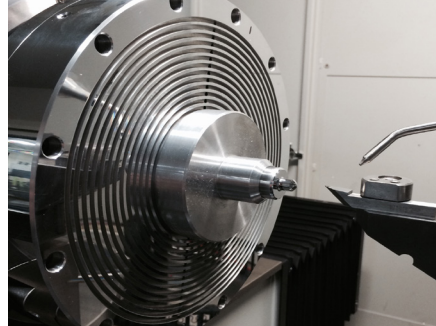




Nanoform® X

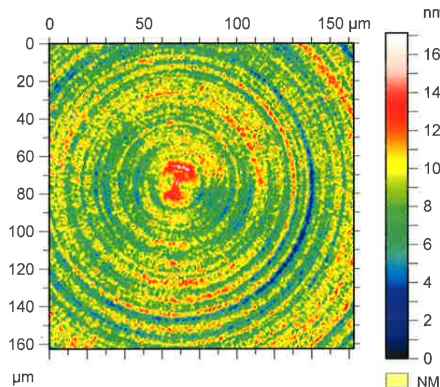


Setup photo



Part photo

Surface data



ISO 25178	
Height Parameters	
Sa	1.43 nm Arithmetic mean height
Sq	1.81 nm Root mean square height
Sz	17.1 nm Maximum height

Goal:

To demonstrate the surface finish and form accuracy results achievable using the Nanoform® X with HS150 work holding spindle on a steep slope aluminum asphere.

Process:

2 Axis diamond turning (X, Z)

Part Details:

- Outer diameter: 8 mm
- Spherical radius: 2.5 mm
- Maximum slope: 52 degrees
- Material: Aluminum

Process Details:

- Tool radius: 0.5 mm
- Spindle speed: 2,000 rpm
- Feed rate: 5 mm/minute
- Depth of cut: 2 µm
- Coolant: Odorless mineral spirits

Measurement methods:

- Finish:** Instrument: Taylor Hobson CCI
Sample area: 150 µm x 150 µm
- Form:** Instrument: Form Talysurf

Results:

- Surface finish: 1.43 nm Sa
- Form accuracy: 0.058 µm PV
0.013 µm RMS

Form data

