Bag full of wisdom when you are in trouble

No. 046
Removing the center point from a Spiral Fluted Tap

Question
I'm using an M6 X 1 Spiral Flute tap to produce a blind hole but the center point of the tap hits the bottom of the hole before reaching the required thread depth. I would like to remove the center point of the tap, but I'm not sure how much I can remove without damaging the tap.
Can you tell me how much I can grind off the end of the tap?

Answer
Normally, an M6 or smaller tap has a convex center point. The center point of the tap can be removed by grinding. However, do not grind any portion of the cutting chamfer.

Guide
If you look closely at the end of the tap, you can see it is divided into two parts. A convex center point ① and the cutting chamfer portion ②. Part ① may be removed by grinding, but be careful not to grind off any portion of the cutting chamfer ② or it will affect the tap's performance.

Advice
Spiral flute taps with a 2.5 thread chamfer are the most suitable for processing blind holes. Yamawa also offers spiral flute taps with a 1.5 cutting chamfer for blind hole applications where the thread length and the hole depth are within 2 to 3 threads in length. This type of hole will not accommodate a tap's center point. The YAMAWA spiral flute taps with a 1.5 cutting chamfer do not have a center point.

Spiral flute tap with a 1.5 thread cutting chamfer.

Spiral Fluted Tap 1.5P (SP 1.5P)
Dimension range M1.2 × 0.25~M16 × 1.5

Spiral tap for aluminum material 1.5P (AL-SP 1.5P)
Dimension range M2 × 0.4~M16 × 1.5