

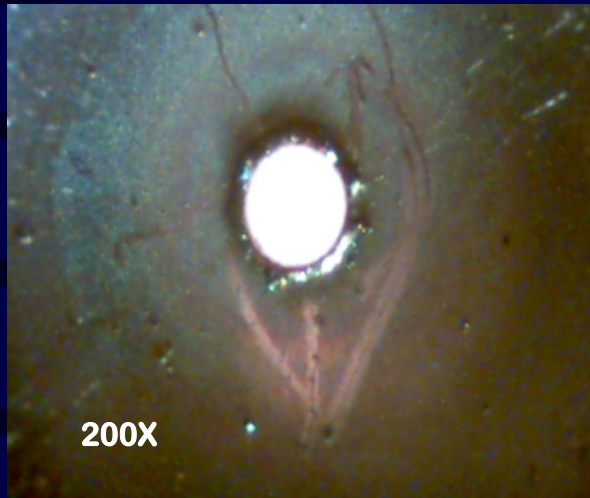


***Applied
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Surfaces Inc.***

Specialists

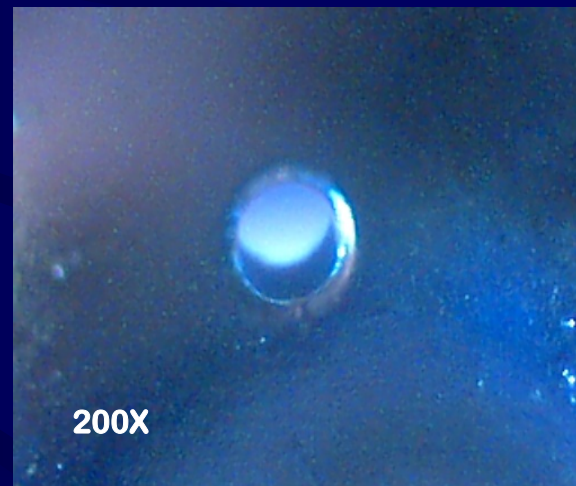
in

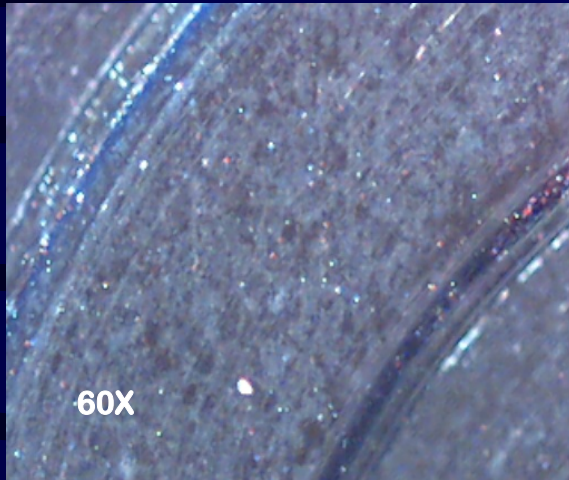
**Ultra High Purity (UHP)
Surface Finishing**



150 Micron Laser "drilled" orifice in
Nickel (as "drilled")

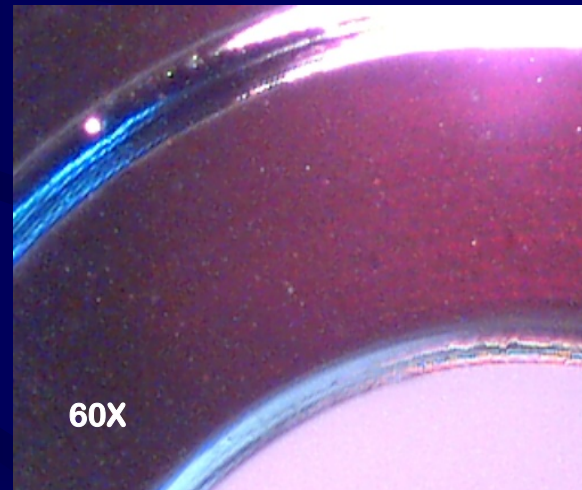
The same orifice after AES UHP
polishing

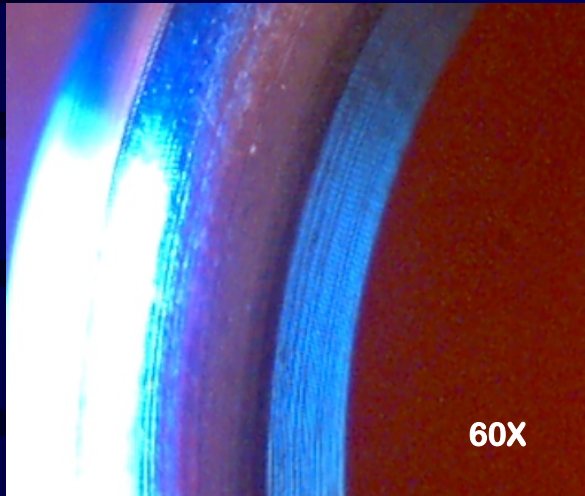




**“Finished” Competitor’s DISS Nickel seal
For CGA 630/732 Fittings**

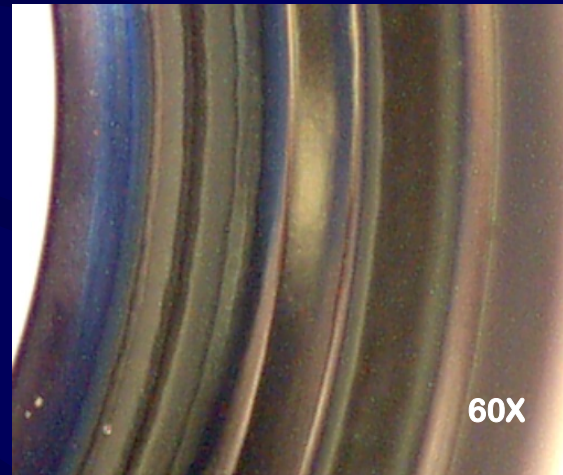
**The same seal after AES UHP
polishing**

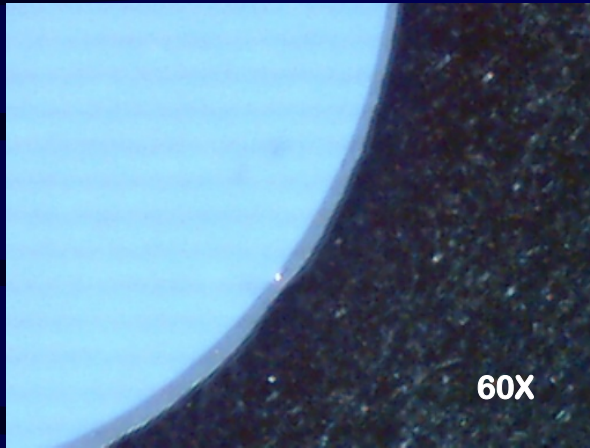




“As Machined” gland sealing bead 316L SS

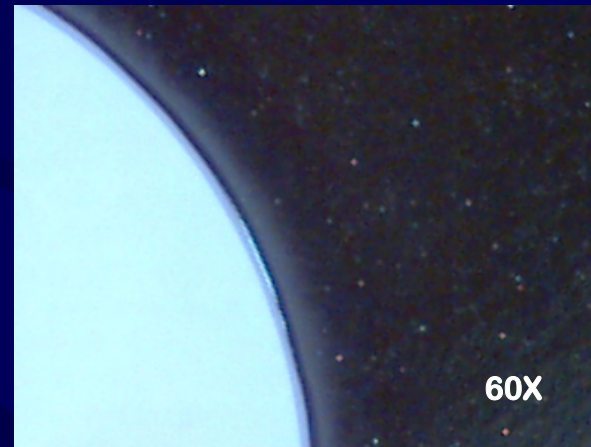
**The same bead after AES UHP
polishing (no mechanical lapping)**





Competitor's finished EP gasket

AES UHP Polishing



Surface Analysis 316L

- **Surface Finish – Ra 5 Ra max and 10 Ra max**
- **Electron Spectroscopy for Chemical Analysis (ESCA) - Cr/Fe - 2.0 and CrO/FeO - 3.0**
- **Auger Electron Spectroscopy (AES) - CrO Layer Thickness - > 20 Ang and > 1.0 Cr/Fe**
- **SEM analysis – defects at 3500X**



Surface Analysis Nickel

- **Surface Finish – Ra 5 Ra max and 10 Ra max**
- **Electron Spectroscopy for Chemical Analysis (ESCA) – Ni and Ni Oxides only**
- **Auger Electron Spectroscopy (AES) -
C Layer Thickness - < 5 Ang**
- **SEM analysis – defects at 3500X**



Quality Assurance & Control

Quality Control Program

- Applied Engineered Surfaces, Inc. has a Quality Program Designed to Ensure that Every Shipment of Product Meets or Exceeds All Customer Requirements
- AES manufactured millions of components during 2004/2005 with no customer quality issues or returns



Manufacturing Control

In Process Material Quality Inspection

- Automated, Continuous Process Control
- Operator Based Inspection and Control



Future Developments

- AES Filed Two Product Patents in 2004
- AES completed a new 12,000 sqft Facility Expansion during 2004



AES Goals

Highest Quality Products
and
Highest Customer Service

