

# Troubleshooting

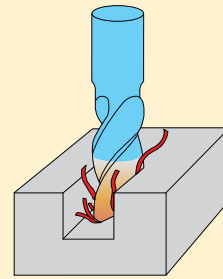
## 5. Chip congestion/cooling

Significant reduction in tool life, chipping on cutting edges, edge build-up of flutes through insufficient chip evacuation

- select milling cutters with internal cooling

### Alternative:

- peripheral cooling via GM 300 chuck
- increase volume flow
- adjust coolant flow
- apply compressed air cooling (according to tool and material)
- reduce feed rate
- modify cutting distribution
- select end mill with fewer flutes



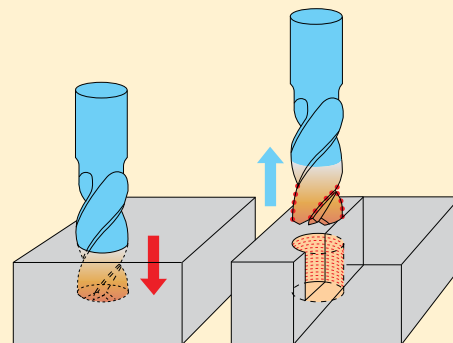
## 6. Pecking when drilling

Significant reduction in tool life as well as chipping of cutting edges through insufficient chip evacuation and thermal stresses

- select milling cutter with internal cooling with drilling depths  $> 0.5 \times D$  pecking in stages

### Alternative:

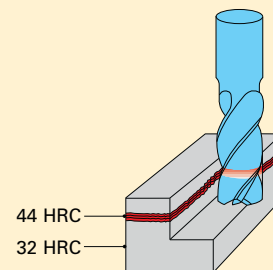
- peripheral cooling via GM 300 chuck
- increase volume flow
- adjust coolant flow
- reduce feed rate



## 7. Thermal influence on materials

Through welding or torch cutting, the material characteristics at the parting line do not correspond with the specified material class

- reduce cutting rates
- select tool for materials with a higher tensile strength



## 8. Entry in hardened materials

For entering materials over 44 HRC, reduce the feed rate IPT in accordance with the illustration on the right

