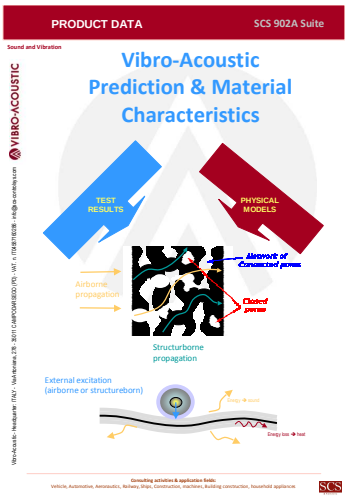
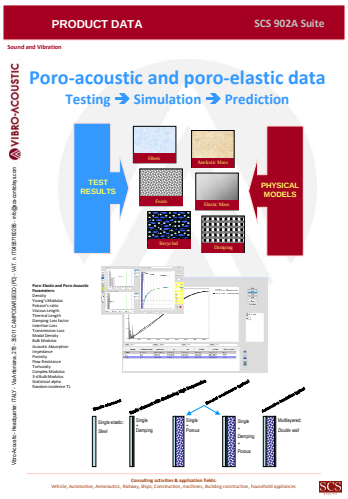
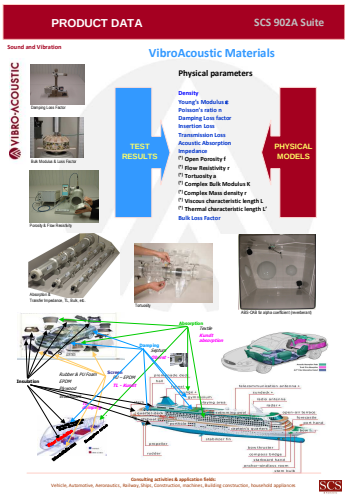
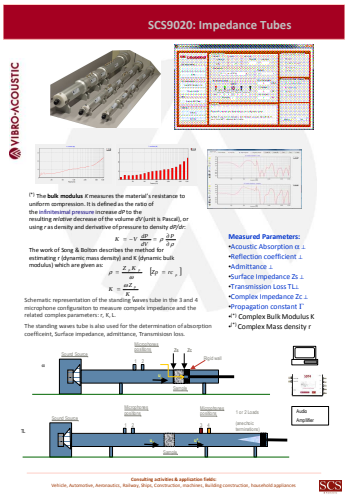
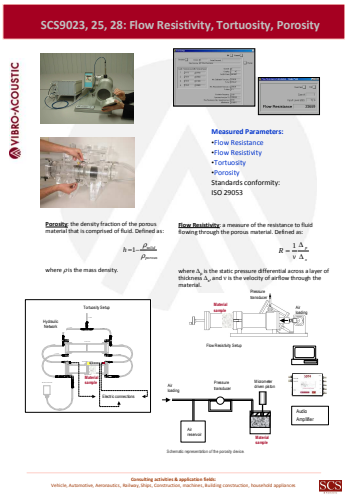
SCS-902A Test Suite

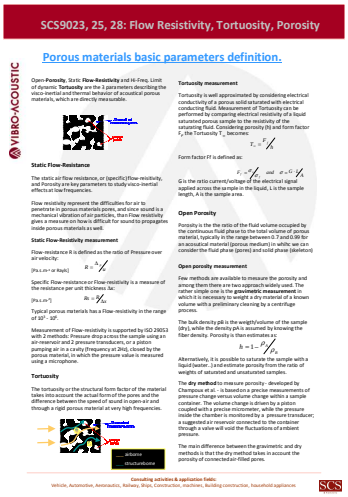












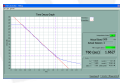
SCS-902A Test Suite

SCS9031: ABS-CAB α_{tot} Absorption Coefficient

VIBRO-ACOUSTIC

Measured Parameters:
- Random Incidence Sound absorption coefficient

Reverberationtime measurment using Impulse Response method and Schroeder theory for decay estimation

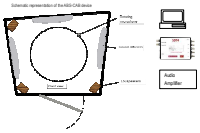


ABS-CAB α_{tot}: **Random alpha**: the random incidence absorption coefficient is (statistic alpha) measured on a scaled ISO 354 room (200 mc → 6 to 15 mc).

ABS-CAB is available in 3 size with lower frequency limits (315 Hz → 200 Hz – 1/3 octave bands). The theory applied as follows:

$$\overline{\alpha}_{tot} = 55.3 \cdot V \cdot \left(\frac{1}{T_{empty}\ mc} - \frac{1}{T_{occupied}\ mc} \right) - 4 \cdot V_a$$

Schematic representation of the ASCC-CAB device



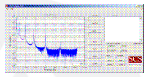
Consulting activities & application fields:
Vehicle, Automotive, Aeroacoustics, Railway, Ships, Construction, machines, Building construction, household appliances

SCS9021, 22: Damping Loss Factor

VIBRO-ACOUSTIC

Oberst device SCS9021

Response transducer: Proximitor, Laser, Accelerometer — Electrodynamic non-contact exciter



Measured Parameters:
- Damping Loss Factor
- Young Modulus (SCS9021)

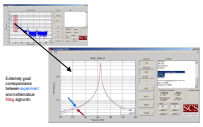
SAE device SCS9022

Instrumented hammer — Accelerometers

Resonance peaks of the beam plate are analysed with FFT analysis and damping coefficient can be derived from the Frequency Response Function FRF with 3 methods:

- Half power frequency band at –3dB points
- Circle fitting of resonance peaks (see figure at side)
- Exponential decay of synthesized SDOF

Alternatively, it is also implemented a most advanced method based on Rational Fractional Polynomial Syntheys.



Extremely good correspondence between experiment and mathematical fitting algorithr

Consulting activities & application fields:
Vehicle, Automotive, Aeroacoustics, Railway, Ships, Construction, machines, Building construction, household appliances

Auxiliary application

AVANT MEASUREMENT INSTRUMENTS

Cursors and Annotation
You can take advantage of.

Signal Calculation
This tool helps you to calculate signal using mathematical calculation like signal.

Graphical Program Interface

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