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Technology News
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Perfect solutions through:

Precise, even and fast finishing of taps and carbide drills in the SF machine

Obtaining an even finish when [deburring](#) taps and [rounding](#) cutting edges remains a major challenge, since protrusions such as the tooth crests of thread-cutting taps and the dead centers of twist drills, are considerably more rounded than the more deeply recessed areas. [OTEC's process development department](#) has carried out extensive tests using the [new SF machines](#) and can report the following results:

Rounding of carbide drills:

Carbide drills were to be rounded in such a way that the dead center does not receive too much finishing. By setting various parameters, the degree of rounding at the dead center could be controlled. In Fig. 1 it can be seen that the carbide drill shown on the right has received a great deal of rounding.



Fig. 1: Carbide drill

Rounding of thread taps:

Thread-cutting taps (with pronounced burring) were to be deburred using the medium HSC 1/300. It used to take 24 minutes to finish taps in a DF machine. In the SF 3, the vertically clamped taps were evenly deburred within 4 minutes. **The tooth crest is no more rounded than the tooth flanks.**

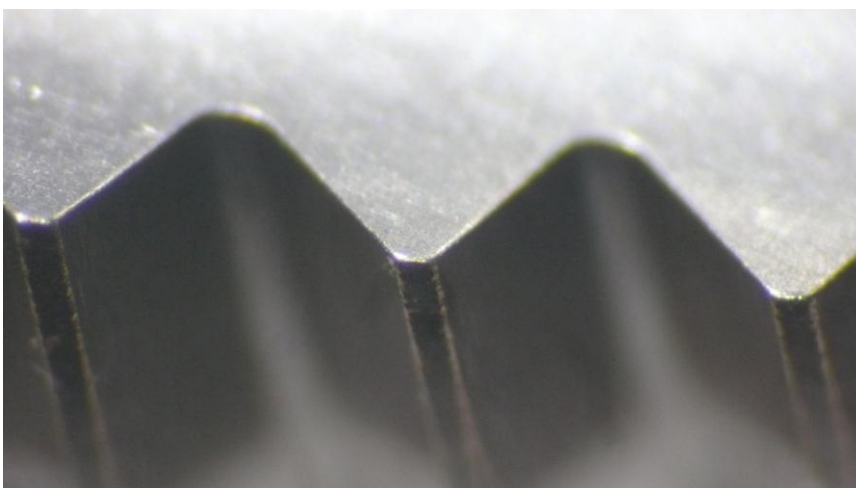


Fig. 2: Thread tap



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Rounding of thread mills:

Carbide thread-milling cutters were to be evenly rounded using the medium HSC 1/300. After just one minute, results could be seen in the form of a rounding of 15 μm and a very even finish, just as with the taps.

Summary: In comparison with the DF machine, the SF offers far greater scope for controlling the K factor and finishing the dead center with great precision, since there are many more parameters that can be defined. A much more even finish can also be achieved with taps and thread mills, whereby the SF is also perfect for finishing tools, amongst other things.

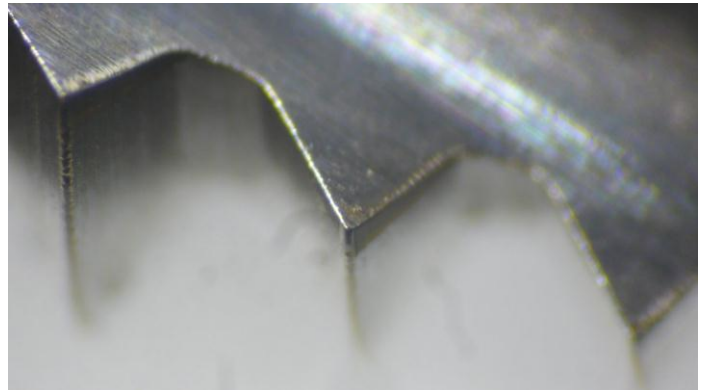


Fig. 3: Thread mill

Preview:

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