siTest

Using siVision Testing Mode: Quality testing through acoustic and vibration measurement in a production environment



siTest optimally monitors the quality of your products with respect to acoustics and vibration. The applications range from 100% testing in production to the determination of complex performance characteristics using samples.

Our proven system for industrial testing has now been further enhanced by the incorporation of our analysis software **siVision**. **siVision** visually displays all sound components perceived by the human ear. The testing system comprises an industrial PC, our **LivePad-X6** LAN front-end with 6 channels, ICP® supply, optional CAN bus interface and the **siVision** software

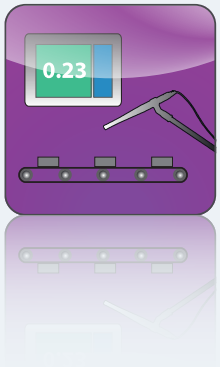
Sound analysis

To define and limit the critical sound which is to be tested, the system employs the **siVision** sound analysis. This sound analysis shows all the relevant sound components:

- Rattling, squeaking or singing sounds are displayed as modulation components in yellow.
- Narrow-band tonal components are shown as red vertical lines.
- The stochastic sound components over the entire frequency range, which lack any salient features, are shown as a green area.

Testing Mode: testing settings

- Thanks to separate filters for each sound component, the critical sound characteristic can be identified exactly.
- Each sound component (tones, modulations, noise) has its own limit curve. It can be created interactively and easily by the user.
- Every setting can easily be exported to the production system via USB flash drive or network.
- Designed for 24/7 usage without user interaction.



Applications

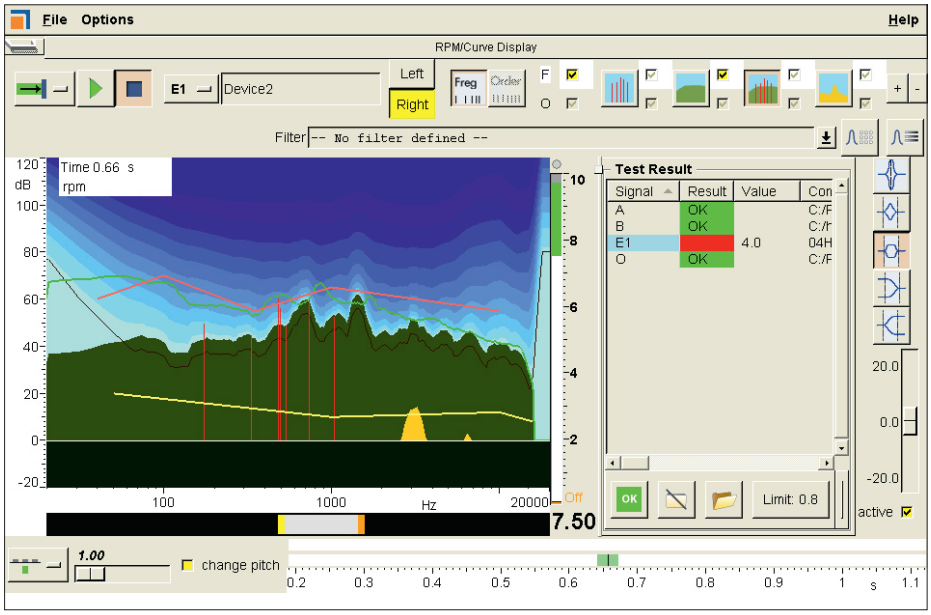
- Trobleshooting components and machines
- End of line testing in production environement
- Comparison and test of acoustic variants

Filters and Evaluation

- Each sound has its own filter set that can also be stored and loaded to other sounds
- 3 limit curves for can be defined by the user for tonal components, noise and modulations
- Automatic rating of various sounds through comparison with limit curves
- Additional analysis can be added

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Display

- If a visible aspect of the sound reaches its limit curve the sound is defined and marked as critical
- An additional Display shows OK or NOT OK for the tested object
- For each sound the judgment is stored and can be shown as just the actual result or as a list of all tested sounds so far

Reliable detection

siTest listens with an expert's ear. The detection rates therefore attain the level of trained staff in the assembly shop, without the fluctuations and drift in criteria which a subjective evaluation always entails.

Easy adaption of limit curves

When the tested object or sound changes, the limit curves for critical sound components can be easily adjusted at any time by the user.

Realistic noise identification

Compared to standard acoustic methods, **siTest** achieves considerably better differentiation in production testing. This is due to a realistic reproduction of the detection processes required in human hearing. **siVision**'s unique and realistic analysis is used for this purpose. This makes it possible to automate acoustic quality control in many areas of production control, where well-trained human ears were previously required.

Easy self-administration

siTest can be configured and serviced by the user via the **siVision** Testing Mode's intuitive interface. As a result, adjustments and extensions can be implemented in a very short time.

Presented by:

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