

Trouble / 情況	Occurrences / 原因	Countermeasures / 對策
Chipping 崩刃	Too high feed 進給量太大	Reduce feed 降低進給量
	Up milling 逆銑 (向上切削)	Change down milling 順銑 (向下切削)
	Sharp cutting edge 切削刃太鋒利	Honing at the cutting edge-chamfering or rounding if needed 修磨切削刃 - 必要時倒角或倒圓
	Chattering 震動	Check spindle speed down 向下調整主軸轉速
	Too much overhang 刀具突出量太長	Adjust to minimize overhang 將刀具突出量調整為最小
	Unfixed chucking of Endmill 銑刀未牢固夾緊	Check the precision of chuck and collet 調整夾治具精度
Wear 磨損	High Cutting speed 切削速度過高	Decrease cutting speed 減低切削速度
	Low feed 進給量太小	Increase feed 增加進給量
	Up milling 逆銑 (向上切削)	Down milling 順銑 (向下切削)
	High-hardened work piece 材質硬度過高	Choosing special coating endmill 選用特殊鍍膜的銑刀
Tool Breakage 刀具折斷	Too much cutting amount 切削量太大	Decrease cutting amount 減少切削量
	High cutting force 切削力過大	Feed down; spindle speed up 降低進給；提高轉速
	Too much overhang 刀具突出量太長	Adjust to minimize overhang 將刀具突出量調整為最小
Surface Roughness 表面粗糙度	Chattering 震動	Change the cutting condition 改變切削條件
	Generation of built-up edge 排屑不良	Increasing cutting speed & Feed rate or down milling 提昇切削速度 & 進給率或順銑
	high feed, low speed 高進給，低切削速度	Reduce feed & Increase speed 降低進給提高切削速度
Accuracy of finished work piece 加工精度	Incorrect Numbers of flute 刃數不夠	Replace more flutes Endmill 更換多刃銑刀
	Deflection of Tool 刀具偏差	Using big diameter tool & Minimize the overhang 使用大刀徑和突出量減至最小