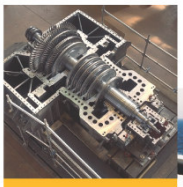
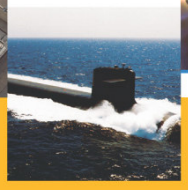
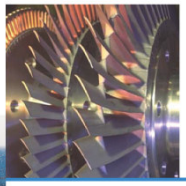





ACOUSTICAL HOLOGRAPHY

Technical data sheet Nr 111B-a

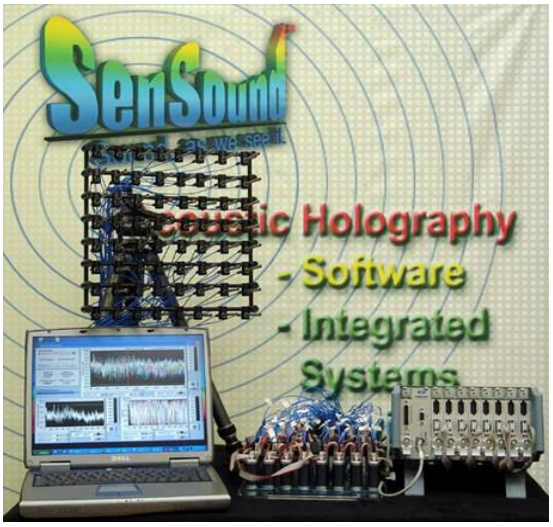
Purposes :

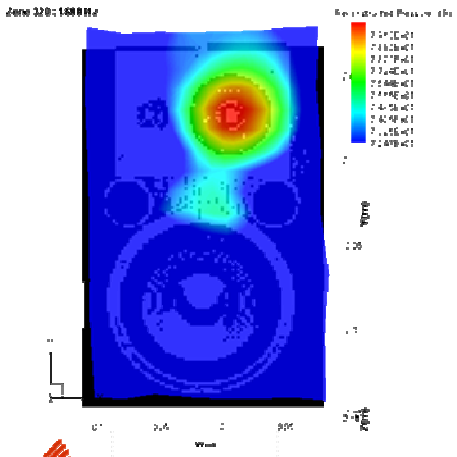
The acoustical holography is an analysis technology for :

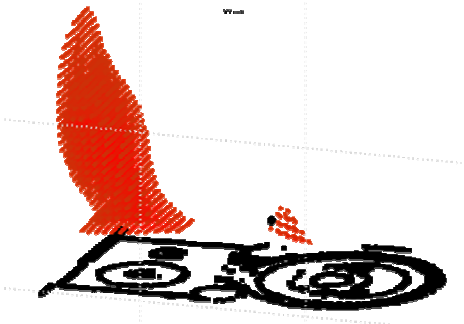
- **NOISE SOURCE IDENTIFICATION**
- **SOURCE CONTRIBUTION RANKING**
- **DETERMINATION OF THE ACOUSTIC POWER**

The acoustical holography contributes to :

- **UNDERSTAND THE SOUND GENERATION MECHANISMS.**
- **THE NOISE IMPACT SURVEY EMITTED BY THE STUDIED SOURCE (DIRECTIVITY)**







FUNCTIONALITIES :

- View the acoustic pressure, the intensity & the particle velocity.
- Map to exterior and interior 3D surfaces.
- Analyze stationary and non-stationary sources.
- Pinpoint noise sources and transmission paths.
- Display narrow band or fractional octave bands.
- Cover a very wide frequency range.
- Overlay data plots on 3D surface meshes or photos.
- Make 3D movies of frequency sweeps.
- Identify vibration modes responsible for sound.
- Track orders on non-stationary sources.
- Rank panel or source contributions.

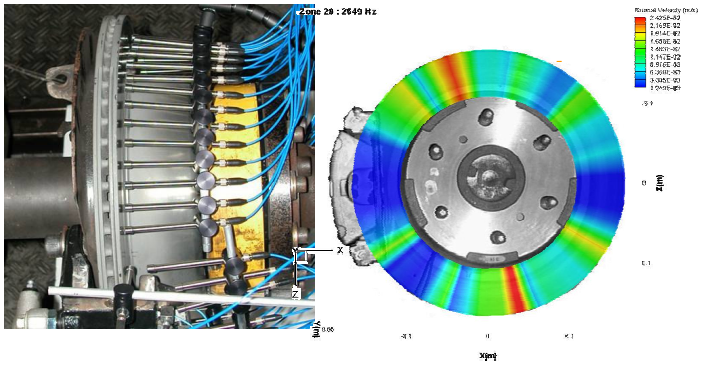
dB Vib CONSULTING

Montée de Malissol – 38200 Vienne – France – Tél : +33 (0)4 74 16 19 90 – Fax : +33 (0)4 74 16 19 99
www.dbvib.com

VIBRATION MODE ANALYSIS

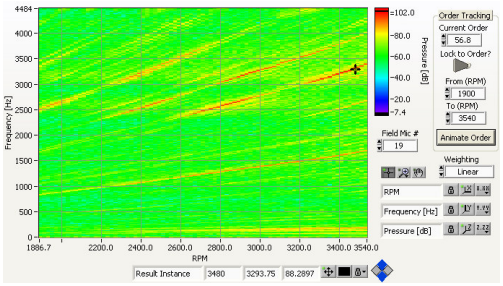
This method allows to go back to the vibration modes responsible for the emitted noise.

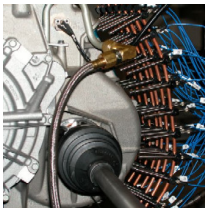
Example : brake disc

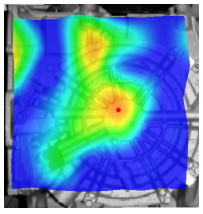


NON-STATIONARY ANALYSIS

Visualization of the order tracking mapping.







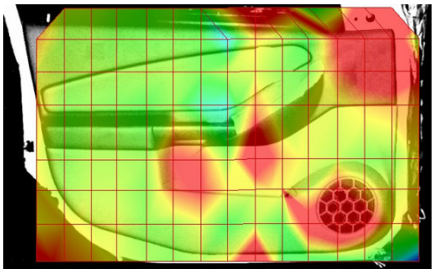
Example : gearbox

APPROACH

- Capture the sound pressure in the near field.
- Create a mathematical 3D model of all sound values on the source surface (HELS method).
- Project and visualize how sound travels through space & time.
- Visualize and compare the different indicators (velocity, acoustic pressure and intensity)

TRANSMISSION PATHS ANALYSIS

Visualization of the acoustic transmitted intensity.



Example : car door

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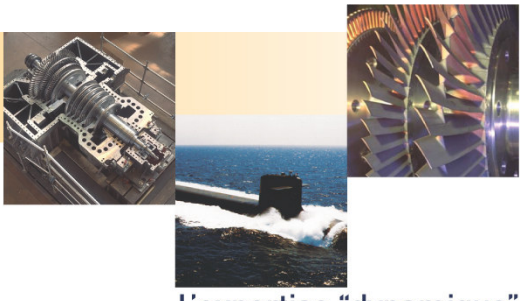

L'expertise "dynamique"