PRÜFTECHNIK ServiceCenter

Shaft vibration and Motion analysis on machines and plants

- Analyse and evaluate vibration according to standards
- Spectral Orbit analysis as a valuable tool
- Improve balancing condition in the machine
- Increase plant availability and reliability
Orbit analysis is a very efficient tool for shaft vibration analysis

With **displacement analysis**, it is possible to check how high the bearing clearances are in terms of quantity, to track the shaft centerline and check they behave as intended under load changes.

The aim of **high resolution time wave analysis** is to check whether the rotating shaft has no movement constrains or whether there are direction dependent constraints or start up phenomena.

**Orbit analysis** makes it possible to record the vibration behavior of rotating shafts in their bearings. This can be used to identify imbalances, alignment errors, anisotropies, constraints, friction, oil whirl, oilwhip, etc.

**Runup and costdown analysis** with phase evaluation allow both critical frequency identification and the monitoring of signs for example for shaft cracks fault.

**Spectral analysis of shaft vibrations**, excitation and natural frequencies can be determined, assessed diagnostically and evaluated in terms of amplitude. Spectral orbit analysis allow depth diagnosis, e.g. to recognize the Morton effect.

With the help of **shaft vibration based field balancing** the best balancing qualities can be achieved, since measurement are made directly on the rotating cause of imbalances.