

Wear Monitoring

Example of Use

Monitoring Tool Wear with our ToolScope - it works!

With the ToolScope different process parameters can be monitored. Amongst others also the tool wear. This example of use monitors the tool wear during a drilling process. Object of this monitoring process are brake discs which were processed in three steps with three different tools. The ToolScope offers different methods to identify the wear of a tool. The main methods are: average torque and vibration of the torque.



Wear Monitoring works

The following picture shows the course of wear for one of the three tools. The course of the average torque was chosen for the extent of wear on the tool.

You can easily recognise the change of the torque and therefore the wear behaviour between the two batches.

The second batch is of much harder material than the first batch. This is the reason why the force rises faster and the tool wears quicker. This is a typical phenomena when processing cast iron.

The ToolScope offers an easy way to define warning and alarm borders, which can be set individually by the operator. Therefore adjustments to customer specific needs such as the quality characteristics (quality of surface finish) are possible.

The change of batch can be forced manually by the operator. This enables the selection of the alarm borders. If no alarm borders are recognised for the running process, the ToolScope will relearn the actual process after the tool change automatically.

The main advantage of monitoring wear amongst others is a much better operating time of your machine tool, comparing the tools and the reduction of rejects.

