layouts
- Perform basic measurements
- Review inspection parameters
- Convert the measurement units (metric/US)



Tools to Ease Code Compliance



Integrated Eclipse Scientific BeamTool

When configuring your inspection using WeldSight software, the ES BeamTool scan plan designer facilitates the task of engineering advanced ultrasonic phased array inspections. The proven software tool incorporates parameters for fabrication codes and a wide range of weld and part characteristics, including bevel design, austenitic and ferritic materials, component cladding, dissimilar metals, probe access, and mechanical considerations.



Probe Sensitivity Calibration for Amplitude-Based Standards

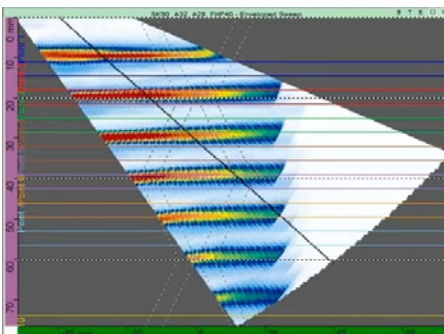
Achieve the high repeatability needed to meet amplitude-based acceptance criteria and to decrease reject rates. Use the software's complete toolbox, including time-of-flight (TOF), wedge delay, and amplitude sensitivity calibrations of PA, TOFD, and UT probes, to comply with industry reference codes, including:

- ASME
- API
- ISO
- ASTM
- DNV



Time-of-Flight and UT Optimization

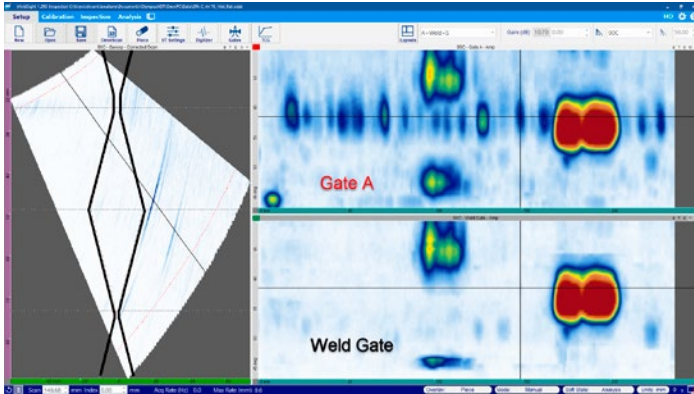
To help ensure your system's performance, WeldSight software offers tools such as one-click validation of wedge parameters and wear as well as pulser and probe element activity. An optimal acoustic performance is directly related to flaw probability of detection (POD), sizing precision, and the weld reject rate for fracture mechanics-based acceptance criteria.



Save Time with One-Pass Calibration

WeldSight software's innovative time-corrected gain (TCG) enables calibration of multiple points simultaneously, individual points in succession, or combinations of both, avoiding the typical limitations of industry software and work procedures.

Customize the Data to Your Requirements



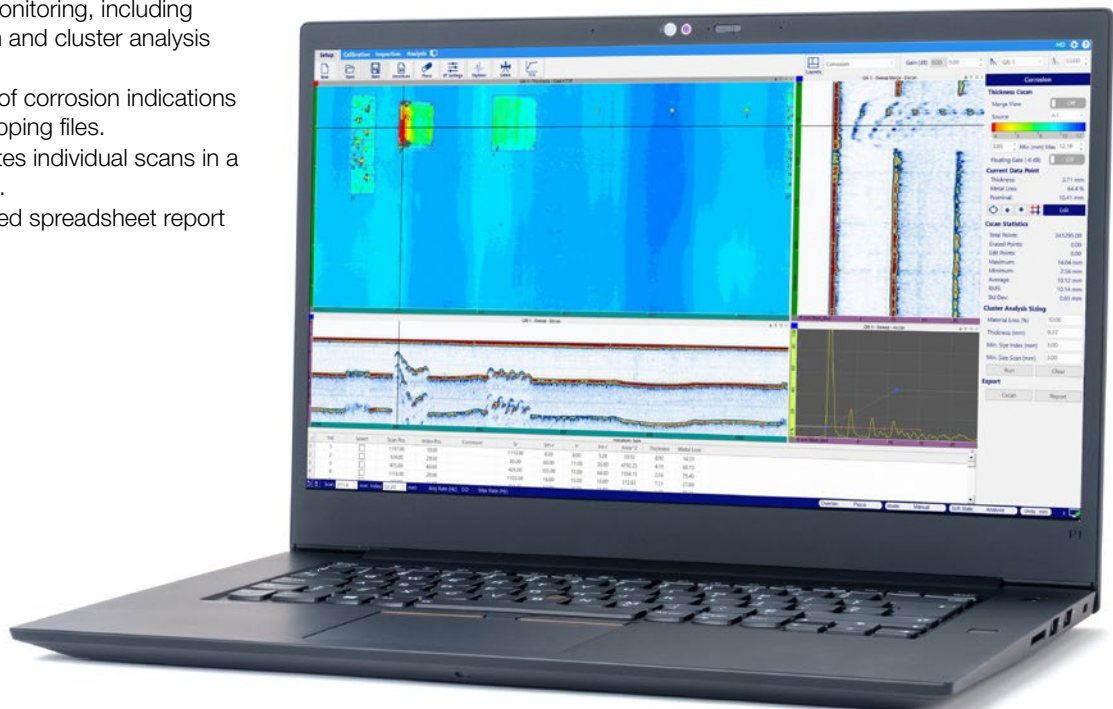
Display your data in ways that enable deeper insights and comply with specific procedure, application, or code requirements, including inspections of complex geometries.

- Customizable layouts: Drag-and-drop the data views, scale the panes, or use a second screen and save your layout.
- Zoom window: Use simple shortcuts to zoom in on specific sections of your data.
- Weld gate: Display a C-scan of data from inside the weld only.

Comprehensive Corrosion Management

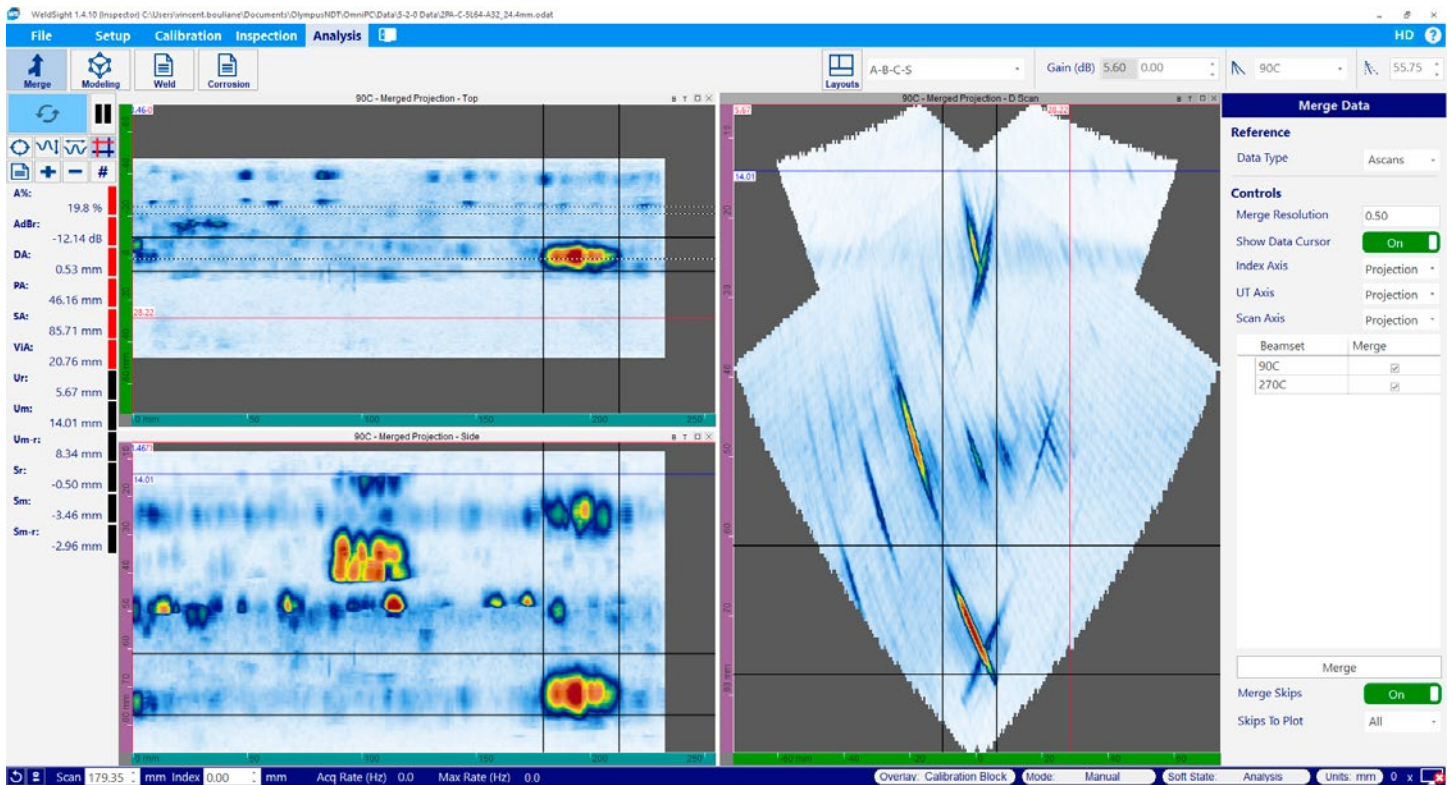
WeldSight™ software offers tools specifically for efficient detection, mapping, and monitoring of corrosion:

- Corrosion manager provides all the data you need for corrosion monitoring, including the thickness C-scan and cluster analysis sizing statistics.
- Automatic detection of corrosion indications in your corrosion mapping files.
- File merge consolidates individual scans in a single corrosion map.
- Export to a customized spreadsheet report with one click.



Advance Your Analysis

Validate Indications with Confidence



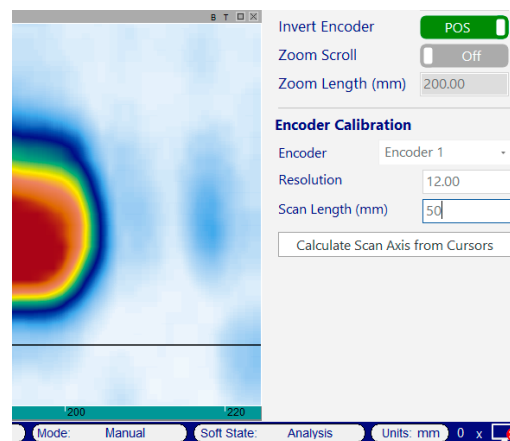
WeldSight software's numerous analysis tools give you the capacity to examine your target in multiple ways, so you can characterize, position, and size flaws accurately.

- **Volumetric data merge:** Screen a large part in one view to efficiently evaluate indications.
- **Slice/projection cursors:** Thoroughly examine your merged data in Top/Side/End views, while unwanted echoes are filtered out.
- **File merge:** Stitch independently acquired data files so all indications appear together in one image.
- **Linked dynamic B-scan:** Refreshes B-scan views of all PA groups simultaneously.
- **Max amplitude/Min thickness:** Automatically positions the cursor at the maximum amplitude (for weld inspection) or minimum thickness (for corrosion detection).

Fine-Tune Your Inspection Data

Improve the reliability of your results avoid the need to rescan by compensating for oversights or errors made during acquisition.

- **TOFD synchronization:** Realign the TOFD B-scan to improve the readability.
- **TOFD lateral wave suppression:** Improve the detection of flaws that are close to the lateral wave signal.
- **Offline encoder calibration:** Adjust minor scan and index offset errors.
- **A-scan resynchronization:** Correct loss of synchronization during acquisition.
- **Soft gain and Auto 80%:** Quickly adjust the gain to 80% or back to reference level.
- **Editable gates:** Compensate for gate setting oversights.



Application Solutions

Pressure Vessel and Piping Fabrication



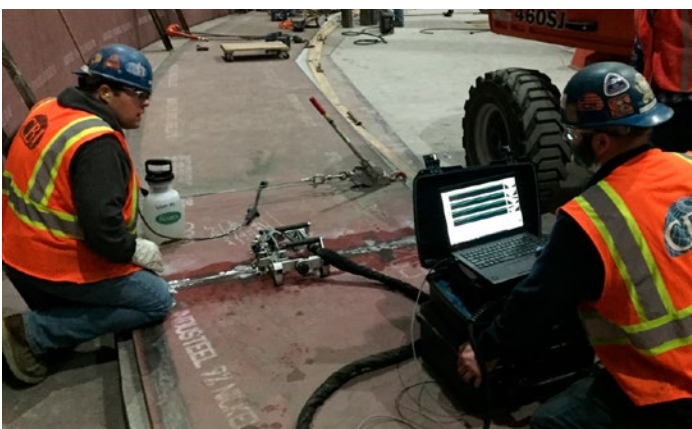
Used in lieu of radiography (RT), our advanced phased array (PA) testing solution using WeldSight software improves the efficiency of piping and vessel weld testing in compliance with ASME, ISO, and similar fabrication codes. Inspect austenitic materials including clad piping and dissimilar metal welds using our 1D phased array probes, TOFD, and DLA/DMA phased array probes.

Wind Tower Fabrication



Replace manual UT inspection with our high-speed automated PA and TOFD solution for wind tower welds in compliance with ISO, AWS, and similar fabrication codes. Reliably inspect wind tower bevel designs, including the thickness of transition welds and vertical weld bevels.

LNG Tank Manufacturing



Comply with API and similar fabrication codes using Olympus' complete PA solution for liquefied natural gas (LNG) tank inspection. WeldSight™ software increases productivity and provides real-time analysis, compared with RT or UT systems. Inspect the austenitic 9% nickel shell to I625 dissimilar metal welds that are typical of cryogenic storage tanks using our DLA probes.

Corrosion Monitoring

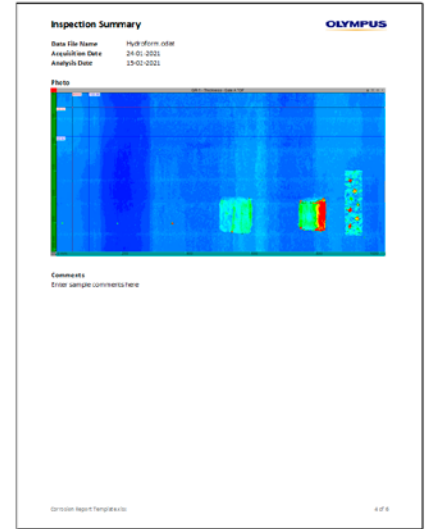


Ease mapping, monitoring, and reporting for wall-thinning evaluations using WeldSight software's corrosion manager and Olympus phased array hardware. Depending on your configuration requirements, setups optimized for corrosion inspection can include our HydroFORM™ or FlexoFORM™ scanner, phased array probes, and an OmniScan X3 or FOCUS PX unit.

Fully Customizable Reports

When your weld or corrosion analysis is complete, WeldSight software's easy-to-use, spreadsheet-based templates enable you to generate professional reports, tailored to your needs.

Personalize your reports with your logo and data that are relevant to your customer or application, so reports can then be produced automatically with the click of button.



Recommended Software Packages

Item Number	Part Number	Description
Q1480007	WeldSightESBT-I	WeldSight Inspection software and ES BeamTool licenses for acquisition and analysis
Q1480003	WeldSight-A	WeldSight Analysis software license only

Other Software Package Options

Item Number	Part Number	Description
Q1480002	WeldSight-I	WeldSight Inspection software license for data acquisition and analysis
Q1480008	WeldSightESBT-A	WeldSight Analysis software and ES BeamTool licenses for data analysis only
Q1480016	WeldSight-UPG-A-I	Upgrade of WeldSight software license from Analysis to Inspection

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OLYMPUS SCIENTIFIC SOLUTIONS AMERICAS CORP.
 48 Woerd Avenue, Waltham, MA 02453, USA, Tel.: (1) 781-419-3900
 110 Magellan Circle, Webster TX 77598, USA, Tel.: (1) 281-922-9300
OLYMPUS NDT CANADA INC.
 505, boul. du Parc-Technologique, Québec (Québec) G1P 4S9, Tel.: (1) 418-872-1155

For enquiries - contact
www.olympus-ims.com/contact-us

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