

Measuring real-time vibration behaviour during machining

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The complex machining process presents many challenges, one of which is controlling vibrations caused by the dynamic behaviour of the machine, the tool and the workpiece. New hardware developments are making it increasingly easy to measure this vibration and thus intervene effectively.

The German company Schunk is launching a sensor-integrated tool holder that can pick up the vibrations close to the tool and display them in real-time. Sensors in the holder measure accelerations while milling or drilling which are then sent wirelessly to an application on a tablet. The dashboard on the tablet not only shows this signal in real time, it also lets you set limit values, save the data and export it for further analysis. This brings the machining world one step closer to Industry 4.0, in which sensor data will play a major role in monitoring every facet of the process.

In the coming months, Sirris's Precision Manufacturing department will be exploring the potential of Schunk's iTendo² for, amongst other things, guaranteeing product quality and measuring and predicting tool wear. The device is currently available for HSK-63 recording. Schunk will expand its range of machine interfaces later this year.

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