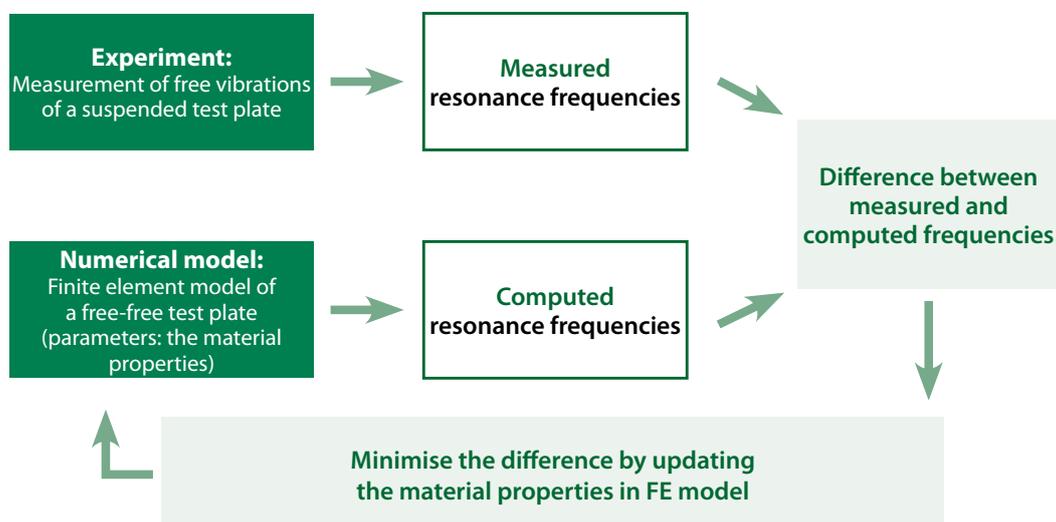




Resonalyser

Manual orthotropic elastic properties measurement on test plates

The Resonalyser procedure is based on the inverse method to measure the resonance frequencies of test plates by IET and to compare these measurements with computed values by accurate finite element models. The engineering constants in the finite element models are tuned in such a way that the computed vibration behavior matches the measured vibration behavior as close as possible. This method is fast and yields very accurate results.



Specifications

Signal conditioner box

The conditioner box contains a data acquisition card combined with a high pass filter (20 Hz), software adjustable low pass filters and amplifiers. The box is connected with a USB port. Input signals can be directly acquired from laser velocity meters, microphones or accelerometers or can be acquired from ICT devices.



Low mass micro accelerometer

A standard delivered micro accelerometer with a mass of 0.5 grams and with a built-in ICT preamplifier can be connected with the conditioner box through a BNC connector.



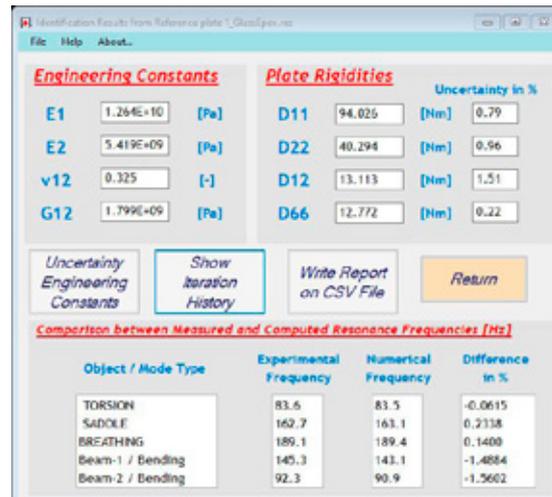
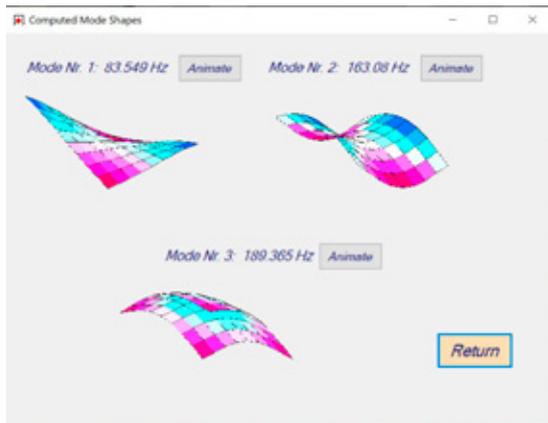
Adaptable suspension frame

An aluminum suspension frame can be mounted into different configurations, depending on the size of the test plates. The aluminum parts of the suspension frame and the signal conditioner box are conveniently stored in a portable flight case.



Resonalyser software (measurements and orthotropic material identification)

The Resonalyser software facilitates all measurements through user-friendly graphical interfaces. After completion of the measurements, the software computes automatically all the orthotropic engineering constants of the tested orthotropic material (Young's modulus E_1 , Young's modulus E_2 , Poisson's ratio ν_{12} and the in-plane shear modulus G_{12}) together with an uncertainty bound.



For more info: www.resonalyser.com