Digitally inspect as-built versus as-designed parts

You design in 3D, so why not inspect in 3D? Geomagic Qualify enables fast, accurate, easy-to-understand graphical comparisons between CAD models and as-built parts for first-article inspection, inline or shop-floor inspection, trend analysis, and in-depth assessment.

Inspect products in a fraction of the time
With Geomagic Qualify, inspection and approval can be completed in hours instead of weeks accelerating time to market, significantly reducing cost and giving you a measurable competitive advantage in the design and manufacturing process.

Obtain accurate, certified and tested results
Geomagic Qualify is certified by the PTB (Physikalisch-Technische Bundesanstalt) and meets the strict quality standards established by leading manufacturers like Fiat, General Motors, Honeywell and Pratt & Whitney.

Improve design efficiency
An intuitive user interface guides you through the entire align, compare, evaluate and report workflow. Graphical comparisons of “as designed” vs. “as manufactured” information aids the designer’s understanding of problems, enabling quicker turnaround time for design changes.

Sustain manufacturing quality in real time
Maintain quality control for in-line production and shop-floor inspection. Trend analysis enables statistical process control (SPC) on multiple samples, providing insights into deviation trends. Deviation color maps allow users to instantly identify problem areas that can be further analyzed.

Perform in-depth product and process assessment
Take advantage of Geomagic Qualify’s sophisticated analysis features including wall thickness, gap and flush, edge comparison, geometric dimensioning & tolerancing (GD&T), as well as 2D and 3D dimensioning. Quickly assess out-of-tolerance conditions to enable immediate correction to the manufacturing process.

Maximize inspection coverage
For multi-sensor metrology users who want to take advantage of the combined strengths of 3D scanners and hard probes, Geomagic Qualify streamlines workflow, improves alignment accuracy, and provides comprehensive inspection coverage. A single interface enables users to quickly capture a full 3D scan of the object and then use a hard probe to measure hard to reach areas, increase alignment accuracy or verify measurements of specific features or surfaces.

Collaborate on the inspection process
Generate detailed reports with numeric inspection data, multiple views, annotated user-defined views, notes and conclusions. Use Geomagic Review to share inspection results with engineers, suppliers, partners, contractors and customers at other physical locations.
Inspect Parts in 4 Easy Steps

1 Scan and Align.

Compatible with all popular 3D scanners, digitizers, and cameras. Import CAD models or use prior scans for comparison. Define features to align models using your method of choice (datums, features, reference point system, 3-2-1 or best fit).

2 Compare.

Graphical displays and annotation tools make first-order analysis very simple, while providing accurate results. Specify graphical annotations to accelerate correct go/no-go decisions. Facilitate problem clarification with automatic annotation features.

3 Evaluate.

Create dimensions of any type in 3D, cross-section and selected regions. Analyze sheet metal features, generate whisker plots of model cross-sections to assess springback, cutting errors and perform wall-thickness analysis. Create and evaluate GD&T callouts with full control over report displays. Access industry-specific analytical aids including airfoil and automotive analyses such as Gap & Flush.

4 Report.

Select from a variety of automatically generated reports to satisfy customer and regulatory requirements. Create reports in several formats including HTML, PDF and MS Word. Export CSV and Unicode data for use in other applications such as SPC.

Geomagic Qualify Add-Ons

Geomagic Blade provides specialized features for evaluating, testing and qualifying turbine blades, rotors, stators and impellers. Geomagic Blade was developed as an extension to Geomagic Qualify based on unique requirements from leaders in the turbine machinery industry such as Pratt & Whitney, Howmet, PCC Airfoils and Honeywell.

Geomagic CAD Importers allow direct, fast, and high quality import of CAD geometry (individual parts and assemblies) into Geomagic Qualify, eliminating the need for intermediate neutral files such as IGES or STEP.

For more information about Geomagic Qualify, please visit www.geomagic.com/qualify.

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