DIMENSIONAL/INSPECTION LABORATORY

Innovation. Integrity. Dependability.



In DTB's Dimensional Lab, our highly trained staff examines your products from a critical perspective. Dimensional Inspection assures product compliance with design specifications by assessing the geometric characteristics that can affect both the reliability and functionality of the part. Our facility provides the capability to non destructively inspect selected parts from a first article or production lot, to confirm conformance to drawing requirements.

Services we offer include

- Inspection per ASME Y14.5
- First Article Inspection
- CMM Inspection
- Part to CAD Inspections
- Gear & Spline Inspection using CMM

- Surface Roughness Properties
- Non Destructive Testing:
- Magnetic Particle
- Liquid Penetrant

www.dtb.com



ISO 9001:2015 and AS9100D Registered



A World of Engineering and Testing Under One Roof[™]

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DTB's 1,000 sq. ft. Temperature Controlled Dimensional Lab Equipment includes:

- Leitz Precision CMM
- Mitutoyo CMM
- FARO Arm
- Surface RoughnessOptical Comparator
- Comprehensive Inventory of: Gauge Pins, Thread Gauges, Micrometers etc.

Dimensional Inspection

We go the extra mile to ensure quality standards are interpreted properly for you. Our conventional open setup measuring equipment features 3 large surface plates, height gauges, calipers, micrometers, over 250 thread gauges, and over 1000 plug gauges. We also have an experienced staff of technicians and engineers with a minimum of 20 years experience. Our technicians are trained in geometric dimensioning and tolerancing.

CMM Inspection

We have 2 programmable Coordinate Measuring Machines (Leitz and Mitutoyo) and a 9ft. FARO Arm Edge to meet your first article or production inspection requirements. All are capable of confirming all Geometric Dimensional Tolerances per ASME Y14.5.

Non Contact Dimensional Inspection

We have an Optical Comparator with auto-edge detection and capabilities of 10X, 20X, and 50X magnifications. Capabilities include 2D measurement analysis and GD & T evaluations using surface or profile illumination.

Surface Roughness Analysis – Our surface roughness measuring station (Mahr-Federal) utilizes a motorized non-skidded stylus measuring probe to determine surface roughness parameters per ASME Y46.1.

Non Destructive Inspections (NDI)

- Liquid Penetrant DTB has the capability of performing liquid penetrant inspections to procedures based on ASTM E 1417.
- Magnetic Particle DTB has the capability of performing magnetic particle inspections to procedures based upon ASTM E 1444. We have the capacity to inspect parts up to 9.5 feet long. Additionally, DTB is equipped with portable magnetic particle inspection equipment.

First Article Inspection

DTB routinely performs First Article Testing for military and commercial suppliers. Prior to dimensional setup, a complete review of the drawing datum structure is performed to create an inspection plan. After the inspection is complete, the measured values are reviewed by our engineering staff.

Part to CAD Inspection

We scan your product's critical profiles using the latest measurement technology. We can confirm compliance with your tolerances and display the results with color coded printouts including: nominal part shape, tolerance bands, actual shape, and deviations.

Gear/Spline Inspection

DTB has the experience, training and approved CMM software to measure your Helical, Spur and Bevel Gears. Inspections typically include Pitch, Cumulative Pitch, Runout, Involute Profile, Lead and Measurement over/between wires. Measurements are in accordance with AGMA 2000 (390.03), ANSI B92.1, as well as DIN, ISO and JIS standards.

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