

Nanotech 250UPL^{v2} Objective

To characterize absolute machine performance on high purity aluminum in terms of both surface finish and form accuracy

Process

2-Axis Single Point Diamond Turning



Application Summary

Part Configuration

Material: Al (M3M BE-F)
Diameter: 75 mm
Radius: 250 mm
Surface Type: CX Sphere

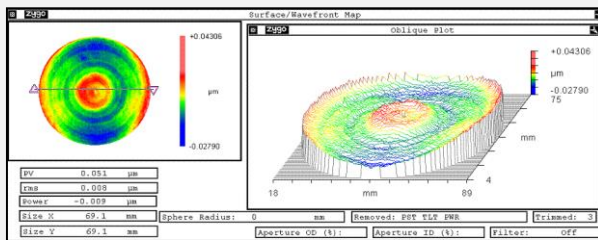
Tool Configuration

Radius: 0.75mm
Top Rake: 0 Degree

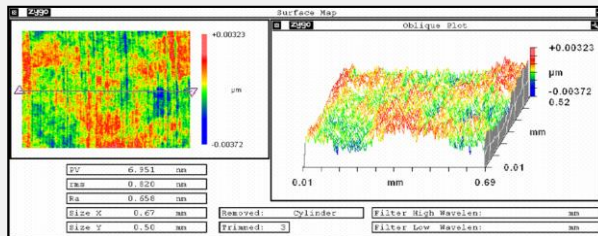
Machining Parameters

Spindle RPM: 2000
Finish Feedrate: 7.5 mm/min
Finish Depth of Cut: 2 μ m
Coolant: Odorless Mineral Spirits

Metrology Results



Form Accuracy: PV = 0.051 μ m



Surface Finish: Ra = 0.658 nm

