Common Troubleshooting Problems in Tool & Cutter Grinding

Problem	Things to Check	Suggested Correction
1. Corner breakdown of wheel	How wheel was dressed	Slow down dressing cycle
	Wheel too coarse	Use finer grit wheel
	Wheel too soft	Use harder grade wheel
	Worn machine bearings	Check for run-out
2. Burning of workpiece	Check coolant flow	Increase or direct coolant to point of contact
	Wheel too hard	Dress wheel faster or use softer wheel
	Work speed too slow	Increase work speed
	Infeed too fast	Reduce amount of stock removed per pass
3. Poor surface finish	Wheel too soft	Slow down dressing cycle or use harder grade wheel
	Wheel too coarse	Dress wheel finer or use finer grit wheel
	Machine vibration	Check worn bearings
	Dirty coolant	Filter coolant more thoroughly
4. Wheel loading or glazing	Wheel too hard	Test softer grade wheel
	Wheel too fine	Test coarser grit wheel
	Dirty coolant	Check coolant filter
	Poor wheel dressing	Dress more often and aggressively

Starting Recommendations Alloys & High Speed Steel

Operation	Wheel Type	Recommendation
Broaches		
Sharpening	**12**	**WA80K**
Backing Off	**6**	**WA60K**
Reamers		
Cylindrical	**1**	**WA60K**
Backing Off	**1 & 6**	**WA60J**
Taps		
Sharpening	**1**	**AZ60K**
Squaring End		**AZ60K**
Touch Up Flute		**AZ60J**
Boring Tools	**6**	**AZ60J**
Drills – Sharpening		
Offhand - Under 1/4"	**1**	**WA80J**
Offhand - 1/4"-1"	**1**	**WA60K**
Offhand - Over 1"	**1**	**WA46K**
Drills – Machine Sharpening		
Under 1/4" Diameter	**6**	**WA80J**
1/4"-1" Diameter	**6**	**WA60K**
Over 1" Diameter	**6**	**WA46K**
Pointing	**1**	**WA80K**
Hobs		
Tool & Cutter	**12**	**WA60J**
Milling Cutters		
Face & Side Mill	**1**	**AZ46K**
End Mills	**11**	**AZ60J**
Formed Cutters	**12**	**AZ60J**
Shell End Mills (L)	**6**	**AZ46J**
Shell End Mills (S)	**1**	**AZ60J**
Side Mills (S)	**1 & 6**	**AZ60J**
Carbide Grinding		
Straight Wheels	**1**	**GC80I**
Cup Wheels	**6 & 11**	**GC80I**