

Analyze Noise and Vibration measurements according to standards The new NVH software imc WAVE 2022

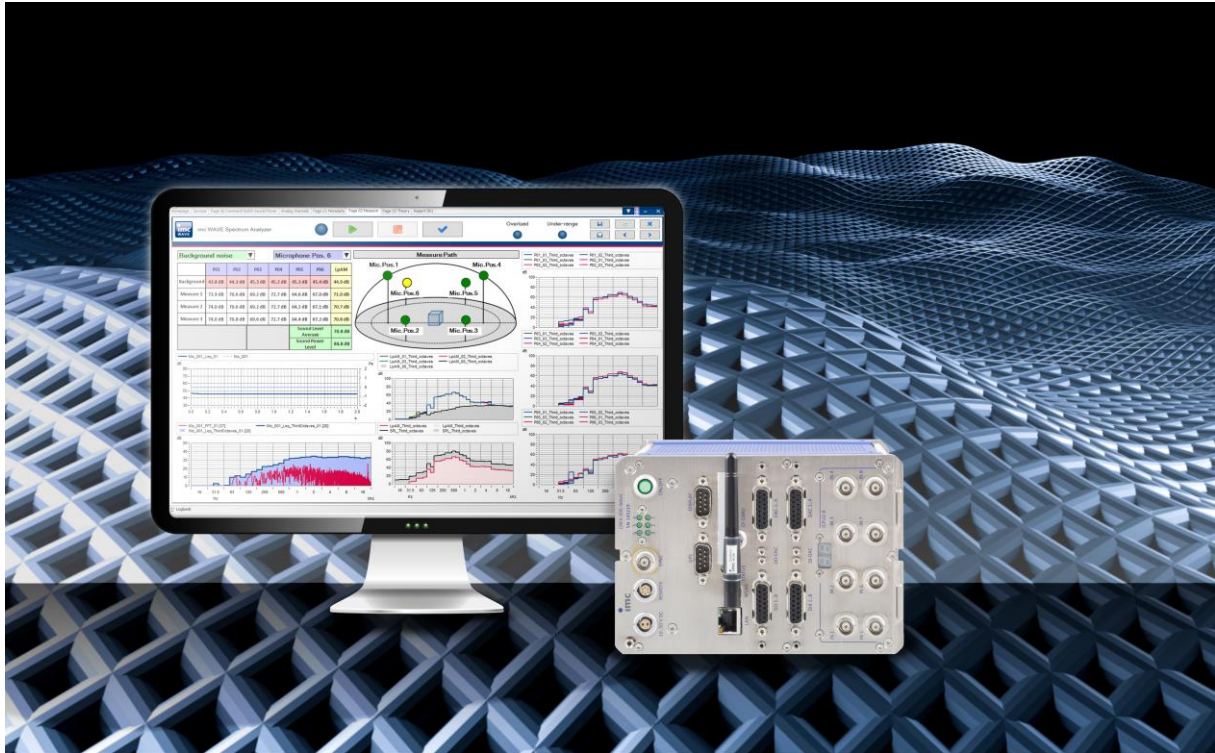


Fig: The new imc WAVE 2022 for NVH data analysis with an imc CRONOSflex data acquisition module.

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imc Test & Measurement presents imc WAVE 2022 - the powerful software for standard-compliant noise and vibration analysis with imc data acquisition systems. Consisting of four analyzers, it offers a comprehensive range of analysis functions for sound pressure and sound power measurement, structural analysis and the analysis of vibrations and of rotating machines. The software guides users from configuration to calibration and from measurement to professional reporting in just a few steps, reducing setup time and delivering reliable results for less experienced users in the field of NVH.

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Typical applications can be found in mobile or stationary setups: testing of prototypes, machine monitoring and test stands for development or end-of-line.

Microphone signals are processed simultaneously and sound level, sound pressure and sound power are determined online according to the relevant standards. The **imc WAVE noise** analyzer offers a comprehensive set of functions for this purpose, such as FFT and octave or third octave spectra as 2D or 3D diagrams (waterfall). Furthermore, microphones can be calibrated within the analyzer.

Vibrations in machine monitoring and diagnostics can be analyzed using **imc WAVE vibration**: It provides advanced evaluation tools for characteristic parameters according to established standards.

imc WAVE rotation evaluates data online during the operation of rotating machines. Based on speed calculations from pulse signals, it transforms signals to angle domain and displays the vibration process as an order spectrum.

imc WAVE structure determines structural dynamic problems in components: It calculates transmission functions and resonance frequencies in order to analyze the vibration behaviour, bending and torsional stiffness.

imc WAVE 2022 pursues a comprehensive approach in analyzing the origins, propagation paths and effects of noise or vibrations: In addition to sound and vibration signals, it also incorporates other physical measurement variables, such as speed, force, pressure, temperature or digital fieldbus data. imc WAVE 2022 works seamlessly with all imc data acquisition systems. Its components can also be integrated directly into the imc STUDIO measurement software platform to equip automated test benches with NVH functionality. Together with the microphones and hemispheres from GRAS Sound & Vibration, a complete NVH solution is provided.

imc Test & Measurement GmbH

imc Test & Measurement GmbH is a manufacturer and solution provider of productive test and measurement systems. Together with its customers from the fields of automotive engineering, mechanical engineering, railway, aviation and energy, imc implements metrological solutions for R&D, service and manufacturing. Every day customers use imc data acquisition devices, software solutions and test benches to validate prototypes, optimize products, monitor processes and gain knowledge from measurement data. The claim “productive testing” is consistently pursued by imc. The company offers its customers top technological performance along the entire measurement chain.

The core of the product portfolio consists of imc's modular data acquisition, control and automation systems, which are supplemented for customer applications by tailor-made sensor and telemetry systems. Using the imc software platform, users can quickly and easily implement comprehensive test and measurement processes, perform real-time analyses and automate test benches. With powerful software tools for the analysis and management of test and measurement data, as well as cloud services, imc sets trends in future technologies, such as smart data analysis, and brings measurement technology solutions to industry 4.0 and the Internet of Things (IoT).

As a solution provider, imc offers its customers an attractive range of services. The service includes project consulting, contract measurements, data evaluation, outsourcing of specialists and customer-specific software development through to system integration and test bench automation. Our team of engineers and natural scientists has extensive project experience and a high level of competence in solving test and measurement tasks.

Founded in Berlin in 1988, the company employs around 300 people. With its headquarters in Berlin, three further locations in Germany, worldwide offices in Europe (Austria, Switzerland, France, Spain, England, Hungary and the Netherlands), the USA and in Asia (China, South Korea) as well as a global partner network, imc customers can find direct contacts in more than 30 countries, Brazil, Canada, Mexico, etc. imc Test & Measurement is part of Axiometrix Solutions, a leading test solutions provider comprised of globally-recognized measurement brands.