

【Question】



I'm using a standard M8 × 1.25 tap to process a S25C steel material that has a through hole thickness of 15 mm with a flood coolant. I continue to have problems with chipping of the cutting edge and occasionally tap breakage. I've heard that a spiral point tap is best for my application to push the chips forward out of the bored hole. I've also been told it does not break easily, why is that? Is there anything to pay attention to or what to check?

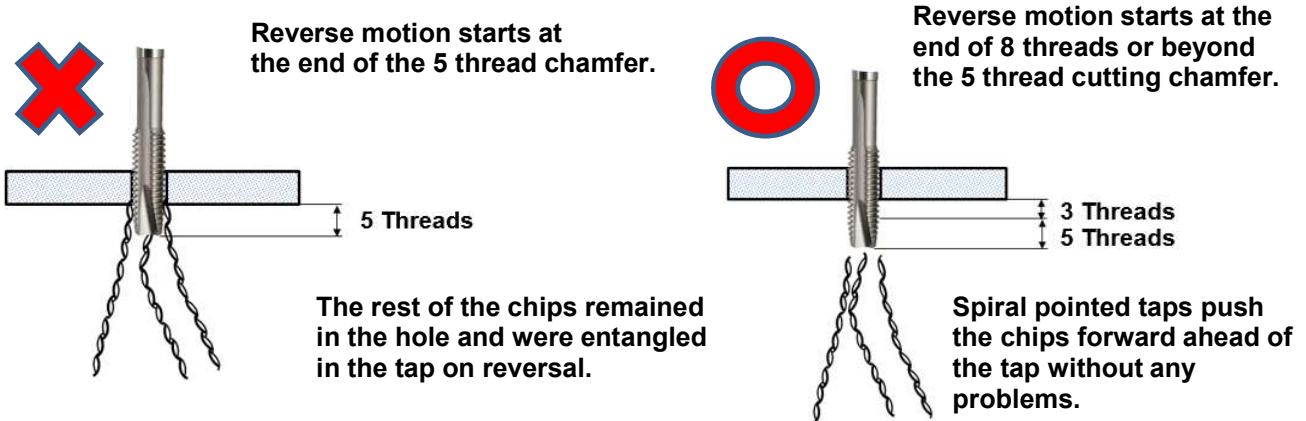
【Answer】

Spiral point taps rarely have cutting edge chipping or tool breakage problems. If you face such a problem while tapping with a spiral point tap, the chips are not ejecting smoothly from the bored hole. Please check the following:

- (A) Is the tap's cutting chamfer tapping beyond the end of the component?
- (B) Is there enough space at the end of the bored hole to eject the chips smoothly?



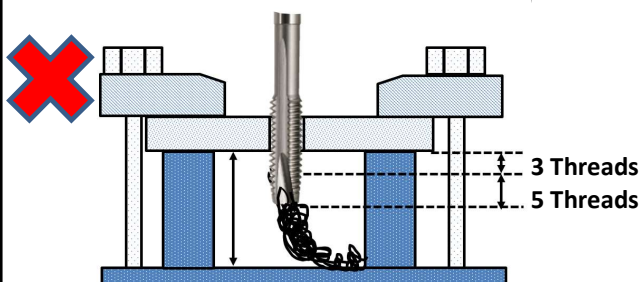
【Explanation】



A spiral point tap has a 5 thread cutting chamfer and must be fed completely through the work material to create an acceptable thread. If the chips are not completely separated from the work material, the chips get caught in the tap on the reverse rotation and cutting edge chipping occurs. Please try to lengthen the feed stroke by 3 additional threads to ensure the cutting chamfer is completely clear of the bored hole. Also, if the chips produced from a spiral point tap hit the bottom of the jig or you allow the chips to accumulate, you will not discharge additional chips very well and problems of cutting edge chipping and breakage will occur.



Not enough space for a smooth chip ejection.



Ejected chips reach the bottom of the work fixture and cannot eject smoothly.

Ejected chips are accumulated in the fixture and new chips can not eject smoothly.

