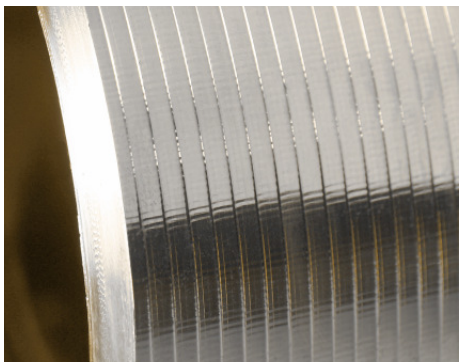
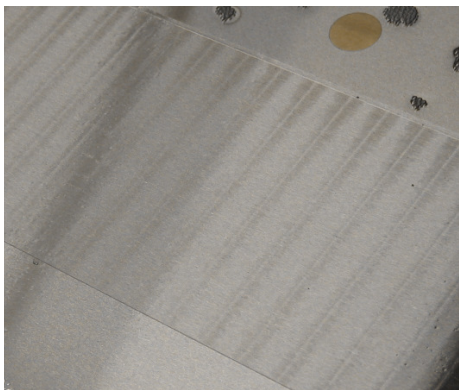
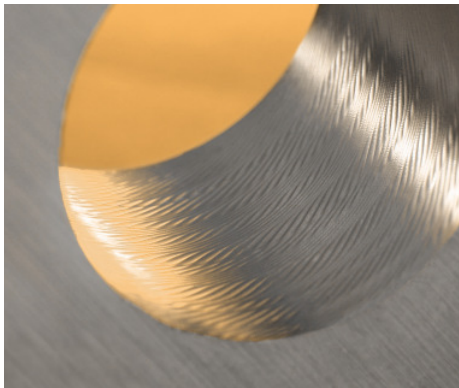


Your contact

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We look forward to take a look at your case of application without obligation and at short notice!



Process- and machine analyses in case of vibration problems at manufacturing companies

Initial situation

By knowledge, monitoring and consideration of the process and machine dynamic you can ensure an enduring availability and capability of your manufacturing plants with stable processes of high manufacturing accuracy.

Unexpected process vibrations (chatter) reduce the machining precision and performance of your machines, thereby reducing the cost effectiveness of your processes.

Our solution

With the aid of metrological and calculational machine analyses, planlauf GmbH supports manufacturing companies in machine evaluation, root cause analysis and elimination of static and dynamic problems.

Short-term measurements

In the case of occurring vibration problems we provide short-term measuring service. The day after a problem has occurred the examinations can already take place under minimum downtime of your machine. This can be realized by an innovative and patented measuring technology as well as efficient procedures in machine structure analysis.

We can offer...

... Determination of the causes of machining errors

If visible or measurable deviations of accuracy appear on a workpiece, it can be divided into geometric, thermal, static and dynamic caused errors.

The deviation amplitudes of e.g. dynamic caused errors vary from few nanometres in the case of grinding waviness to the tenth part of a millimetre in the case of milling chatter waviness.

Furthermore lifetime and wear problems can appear on the used tools.

The error analysis takes place during the machining process by means of temperature, force, displacement or acceleration measurements. The evaluation is carried out in time and frequency domain.

... Localization of possible weak-points of the machine structure

In addition to the process analysis an evaluation of the machine structure is performed.

- Static / quasi-static load-deformation-analysis for the determination of the rigidity of the complete system and the flexibility proportions of the components respectively.
- Dynamic flexibility measurements for the determination of structural resonance points.
- Modal analysis for the visualization of the displacements and deformations of machine devices existing at the resonance points.

... Identification of methods for the improvement of machine and process

Based on the measurements in combination with the latest possibilities of finite element- and multi-body simulation we offer substantiated proposals for the optimization of the machine characteristics and the improvement of process behavior.