



## How the Acoustic Camera and WaveCam video vibration analysis software can change the future of wind energy

**More efficient, safer and environmentally friendly wind farms: At this year's Husum Wind, gfai tech will present the latest developments in acoustic and structural analysis that contribute to this goal. These include the Acoustic Camera and the WaveCam vibration analysis software.**

Mighty wind turbines tower over sprawling fields, embodying progress towards a greener future. But how can we ensure that every cog, blade and component is working properly without taking the turbine out of service? Experts from gfai tech will be presenting groundbreaking technologies for noise and structural analysis at the leading trade fair for the German wind industry: the Acoustic Camera and the WaveCam vibration analysis software.

The Acoustic Camera from gfai tech is more than just an ordinary camera: With the help of the NoiseImage software, it transforms sound into colorful images. Such images can be generated for different noise frequencies. An optical camera captures the appropriate image or video of the wind turbine, while 48 microphones or more record the different sound emissions for acoustic mapping. This enables precise identification of noise sources and provides indications of faulty operating conditions. The data collected by the Acoustic Camera helps engineers and researchers optimize the construction and operation of wind turbines and extend the life of these turbines. The measurements on the wind turbines can be carried out easily, quickly and without time-consuming preparations during ongoing operation.

The acoustic findings obtained are of crucial importance for the planning of wind farms that aim to integrate with their surroundings. They make it possible to take into account any concerns of local residents and to reduce noise pollution to a minimum.

The vibration analysis software WaveCam, is an answer to the challenges of structural analysis. It enables comprehensive monitoring and early detection of potential wind turbine problems. This is because WaveCam





makes supposedly invisible vibrations visible to the human eye through motion magnification. In addition to the software, only video recordings of the wind turbine are required. Through visible vibrations, maintenance measures can be carried out in time and efficiency as well as energy production can be increased.

Visitors can experience the optical-acoustic solutions for noise and structure analysis at first hand at booth 3A28 in hall 3. The trade show will take place from September 12 to 15 at Husum.

#### **About gfai tech**

gfai tech GmbH is a German company specializing in innovative sound and vibration measurement and analysis solutions. We offer advanced Acoustic Cameras, comprehensive analysis software, and cutting-edge structural dynamics solutions. Our expertise spans various industries, helping customers achieve noise reduction, false detection, sound design improvement, and precise vibration monitoring. As a subsidiary of GFal e.V., we provide unique hardware, software, and customized customer solutions backed by global support.

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High resolution images can be provided upon request.

