

Nanotech 100UPG^{v1} Objective

To characterize XZB wheel normal machine performance when grinding Silicon Carbide in terms of both surface finish and form accuracy

Process

XZB Wheel Normal Grinding

Optional Accessory Item

Motorized CNC Dresser with LVDT Probe

Application Summary

Part Configuration

Material: Silicon Carbide (SiC)

Diameter: 19 mm

Radius: Aspheric

Surface Type: Convex

Tool Configuration

Diameter Wheel: 20mm

Edge Radius: 0.1 mm

Machining Parameters

Work Spindle RPM: 100

Grind Spindle RPM: 20,000

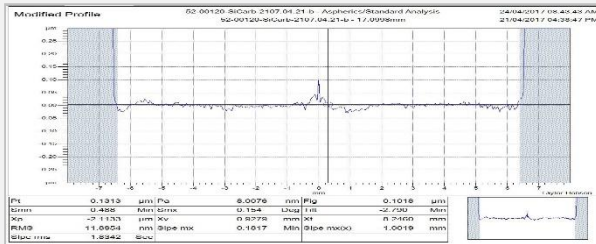
Finish Depth of Cut: 0.2 μ m

Finish Feedrate: 0.5 mm/min

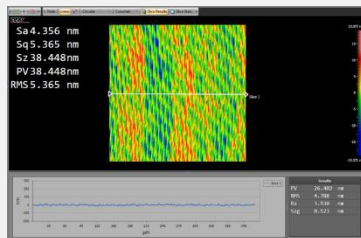
Flood Coolant: Temp Control



Metrology Results



Form Accuracy: PV = 0.131 μ m



Surface Finish: Ra = 4.356 nm

