

Troubleshooting Turning



Failure Mechanism Analysis and Corrective Actions

Problem

Edge Wear*

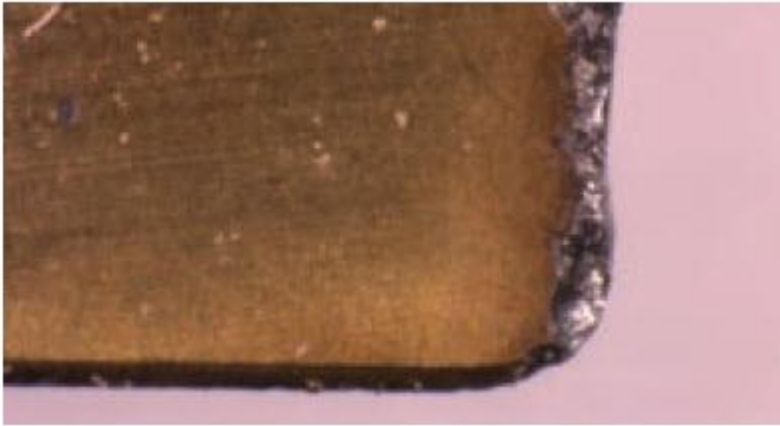


Corrective Action

- Increase feed rate
- Reduce speed (sfm)
- Use more wear-resistant grade
- Apply coated grade

Problem

Chipping



Corrective Action

- Utilize stronger grade
- Consider edge preparation
- Check rigidity of system
- Increase lead angle

Problem

Heat Deformation

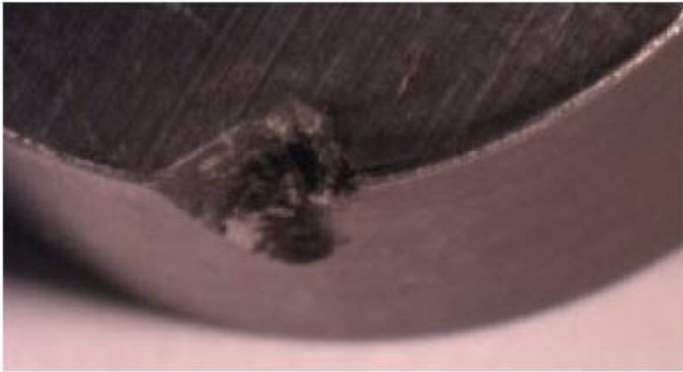


Corrective Action

- Reduce speed
- Reduce feed
- Reduce depth-of-cut (doc)
- Use grade with higher hot hardness

Problem

Depth-of-Cut Notching



Corrective Action

- Change lead angle
- Consider edge preparation
- Apply different grade

Problem

Thermal Cracking

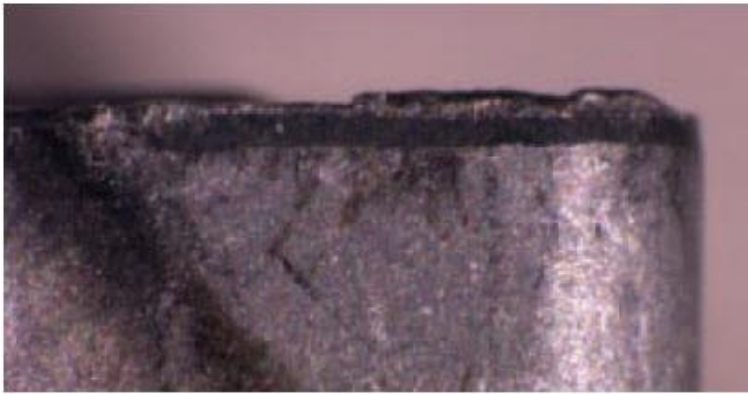


Corrective Action

- Properly apply coolant
- Reduce speed
- Reduce feed
- Apply coated grades

Problem

Built-Up Edge



Corrective Action

- Increase speed (sfm)
- Increase feed rate
- Apply coated grades or cermets
- Utilize coolant
- Edge prep (smaller hone)

Problem

Crater



Corrective Action

- Reduce feed rate
 - Reduce speed (sfm)
 - Apply coated grades or cermets
 - Utilize coolant
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Problem

Catastrophic Breakage



Corrective Action

- Utilize stronger insert geometry or grade
- Reduce feed rate
- Reduce depth-of-cut (doc)
- Check rigidity of system