

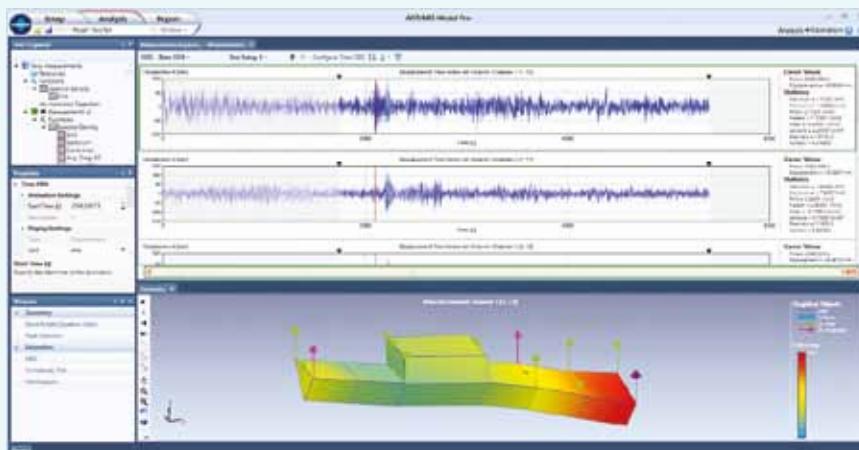
Operating Deflection Shapes Analysis with ARTeMIS Modal



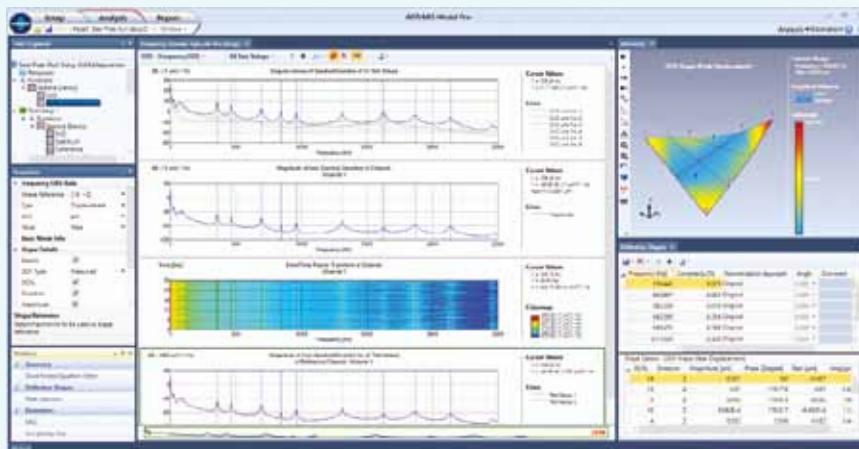
All versions of ARTeMIS Modal includes frequency as well as time domain Operating Deflection Shapes (ODS). These features allow you to study the overall vibration pattern either over a time segment or at a specific frequency.

ODS analysis is very beneficial in combination with Operational Modal Analysis as it determines and

visualizes the combination of the actual forcing functions acting on the structure and the dynamic behavior of the structure. Results can be shown as displacement, velocity or acceleration in SI or Imperial units. Decimation and various filters (low-pass, band-pass, band-stop and high-pass) can be applied to frequency limit the analysis.



Time Domain Operating
Deflection Shapes.



Frequency Domain
Operating Deflection
Shapes

BENEFITS OF THE SUPPORTED ALGORITHMS

Frequency Domain Operating Deflection Shapes (FODS):

- Frequency domain animation of all test setups.
- Shape estimation using Phased Assigned Spectra (PAS) with respect to a specific reference channel.
- User choice of measurement type and unit of the shape.
- User choice of shape output value. Peak, Peak-to-Peak, RMS and Power available.
- Pick a frequency to animate the shape on various spectral diagrams or time-frequency spectrograms.
- View the animation as a movie or step through the movement, frequency step by frequency step.
- Store shapes for specific frequencies in a Shapes list.

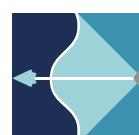
- The measurements can be signal processed using the same Signal Processing Control dialog as used by the modal analysis techniques.
- AVI and GIF movie creation of animations.

Time Domain Operating Deflection Shapes (TODS):

- Time domain animation test setup by test setup of all frequency content in the processed measurements.
- Animation can be made in displacements, velocities or accelerations. Integration filter can be configured by the user.
- Pick a segment in time to animate.
- View the animation as a movie or step through the movement, time step by time step.
- AVI movie creation of animations.

ARTeMIS Modal – ODS

More information about ARTeMIS Modal/ODS is available on our website:
www.svibs.com/products/ODS



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