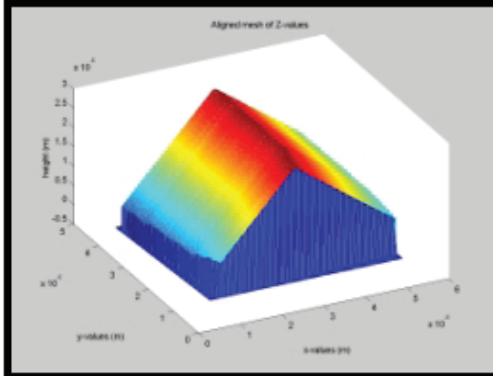


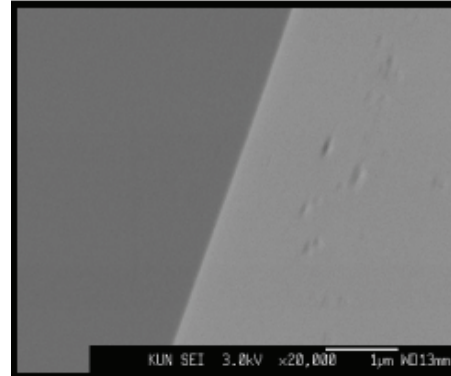
DIAMOND TOOL EDGE QUALITY

Here are examples of a cutting tool edge in single crystal diamond from Contour.

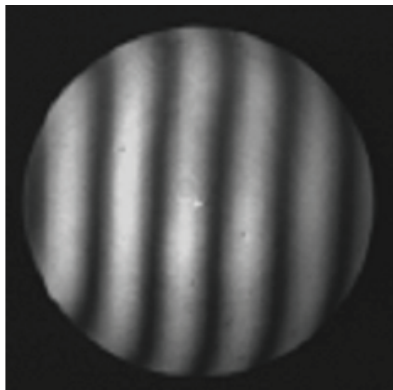
This image shows the edge at 20,000x magnification and provides a visual image of how sharp the cutting edge can be



However the real edge sharpness can only be seen under very high magnification available with a Scanning Electron.



The edge quality is also quite visible under interferometric imaging.



The cutting tool can fall under (2) classifications

1. Non-Controlled Edge Waviness

An edge that typically has a waviness from the true circle of around $2.0\mu\text{m}$ (0.00008"). Non-Controlled Edge Waviness tools have applications for: Rotary axis (R-Theta) or Tool Normal, Roughing for 2-axis and Flycutting

2. Controlled Edge Waviness

$1.0\mu\text{m}$ to $< 0.05\mu\text{m}$ (50 nm...or 0.000002")
Peak to Valley over Full Arc. Controlled waviness tools have applications for: 2-axis turning & multi-axis milling. These tools are supplied with a Tool Waviness Certificate which is also available on Contours exclusive CLUB CFT

Waviness Certificate

Tool Type	: C0.5mLFCr120° CS1422	
Tool Serial	: V47353	H1(Cutting Height)
Radius Size	: 0.497 mm	H5(Diamond Depth)
R(Rake)	: 0°	H6(Primary Depth)
Arc	: 120°	C1(Front Clearance)
Waviness	: 0.082 μm	C2(2nd Clearance)
		Shank Length

