SIEMENS energy

Laser scanning for digital repairs



siemens-energy.com/compressionrepairs

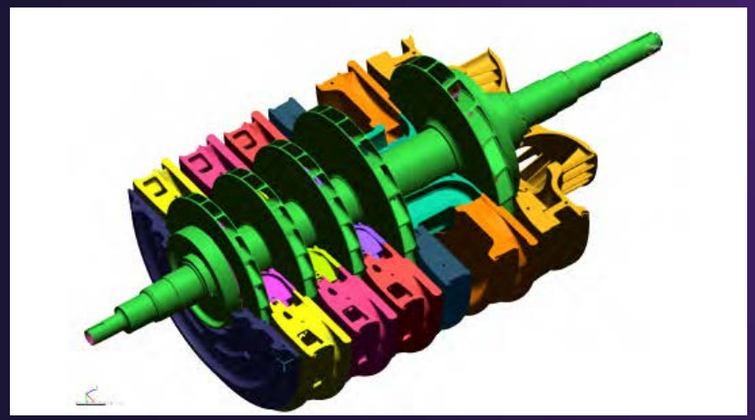


The introduction of 3D laser scanning for digital inspection has revolutionized maintenance, quality control, and design processes, providing numerous advantages over traditional inspection methods.

Our 3D laser scanning technology is a non-contact, high-precision method of inspection that offers a comprehensive way to capture the physical dimensions of compressors and their components in intricate detail.

Shedding light on digital repairs







Faster inspections

Our scanners take millions of data points every second, and when combined with our automated inspection scripts, our technicians can dimensionally inspect your equipment in real time – right on the shop floor.

Enhanced client experience

Using industry-leading inspection software we can create visualizations of any damage on your equipment, aiding in your comprehension of the suggested repairs. Measurements from the laser scanner are also linked directly to our digital inspection platform (Digital Inspection Jacket) which allows us to provide repair recommendations to you in a fraction of the time.

More data

When your unit is scanned at a Siemens Energy Service Center, the data is securely saved and organized in our PLM system. This allows us to precisely compare the current condition of your equipment to its state from the last repair, highlighting the distinct wear patterns of your machine. This data is also accessible to our Modifications & Upgrades, Technical Support, and Field Service teams between overhaul cycles, ensuring you receive the highest quality service possible.

Real-time digital inspection

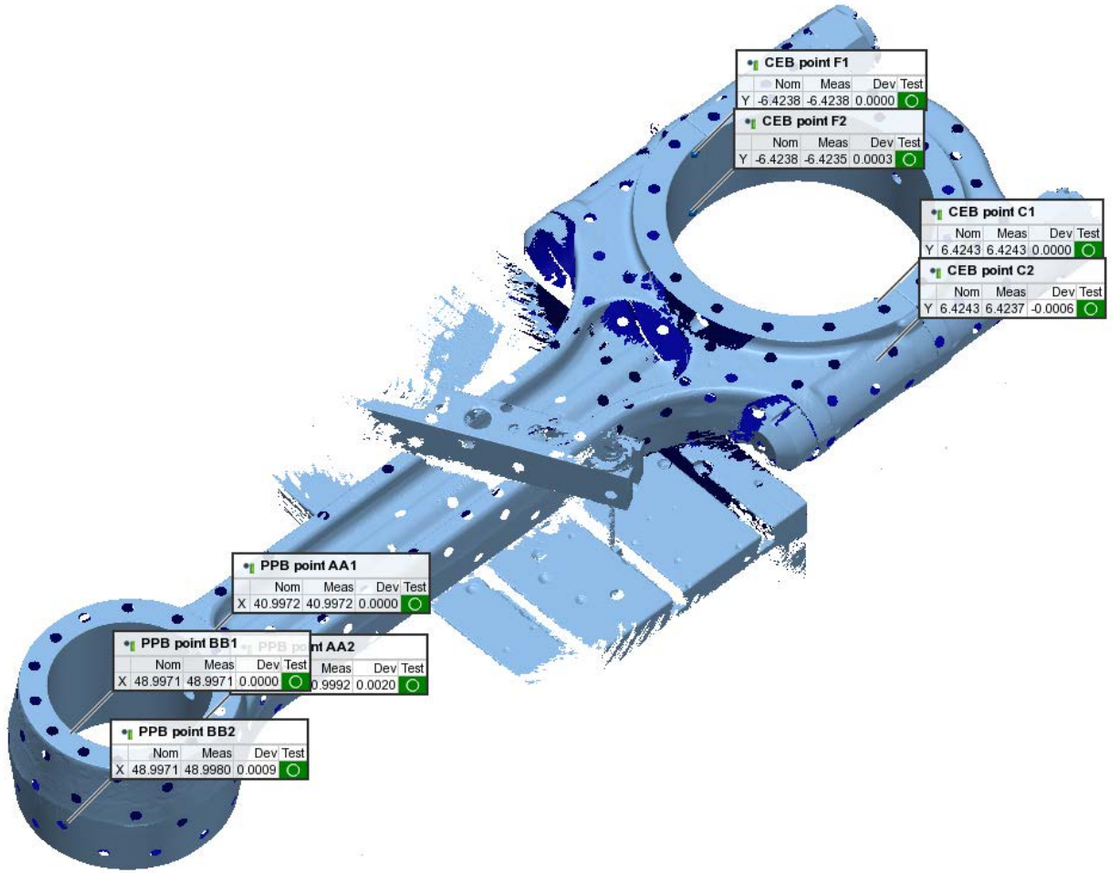
Rapidly scanning components is just the beginning; our automated inspection scripts enable our technicians to analyze scans and produce actionable insights directly from the shop floor, eliminating the need for engineering delays or offshore processing.

Non-contact measurement

With a contact-less approach, laser scanning is ideal for inspecting fragile items without any damage risk, enhancing safety for both the object and the operator.

Comprehensive data collection

Our 3D laser scanning delivers a complete data overview in just one pass, providing a detailed analysis and uncovering potential issues that less comprehensive methods might overlook.



Outage reduction through virtual assembly

In addition to reducing inspection time, we utilize the gathered data to significantly decrease the length of turnaround periods.

Digital pre-assembly

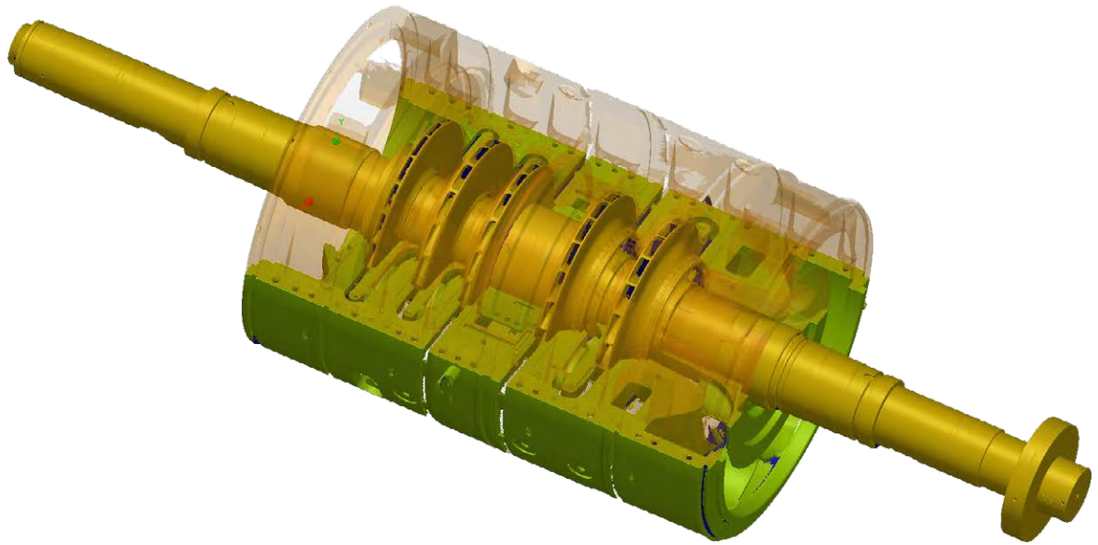
Before turnaround begins, we have the capability to scan and inspect all spare parts, followed by digital assembly. This preparation allows us to be ready before time becomes a factor. Once turnaround commences, we can seamlessly integrate the digital assembly into the newly scanned environment, enabling the immediate start of precision machining.

Digital reassembly

After completing the scans of all major components, we have the capability to digitally piece together the scans. This enables us to quickly identify any potential fitting or interference issues well before the reassembly process begins.

Digital alignment

Once reassembly is finalized, we employ our scanner to determine the rotor's centerline and adjust the seal clearances, ensuring accuracy before the rotor is installed.



Custom repairs

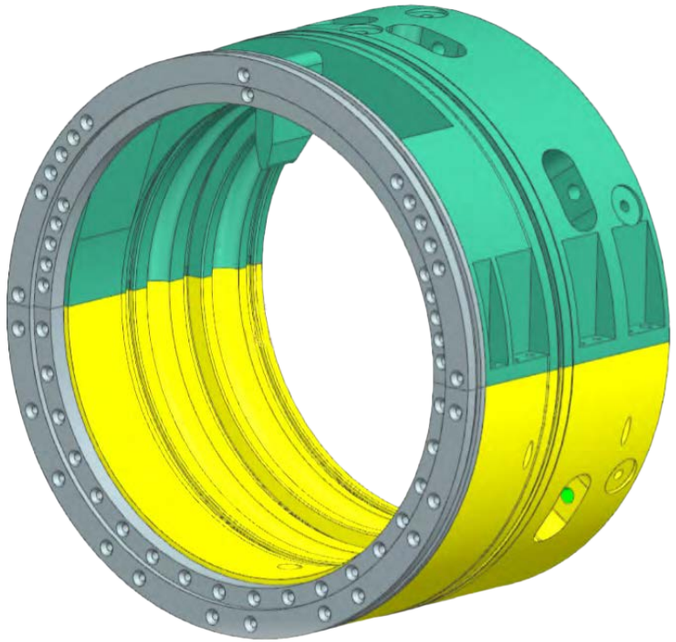
We provide a detailed and flexible approach, facilitating exact repair for a diverse range of parts and components.

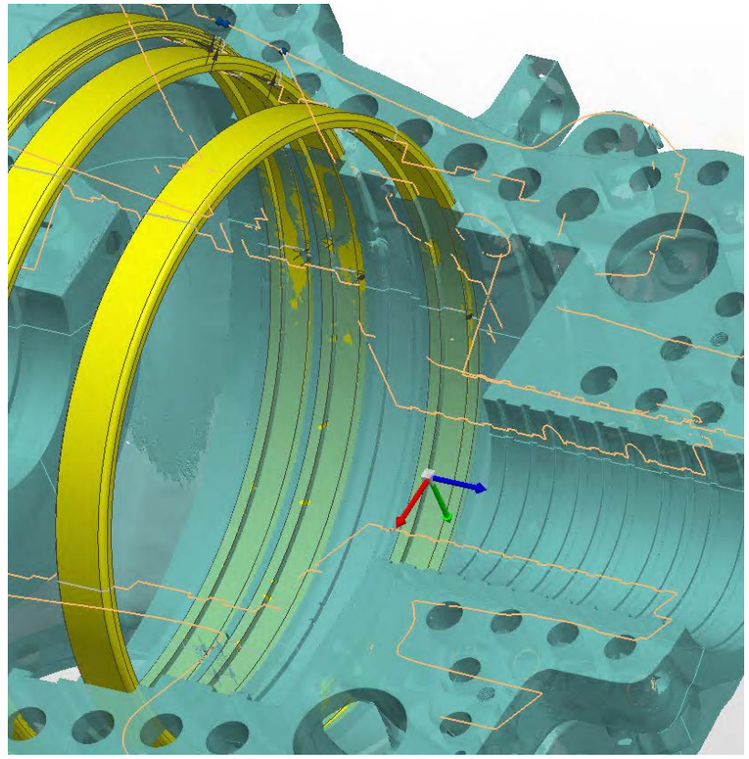
Precise repairs, tailored for you

By capturing detailed data points from the damaged area, we craft a precise digital map that guides our customized repair process. This approach aims for an optimal fit and restoration with each procedure.

Efficient and effective custom solutions

With our cutting-edge technology, we perform comprehensive analyses to deliver repairs customized to address distinct challenges. This leads to reduced repair durations and improved efficiency, minimizing your downtime and facilitating a swift return to full functionality.





In-field scanning

To provide unparalleled service, we can conduct on-site scanning, when necessary, to seamlessly bridge the gap between work conducted at your site locations and the intricate processes carried out in our SE service centers.

Optimized productivity

By integrating 3D laser scanning, we drastically cut down the duration needed to gather detailed data on a site. This boost in efficiency not only saves significant time but also reduces costs associated with shipping, materials, and labor.

Enhanced safety

Field service personnel can collect data from a safe distance, minimizing the need to access hazardous or hard-to-reach areas directly. This capability is particularly beneficial in locations where safety concerns are paramount.



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