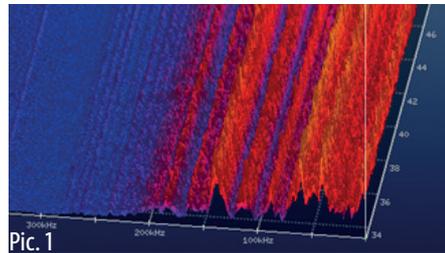
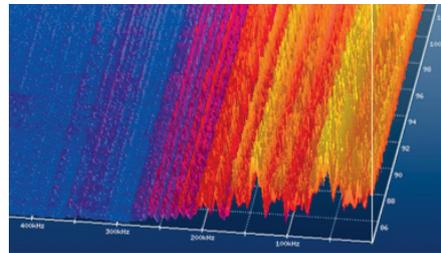


Quality Monitoring For Wire Machinery

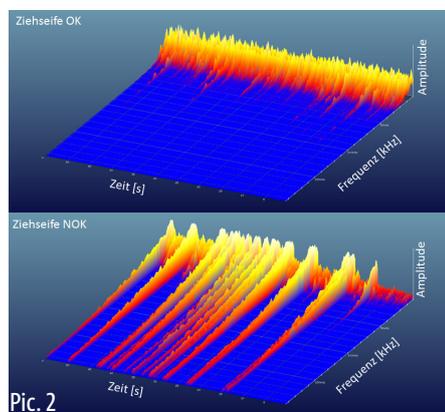


Drawing speed 6 m/s

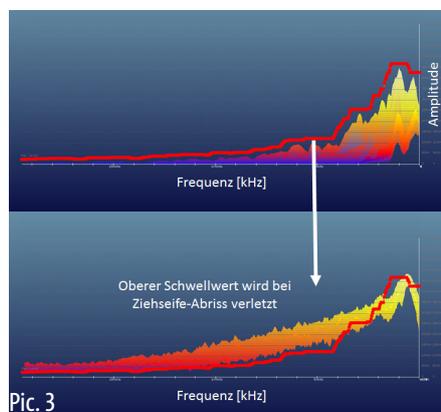


Drawing speed 12 m/s

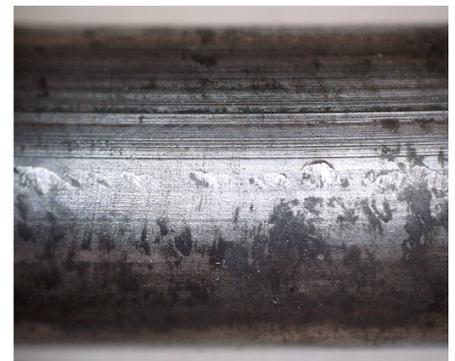
These two images show two different **drawing speeds**. They cause different HFIM-signals. If the drawing process is going too fast and product quality is decreasing, anomalies will show up in the HFIM-signals.



Comparison: The upper depiction shows a faultless wire drawing process, at the bottom is a faulty one due a lack of lubrication. In addition, scoring is visible in the increased frequency range.



Threshold value analysis: The image above shows the successful teach-in of a wire drawing process into the QASS System Optimizer4D. In the image below, defined tolerance limits are exceeded by a lack of lubrication.



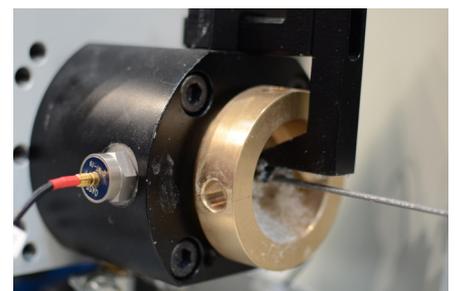
Wire with clearly visible die marks.

Proof of process quality

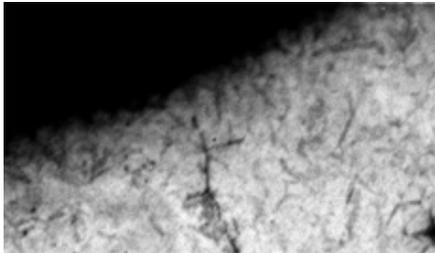
Optimizer4D is able to monitor complete wire drawing processes. If a ring has been running faultless, the quality is documented. This is possible by a depiction of the signals, on the basis of **HFIM (High-Frequency-Impulse-Measurement)**. Optimizer4D records these signals in real-time. Anomalies during the production process show up in the HFIM depiction.

The **speed of the production process** can be increased or optimized by Optimizer4D. The faster a process, the higher the risk of deviations. Optimizer4D detects deviations in real time and makes it possible to increase the speed of production processes up to the point of losing quality (Pic. 1).

Furthermore the measurement system is able to monitor various other process parameters, such as **scoring** (see Pic. 2) or **a lack of lubrication** (Pic. 2 and 3).



This is **QASS**

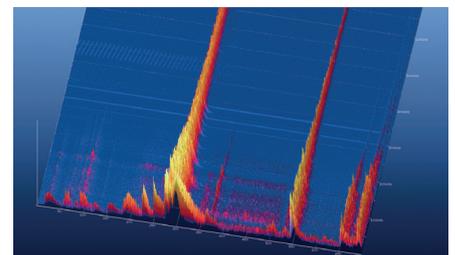


The Problem

During many production processes, enormous forces occur and even during carefully monitored production a certain percentage of products will be faulty. Cracks, missing components or many other types of faults are possible. Many production processes are nearly inaccessible for conventional test methods.

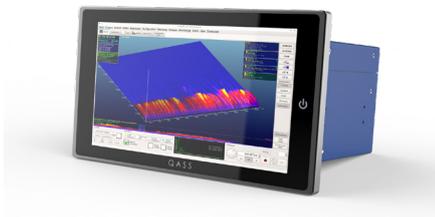
The Idea

QASS is the worldwide market leader for crack detection from hardened steel shafts. With a new structure-born analytical method, we are able to detect even the smallest cracks. The new method analyzes the structure-born emissions in 3D in addition to time and signal amplitude, it also examines frequencies.



The Solution

QASS Optimizer4D reliably recognizes cracks and anomalies of the process. Faulty components emit other types of signals than impeccable parts. The same applies to machine and tool. High-Frequency-Impulse-Measurement is the key to an extensive and automated process evaluation in real-time.



Contact

The everlasting innovative commitment: QASS is a medium sized company in the city of Wetter (Ruhr) in NRW in Germany and world leader for crack detection in straightening.

The innovative QASS measuring system makes it possible to optimize numerous production processes and to monitor work pieces and tools.

Companies that are using QASS measuring systems are: BMW, Bosch, Caterpillar, Chery Automotive, Daimler, FAW, Ford, Fiat, Galdabini, Getrag, Harley-Davidson, Hyundai, John Deere, Kokusai, MAE, MAN, Renault, Skoda, Volkswagen, Volvo, ZF and more.

Sales and service partners are located in China, South Korea, Japan, Mexico as well as North- and South America.

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