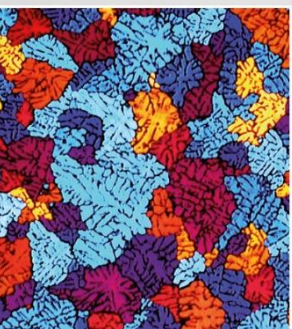


Application lab report

Cutting of a splined shaft made of
nitrided steel



QATM-Preparation method

Objective:

This report shows how a splined shaft made of nitrided steel (Figure 1) can be cut. The Qcut 400 A was used for the separation process. The exact parameters and further details as well as pictures can be found in the following report.

Cutting

		Cutting	
Device	Cut-off disc	Anti-corrosion coolant	Clamping tool
Qcut 400 A	FS-D-300A	Anti-corrosion coolant, Standart	- 2 x Guide bar with sliding carriage and v-gooove block Z1350001 - 2 x Universal vice mono 132 Z1350011 - 2 x Easy clamping base L Z2236011
Cutting method			
Automatic vertical cutting method (with Y-Axis)			
Parameters			
Feed speed	Pulse parameter	Cut-off disc rotational speed	
0,2 mm/s	Without Pulse	2750 RPM	
Notes			
- cutting time for one cut = approx. 3 minutes - consumption of the cutting disc per cut = 1 mm			

QATM-Preparation method



Figure 1: Overview of the machine and the sample.

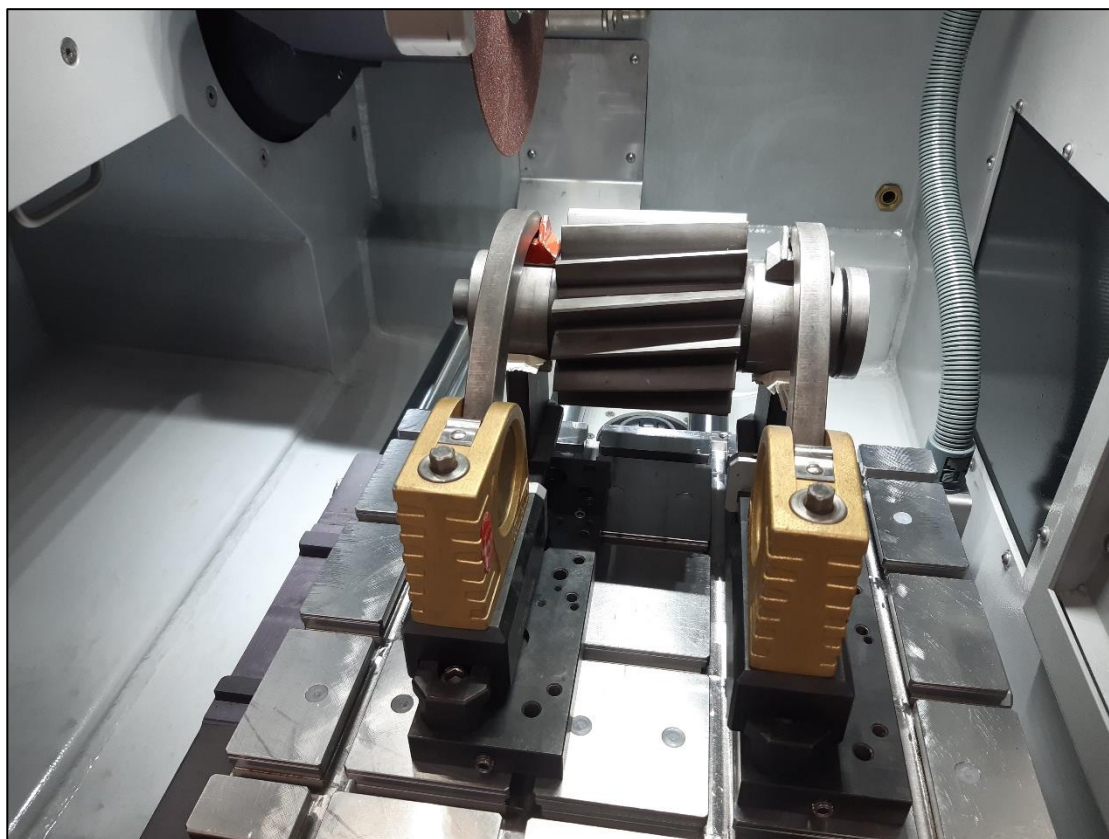


Figure 2: Overview of the clamping tool.

QATM-Preparation method

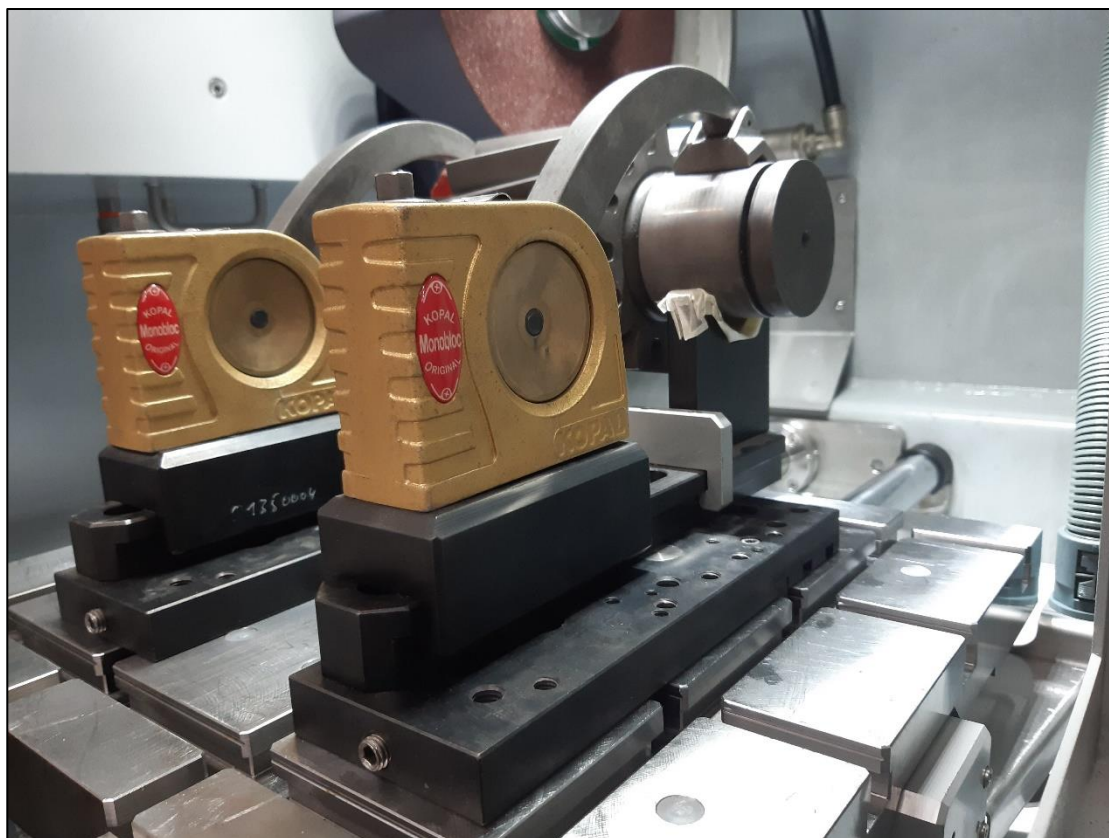


Figure 3: Overview of the clamping tool (duct tape was used as protection).

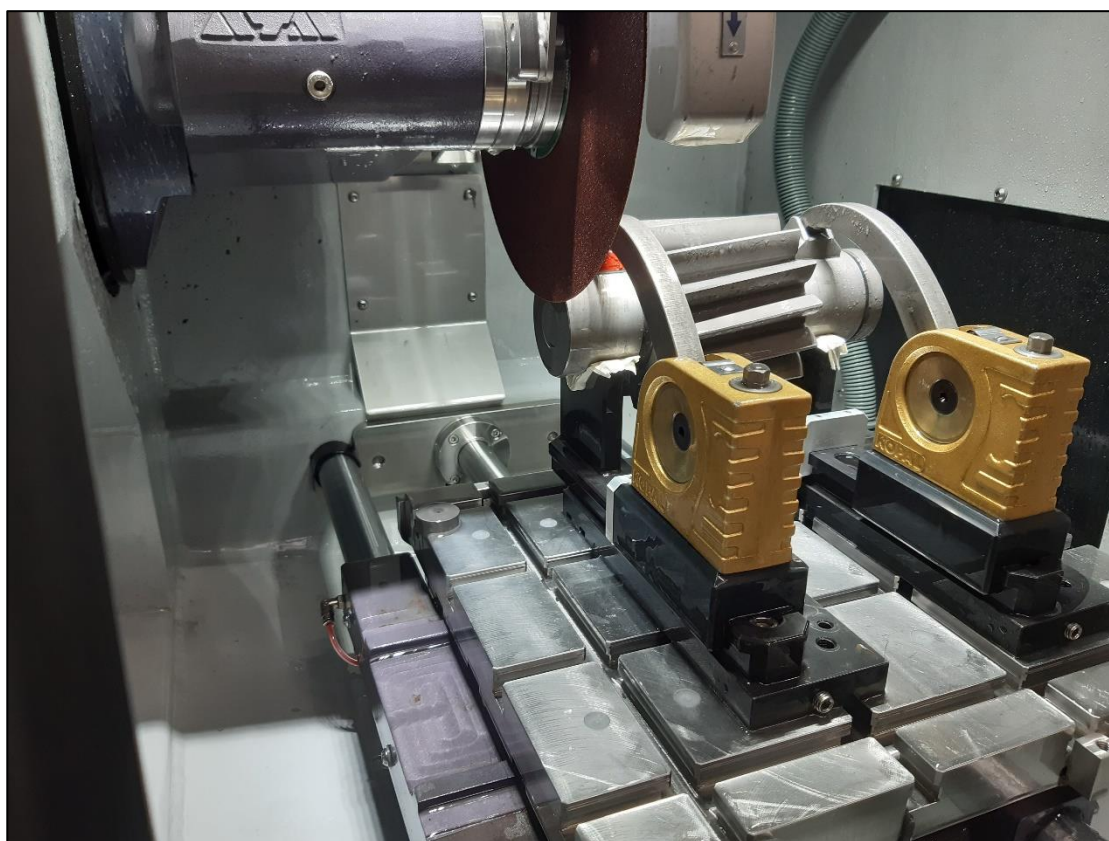


Figure 4: Sample after first cut.

QATM-Preparation method



Figure 5: Sample after first cut.



Figure 6: Sample after second cut.

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Figure 7: Sample after second cut.