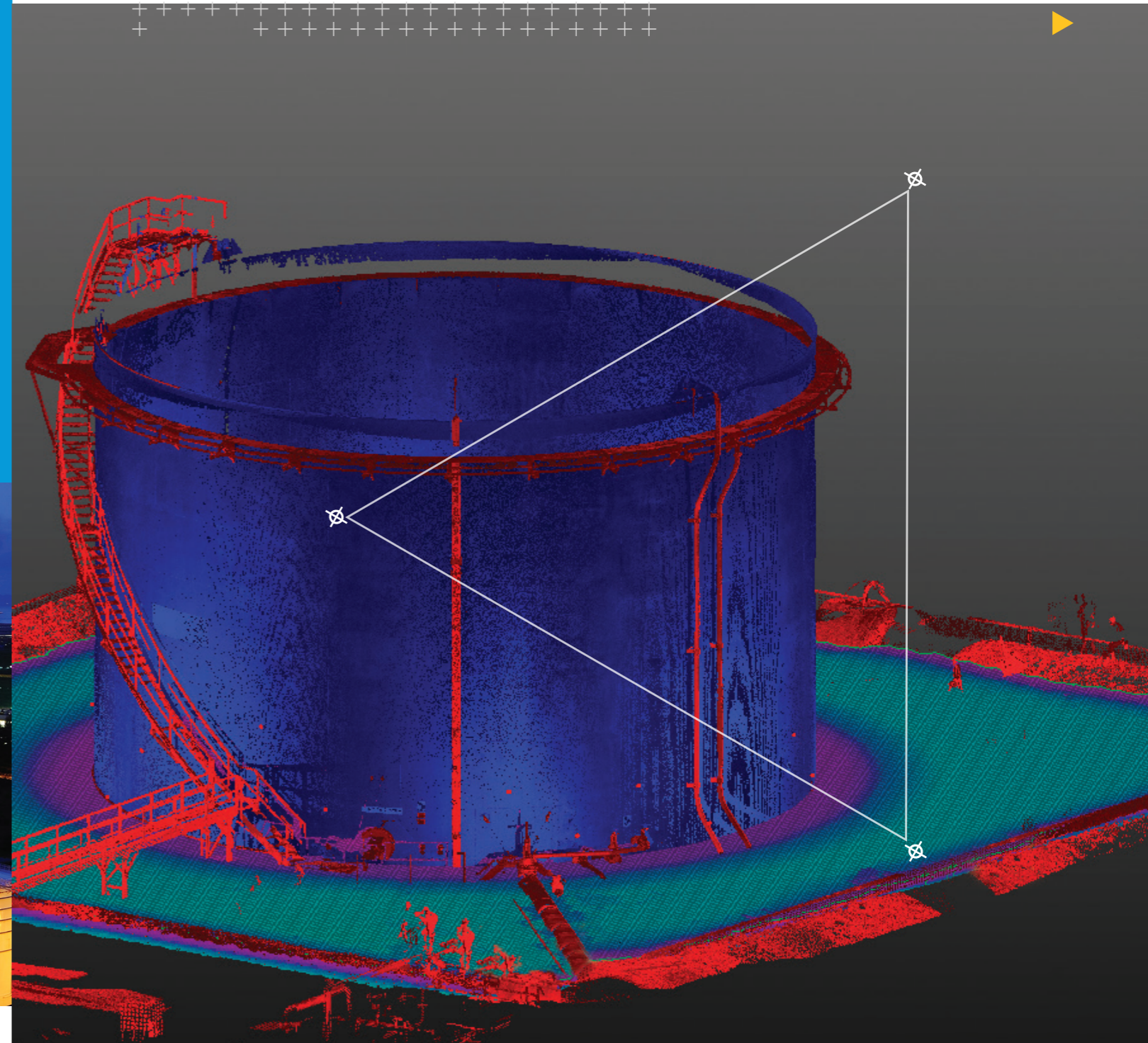


About Trimble's Geospatial Division

Trimble's Geospatial Division offers solutions that facilitate a high quality, productive workflow and data exchange to drive value for organizations of all sizes through efficiency, productivity, and safety. Our innovative technologies feature integrated sensors, field applications, real-time communications, data processing and modeling applications, and analytics—to facilitate productive workflows and exchange of data—ensuring organizations capture the most accurate spatial data and transform it into powerful insights for higher quality performance and confident decision making. Whether it's about better using our natural resources to produce energy or extending the life of our civil infrastructure, reliable information is at the core of our solutions, transforming the way people work and live.

For more information: www.trimble.com/oil-gas-chemical



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Storage Tank Solutions

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TRANSFORMING THE WAY THE WORLD WORKS

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TRANSFORMING THE WAY THE WORLD WORKS



Trimble TX8 Scanner: A Revolution in 3D Scanning



TRUE PERFORMANCE IN A REAL WORLD

The Trimble® TX8 laser scanner sets new standards for performance and ease of use in high-speed collection of 3D data. Using a state-of-the-art blend of speed, long range and precision, the Trimble TX8 delivers high quality results in industrial measurement, engineering, construction, forensics, and other applications that require high levels of accuracy and flexibility.

The TX8 combines speed and range to reduce the time and effort for 3D scanning. The TX8 lets you gather data more quickly from each setup while the scanner's long range reduces the number of setups needed to do the job. As a result, you'll finish your projects faster and with the confidence that your data is complete and accurate.

Using Trimble's patented Lightning™ technology, the TX8 can measure one million points per second while capturing precise data over its full measurement range. Because Trimble Lightning technology is less susceptible to variation in surface types and atmospheric conditions, you can

capture complete datasets from each station. The TX8 streamlines work in the office as well. The scanner's clean, low-noise data results in less time for processing. Data from the TX8 loads directly into Trimble RealWorks® software. The TX8 paired with RealWorks also provides efficient dataflow into popular CAD programs.

High Performance for Demanding Storage Tank Applications

The Trimble TX8 is ideal for capturing detailed data on existing conditions. Making high-speed measurements without compromising range or precision, the TX8 delivers high-density 3D point clouds needed by design and analysis professionals. The TX8 provides a 360 degree by 317 degree field of view and captures data at one million points per second with a typical scan time of only 3 minutes. The TX8 maintains its high precision over its entire range of 120 m and is available with an optional upgrade extending the range to an impressive 340 m.

editing, coloring point clouds with high quality imagery, inspecting the tank shell, and producing industry-standard reports.

Advanced Inspection Capabilities

Trimble RealWorks Advanced-Tank automatically detects areas that are out of tolerance. Following this automatic detection, issues can be inspected in greater detail and clearly reported to stakeholders. Complex internal structures including mixers, heaters, irregular floors, and specially-configured sumps can all be analyzed in detail to produce very complete inspection deliverables. The powerful tools in RealWorks also simplify the analysis of secondary containment systems. Rapidly locate initial overflow points, areas that need remediation and the maximum holding volume.

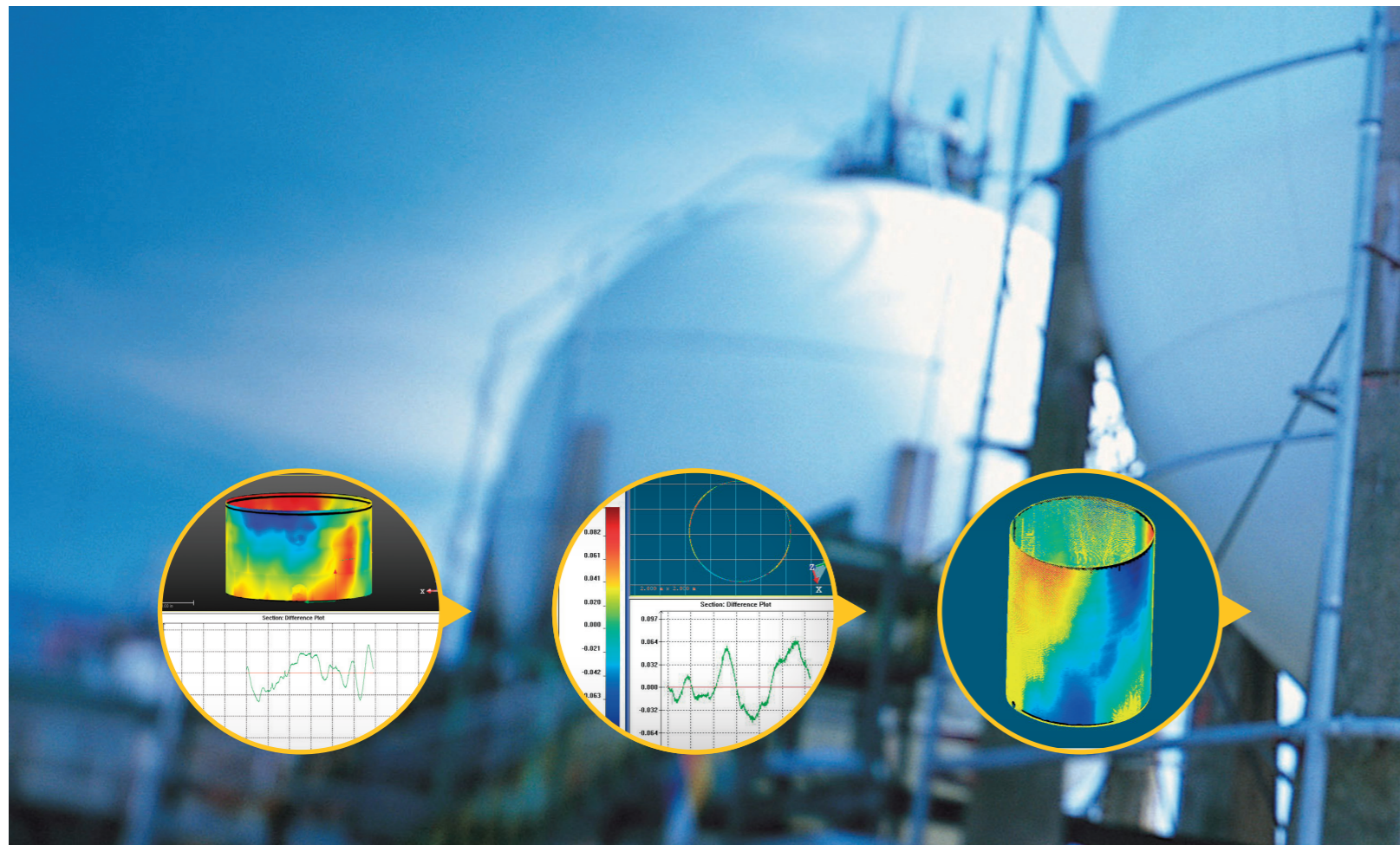
Complete Deliverables without CAD

The Advanced-Tank Edition eliminates the need to use CAD software to create final inspection reports. All of the measurements, charts, and tables for industry standard reports are created in Trimble RealWorks. Published packages provide an additional, interactive way to share tank inspection details. Save time and money producing complete datasets in a single software environment.

Industry-Standard Reporting

Trimble RealWorks Advanced-Tank automatically produces graphic and textual reports as recommended in the API 653 Standard. Roundness reports are produced for each defined course and other selected vertical inspection intervals. Verticality reports are produced for each user-defined station. Bottom settlement reports thoroughly detail conditions for all standard tank bottom designs.

Trimble RealWorks Advanced-Tank Edition: Advanced Productivity



Delivering the power and flexibility to tackle even the most demanding projects.

TAILORED SUPPORT FOR ANALYSIS WORKFLOWS

Storage tank inspectors are increasingly adopting laser scanning as a measurement technology to collect dense, accurate data quickly in the field. Trimble works closely with industry professionals to understand the specialized workflows and deliverables associated with storage tank inspections. The result is a software solution specifically for tank inspection operations involving laser scanning. The Trimble RealWorks Advanced-Tank Edition provides optimized processing, analysis, and reporting functions to provide results in a fraction of the time of traditional methods.

Streamlined Workflow

Trimble RealWorks Advanced-Tank offers a streamlined, guided workflow to quickly produce spatial inspection deliverables.

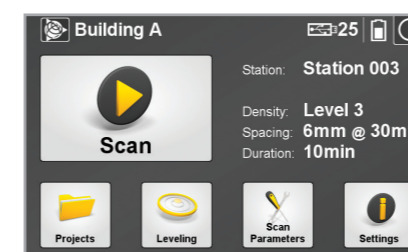
The workflow can be summarized in just a few steps:

- ▶ Import and register laser scanning point clouds
- ▶ Clean the data set to focus on the tank shell
- ▶ Define the inspection stations around perimeter
- ▶ Define courses and vertical inspection intervals
- ▶ Define tank bottom inspection intervals
- ▶ Define tolerances for automatic issue detection
- ▶ Perform additional, focused inspection on out-of-tolerance features
- ▶ Generate industry-standard reports with customized content

Specialized Toolset for Tanks

The Advanced-Tank Edition includes all of the features of Trimble RealWorks and adds specialized tools to automate storage tank inspections using laser scanning technology. A single software supports point cloud registration and

Rugged, Flexible and Easy to Use



A color touchscreen display and one-button scanning make data capture easy and efficient. The intuitive onboard software lets you quickly manage scan resolution and define scan areas. Because you capture only the data you need, you'll save time in the field and office.

Benefit from the flexibility to operate in demanding environments and situations. With its eye-safe Class 1 non-visible laser, the TX8 is safe to use even in busy public places.

The TX8 features a rugged design, IP54 environmental rating, protected mirror and ability to capture data in bright sunlight.

Designed for mobility, the TX8 weighs just 11 kg and is powered by lightweight, long-life lithium ion batteries. The wheeled transportation case conforms to requirements of most airlines for checked luggage which allows you to easily transport the TX8 between job locations.

The Total Solution

With the Trimble TX8's ability to capture precise high-density 3D data combined with Trimble RealWorks Advanced-Tank edition software advanced modeling, analysis, and data management tools, the Trimble TX8 laser scanner is the complete scanning solution for storage tank operations professionals.

Trimble RealWorks Advanced-Tank Edition: Advanced Productivity

Industry-leading storage tank solutions.

Trimble's complete solutions for applying laser scanning technology to perform precise, accurate, storage tank inspections and calibrations save money, increase field worker safety, and produce superior results over other spatial measurement methods.

STORAGE TANK INSPECTION

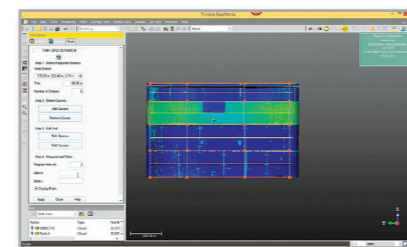
The construction and safe operation of storage tanks requires thorough, regular inspection. Spatial inspections to detect tilt, differential settlement, and deformation are an important part of tank construction and sustained, reliable operations. Structural modifications, process changes, and stored product changes can all require inspections and suitability assessments.

Combining the power of advanced laser scanning technology with software tailored to support storage tank analysis produces superior results while saving time in the field and office. Quickly collect accurate, detailed measurements of complex storage tank features including complex sump and bottom details with the Trimble TX8 laser scanner. The Trimble RealWorks Advanced-Tank Edition features highly-automated, efficient workflows to thoroughly analyze complex datasets and create industry-standard inspection deliverables. Automatically detect out of tolerance areas and produce reports according to API 653 Standard guidelines and efficiently produce highly-accurate holding volume calibration tables. Together these products are a complete solution with the accuracy and efficiency needed to fast track your productivity.

SPECIALIZED FEATURES FOR STORAGE TANK OPERATIONS PROFESSIONALS

Simplified Workflow

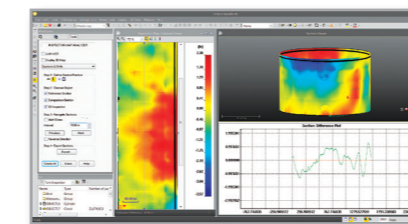
- ▶ Easy configuration to analyze tanks following API 653 Standard guidelines
- ▶ Rapid, automated detection of out-of-tolerance areas
- ▶ Advanced analysis tools for complete inspection in the office



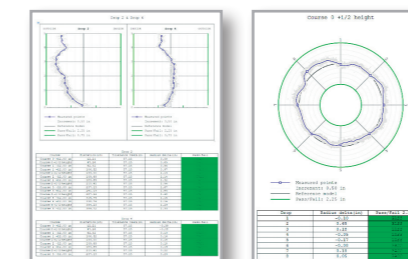
Select station spacing, vertical intervals, and set tolerances for automated reporting

Industry-Standard Deliverables

- ▶ Graphical and tabular outputs following API 653 Standard reporting guidelines
- ▶ Clear reporting of tolerance pass or fail



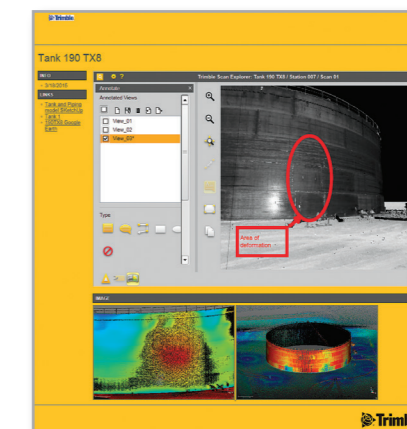
Perform detailed analysis of tank shell features in the office



Graphic and tabular reports following API 653 Standard guidelines

Advanced Interactive Deliverables

- ▶ Published packages offer a complete, interactive project review experience to stakeholders



Publish rich, detailed results for the Trimble RealWorks Viewer