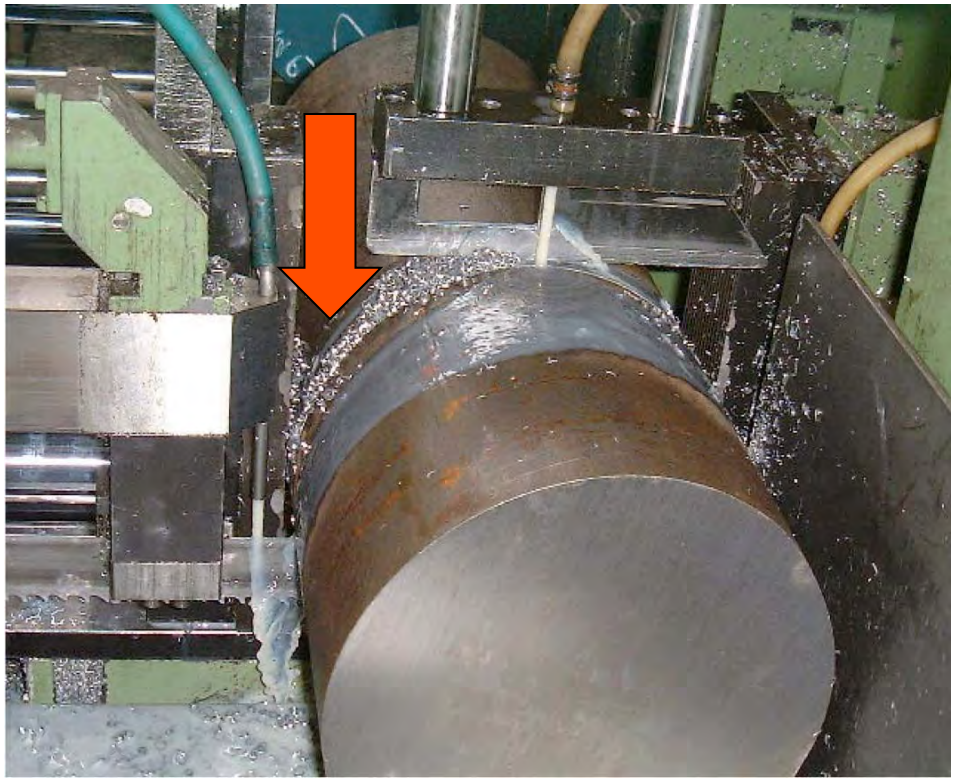
Failure Guide

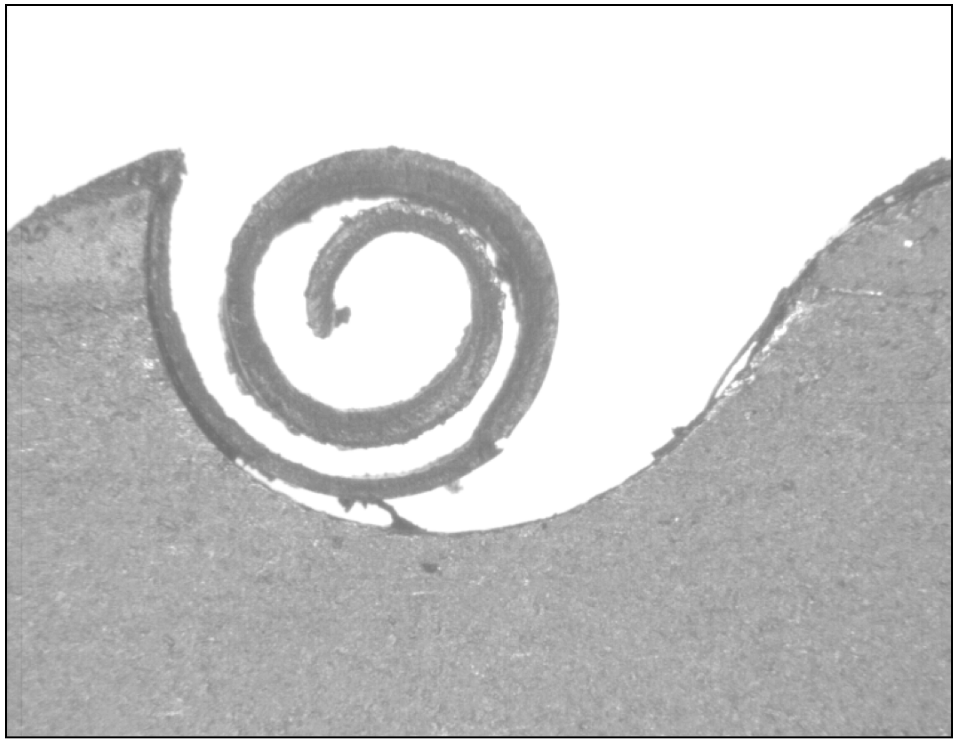
- Band inspection can determine the cause of failure.

Chip Brush



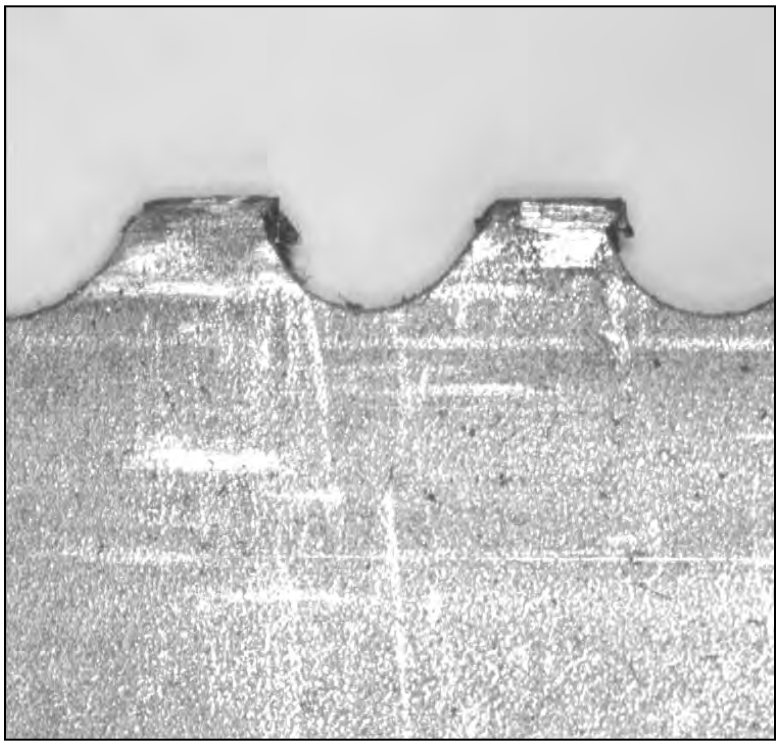
- Chips at the side of entrance of the band indicate that the chip-brush is not working properly.
- Check and correct as soon as possible
- This can cause:
  - tooth breakage
  - rapid tooth wear

Chip welded to tooth tip



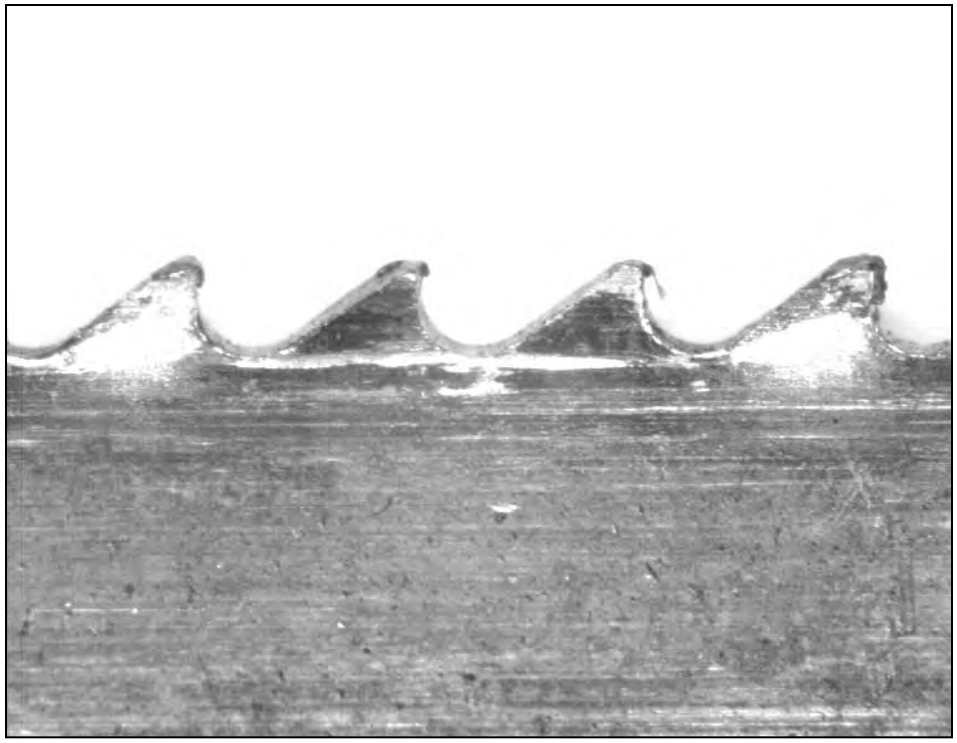
- Too high feed and/or speed for the material cut.
- Too fine TPI
- Failing chip brush
- Coolant failure
  - No coolant
  - Wrong type
  - Too low volume
  - Mis-directed

Tooth Stripping



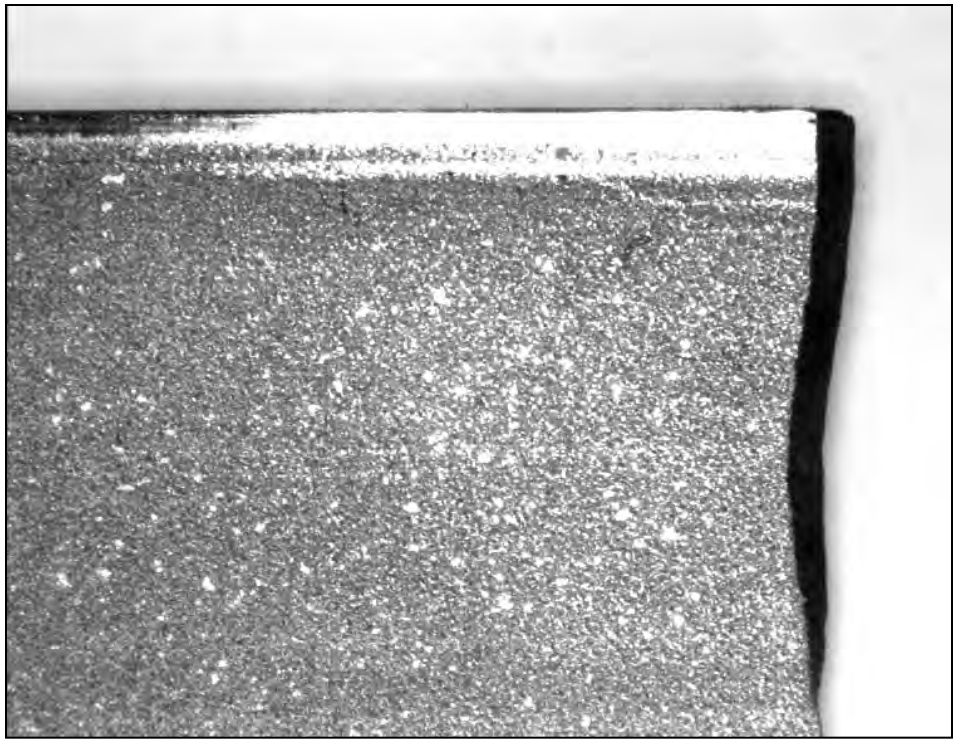
- Too fine TPI
- Excessive feed rate/ pressure
- Hard spot in the material
- Improper break-in
- Chip brush failure
- Handling damage

Wear on side of teeth



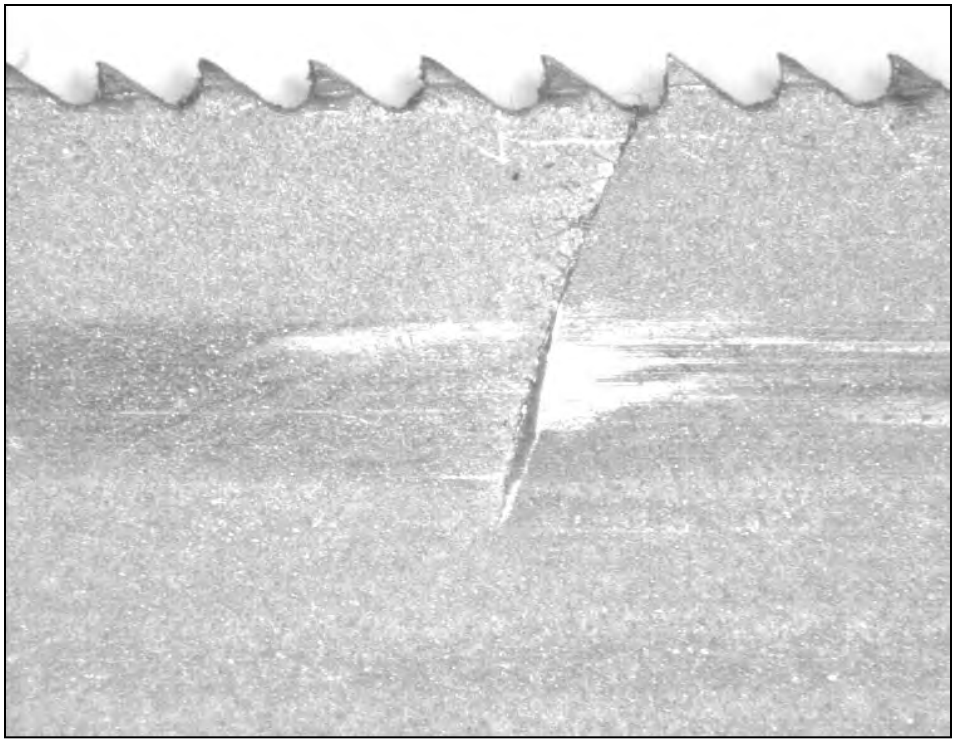
- Too high band speed
- Material too hard or abrasive
- Back-guide allows teeth to rub the guides
- Insufficient overall set; sides of teeth rub in the kerf
- Teeth hit some part of the machine, causing rapid tooth wear

Wear on back edge



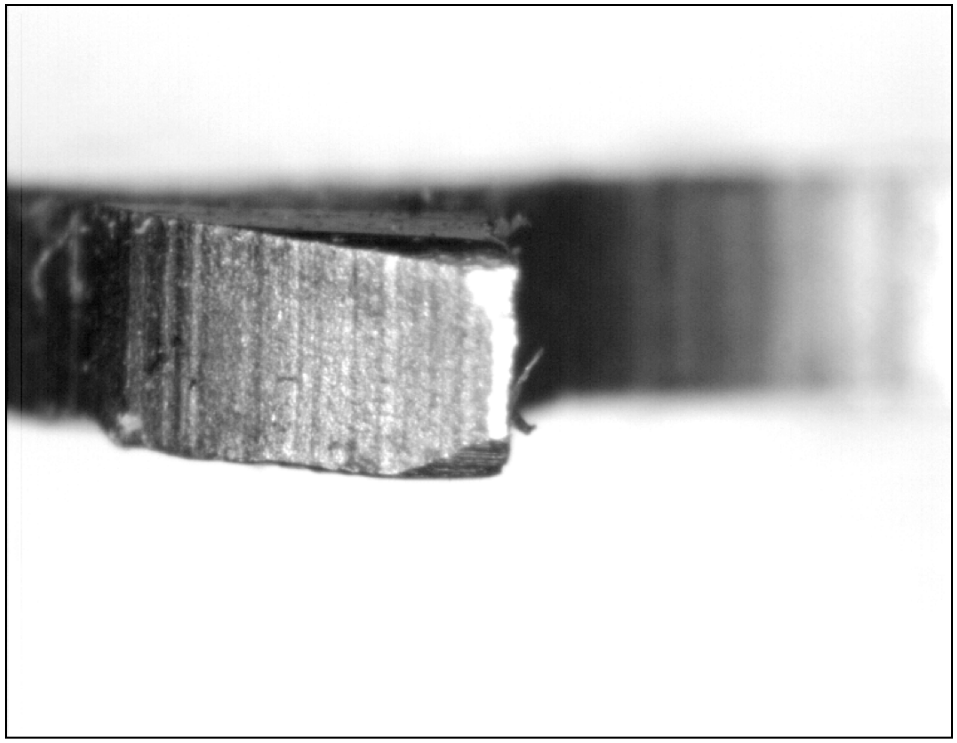
- Guide problem
  - Too tight
  - Worn or defective back guide
  - Guides out of alignment
  - Guides too wide apart
  - Chips build-up in guide, scoring the top of the band
- Band not tracking properly, band is wearing on the wheel-flange

Cracks from the gullet



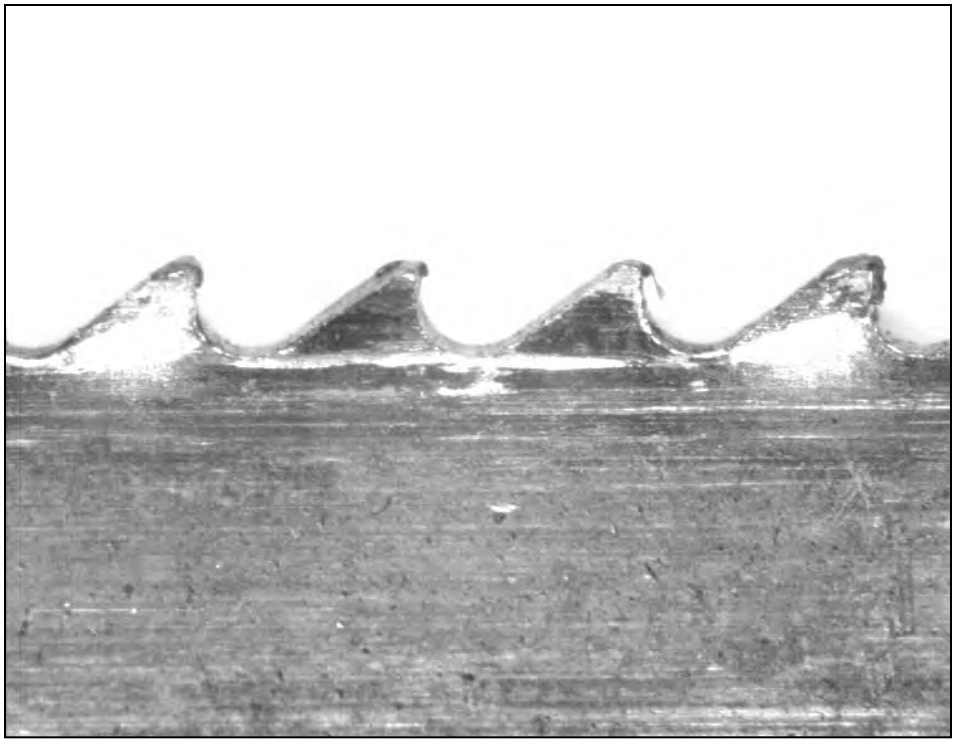
- Guide problem
  - Too tight
  - Worn or defective
  - Out of alignment
- Excessive band tension
- Excessive feed pressure

Chipped and damaged teeth



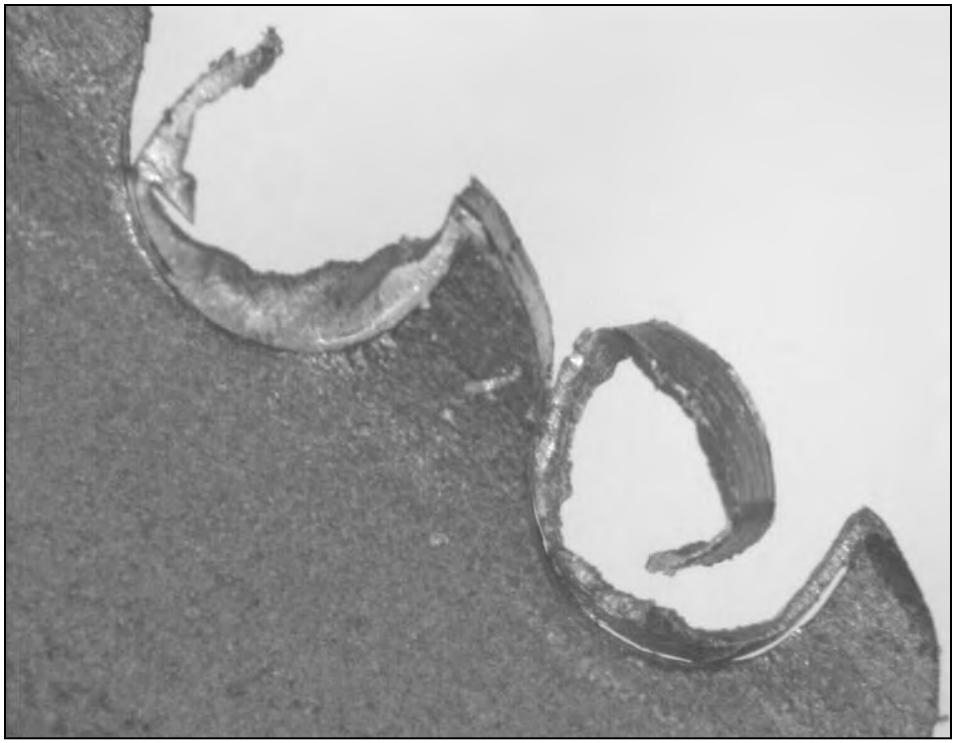
- Improper break-in procedure
- Handling damage
- Hard spot in material
- Work piece not secure
- Too high feed pressure
- Excessive feed rate

Heavy wear on tooth tips



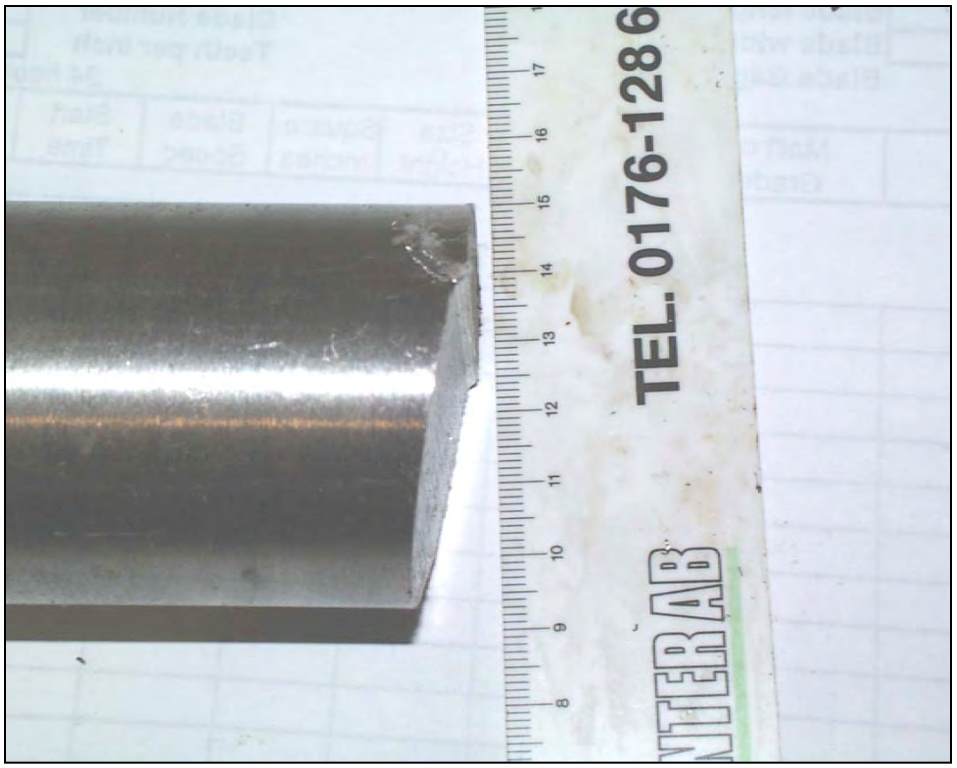
- Too fine TPI
- Too high band speed
- Too low feed rate, teeth rub instead of cut
- Improper break-in procedure
- Coolant problem
  - Wrong type
  - No or too low volume
  - Misdirected

Gullet loaded with chips



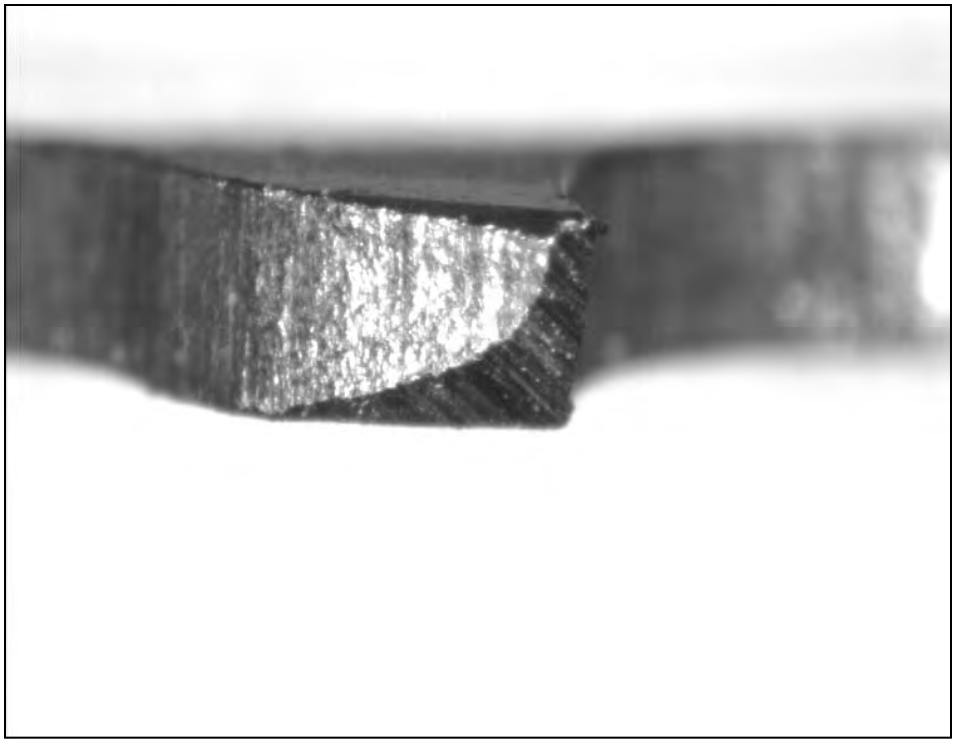
- Gullet capacity inadequate
  - Too fine tooth pitch
  - Too high feed rate
- Coolant problem
  - Wrong type
  - No or too low volume
  - Misdirected
- Chip brush failure

Crooked cutting



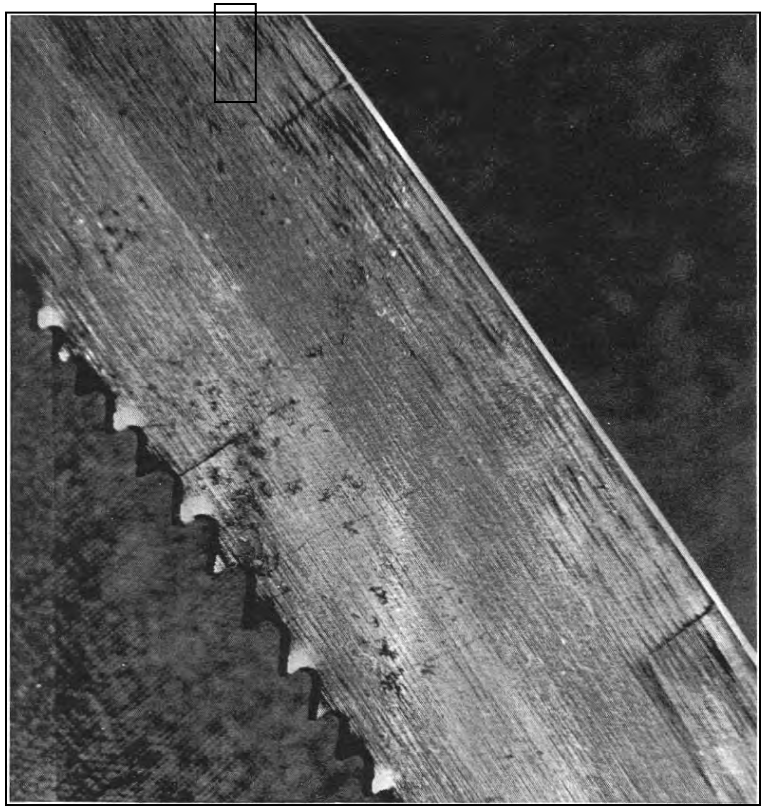
- Band tension too low
- Guide problem
  - Too far apart
  - Worn-out
  - Guide arm loose
  - Poorly adjusted
- Too high feed rate
- Too fine TPI
- Damaged teeth
- Band worn out

Vibration



- Improper break-in procedure
- Guide problem
  - Too far apart
  - Poorly adjusted
- Feed rate too high or low
- Band tension too low
- Work piece not secure
- Natural vibration - increase or decrease slightly

Fatigue cracks



- Too small wheel diameter
- Wheel mis-alignment
- Guide problem
  - Worn-out
  - Setting too wide
- Too fine TPI
- Too high feed-rate
- Too high band tension