Laser Tracking Services
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Reverse Engineer Large-scale Assets with Extreme Accuracy and Dimensional Integrity

As machinery evolves and becomes more efficient, so does the requirement for tighter tolerances. Laser tracking plays an important role during the manufacturing of these high-precision heavy-machinery components and in the inspection of large volume components during in-process machining.

TEAM’s laser tracking services provide large-scale 3D measurement technology to our customers for building and/or adjusting equipment or products with dimensional integrity. Our highly trained technicians use the latest laser alignment tools to gather data in relation to concentricity, ovality, dimensional changes, essential part locations, equipment interferences, and other key areas in need of inspection and maintenance of key assets.

How Does the Equipment Work?
Ideally suited for large equipment measurements, laser trackers are portable contact coordinate measurement machines that can be used indoors or outside.

The equipment TEAM technicians use are high-performance, high-value laser trackers, which allow users to maximize productivity and reduce inspection cycle times by 50% to 75%. They have the capability for real-time feedback of 3D spatial positioning which makes it ideal for alignment operations.

Through the use of software and the power of coordinate geometry, coordinate systems can be placed at any location and be represented in a multitude of outputs. In addition, the technology aligns with advanced software to fit measured points into numerous 3D entities such as planes, cylinders, spheres, cones, circles, and even 3D CAD data. Actual measurements (x, y, z coordinates) are then compared against nominal data provided from CAD models or drawings.

Benefits of Onsite Laser Tracking
Portability and Versatility – In the not so distant past, manufacturers were forced to perform tests on parts and components using stationary coordinate measurement machines (CMMs), which made it extremely difficult to measure large parts or parts still on the production machine. Unlike a traditional CMM, a laser tracker can be brought directly to the part because of its small and lightweight portability, giving the user optimum measurement versatility in confined spaces.

Continuous Measurement – The laser tracker can measure points continuously to capture large volumes of 3D coordinate data quickly and in real time. Data can be gathered on critical areas and the laser tracker can track moving machinery safely without human interference.

Highest Precision and Accuracy – Laser tracking is one of the most precise methods of measuring. It uses ADM (absolute distance measurement)/laser interferometer (IFM) to measure distance, which is repeatable to 10 microns. Using laser trackers, we eliminate human error in measurement and can achieve consistent accuracy and repeatability.

In-depth Diagnosis and Reporting – TEAM delivers reports that include a complete evaluation of the data gathered and 3D drawings produced by the laser tracking tools. We can diagnose equipment problems, and our expert engineering support team will recommend solutions based upon the data collected. Our diagnostic reports also aid in translating equipment inspection to process improvements with fast ROI.

TEAM can Help Your Company
• Reduce downtime with onsite readings that are three times faster than traditional methods
• Enable error-free 360° inspection of volumes up to 200’
• Achieve 0.001” repeatable accuracy regardless of an object’s geometry, size, or axis of rotation
• Ensure cost savings, thorough data capture, and simplified reporting

Why TEAM?
• Single supplier for asset integrity management solutions worldwide
• Company-wide commitment to safety
• Trained and certified expert technicians
• Complete range of maintenance and repair services
• Engineering, manufacturing and technical support
• World-class quality processes and systems

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