STELLRAM

Cause	Correction	Failure
Intermittent heating of the cutting edge. High V_C and high volume metal removal.	**A** Use a heat resistant grade increased TaC. **B** Use positive rake tools. **C** Increase nose radius. **D** Reduce in the following order: surface speed, feed or depth of cut. **E** Avoid use of coolant.	 **Thermal Cracking**
Cutting tool excessively brittle. Tool too hard for application conditions.	**A** Use a tougher grade. **B** Use negative rake angle inserts. **C** Increase nose radius. **D** Use increased edge land. **E** Increase cutting speed.	 **Chipping**
Grade not hard enough for application. High surface speed.	**A** Use a harder, more wear resistant grade. **B** Decrease surface speed. **C** Increase feed. **D** Use coolant.	 **Excessive Flank Wear**
Notching occurs at depth of cut line. Usually due to work hardened surface, scale or abrasion.	**A** Increase approach angle to maximum. **B** Increase nose radius for shallow cuts. **C** Reduce V_C surface speed and feed. **D** Vary the depth of cut.	 **Notching**
Surface speed too low for material being machined.	**A** Increase surface speed. **B** Use inserts that reduce friction. i.e. TiALN PVD Coated **C** Use high lubricity coolant.	 **Built-Up-Edge**
Heavy feed or high surface speed.	**A** Reduce surface speed. **B** Reduce feed. **C** Use a harder grade. **D** Use a more heat resistant grade.	 **Deformation**
Excessive heat and pressure causing chip to weld to rake angle.	**A** Use a harder grade. **B** Reduce surface speed. **C** Reduce feed. **D** Increase the rake angle.	 **Crater Wear**

N°	Failure type	
1	Flank wear	Physical
2	Chipping	
3	Partial fracture	
4	Crater wear	Chemical
5	Deformation	
6	Thermal Crack	
7	Built up edge	

