



NEW!

Burnishing and edge rounding of gear hobs in the SF machine

Gear hobs are used to make gears, cog wheels and other toothed components.

OTEC has already conducted a great many lab tests with gear hobs. So far, the main task has been to debur and simultaneously round the edges of these tools. These tools show a considerable variation in the amount of burring to be removed. This previously made it impossible to attain an even degree of edge rounding, so that we had only limited success with this type of tool.

Following new tests to debur gear hobs of the quality class AAA, which is the class with the highest degree of precision (2 μm tolerance from tooth to tooth), we have obtained the following results:



Tasks:

- Burnish and smoothen the crest, flanks and relief faces of the tooth. Initial roughness Ra 0.9 μm
- Remove grinding marks
- Round the edges to approx. 15 μm

Smoothing the surface of the tooth surfaces considerably improves the quality of the tool. This increases tool life and can enable the tool to generate better quality surfaces.

Process: Approx. 20 minutes in KXMA 24 (wet finishing)

Machine: SF 2 / 1050

Result:

- Ra 0.35 μm
- Grinding marks were removed
- Edge rounding of approx. 15 μm