



// **ACOUSTIC®**
THE TOOL OF ACOUSTIC ENGINEERING

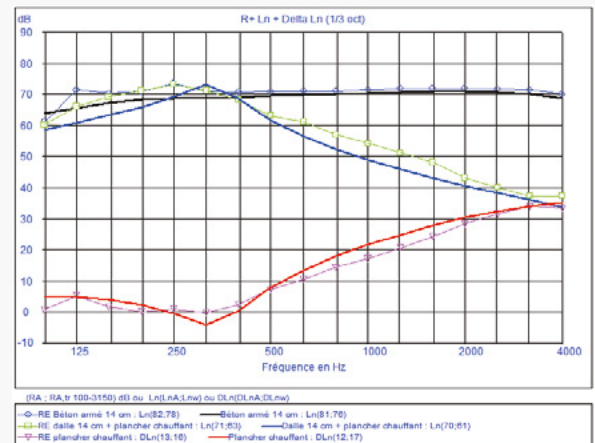
IMPACT NOISE LEVEL FORECASTING SOFTWARE

IMPACT NOISE LEVEL FORECASTING SOFTWARE



The AcouS STING® software is a simple and adaptable tool which allows by its applications to :

- Determine the impact noise level of a simple or complex floor,
- Help in the development of new products,
- Optimize operations of measurement in a laboratory,
- Estimate the performance of a floor covering,
- Extrapolate the performances of conventional works,
- Forecast of unconventional works and their optimization,
- Understand the acoustic behavior of a floor.



A few of the main features and public concerned

Robust models of calculations :

The basic theoretical models have been developed either within the framework of internal research or within the framework of research under contract. The results of these model calculations have been validated through hundreds of comparison tests with laboratory measurements. These models are in constant development.

Compliance with standards :

Calculations of indexes corresponding to standards (ISO 717-2,...)

Publics concerned:

The training is aimed at all the engineers who have to conceive or to prescribe floors, in particular :

- the engineers in charge of studies who have to recommend constructive systems,
- technical salesmen in charge of the prescription of work derived from a system catalogue,
- the research and development engineers of a department in charge of the development of a floor, or a system of assembly or technology for manufacturing.

AcouS STING® is shared
by hundreds of
users worldwide

Accessibility of the entry parameters

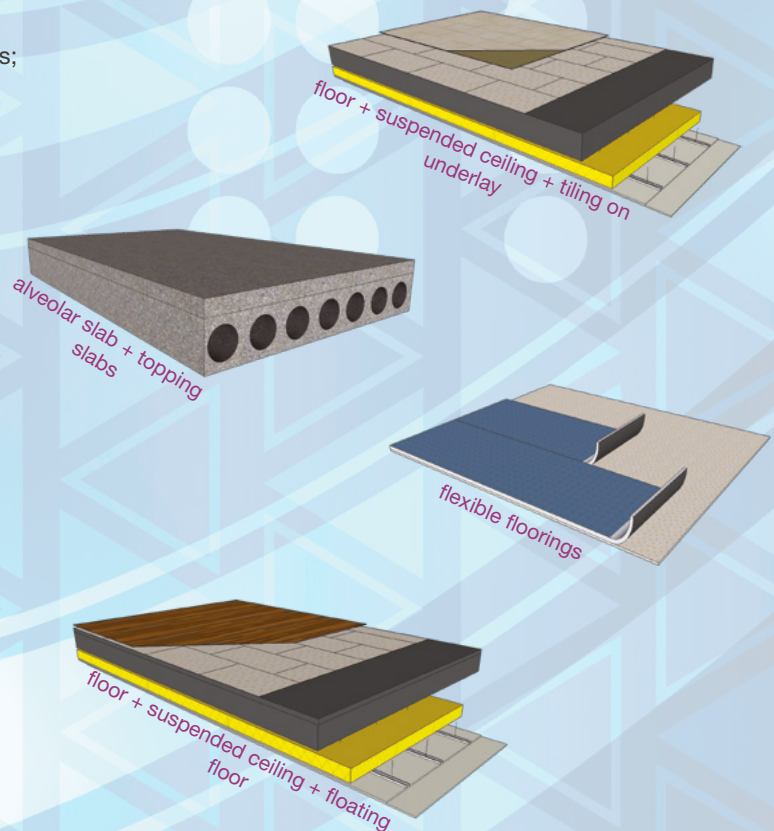
The AcouS STING® software

has been developed thanks to the experience acquired during the course of twenty years of daily confrontation with concrete problems of noise impact. This development has provided us with the possibility of isolating the essential and relevant features, requiring only the entry parameters accessible to an acoustic engineer on the ground : dimensions, module of Young, density, factor of loss and resistivity to the air flow.

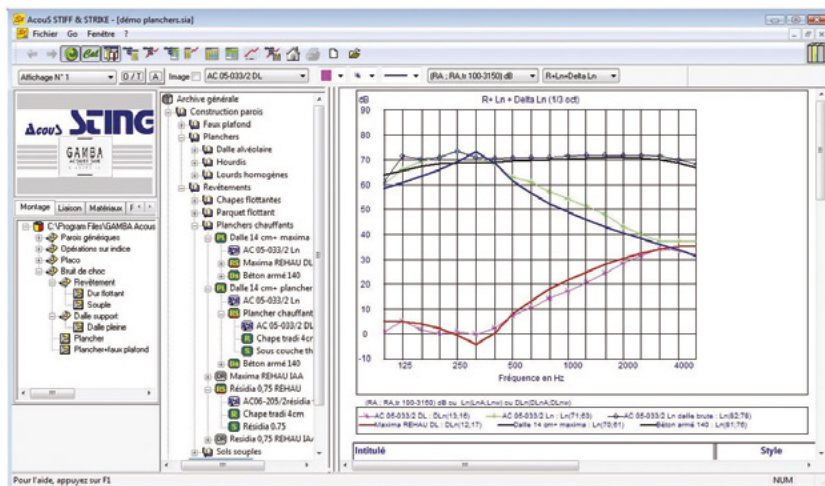
calcul			
Caractéristiques physiques et dimensionnelles			
	Chape tradi 4cm	Dalle à plots	Déton armé 14 cm
Longueur (m)	4	4	4
Largeur (m)	2.5	2.5	2.5
Epaisseur (mm)	40.00	32.00	140.00
Masse volumique (kg/m ³)	2300	39	2300
Module young (N/m ²)	1.4E+010	1.5E+007	1.3E+010
Facteur de perte	0.05	0.3	0.05
Rés. à l'écoulement d'air (Pa. s/m ²)			
Coeff. collage de poreux			
Réverbération Cavité	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coeff. de fibrage			
Masse surfacique (kg/m ²)	92.00	1.25	322.00
Freq. critique (Hz)		4.7E+008	
Raideur (N/m ³)			
Type paroi	R Revêtement	SC Sous couche	SU Dalle support
Nombre de plaque	1	1	1

The assembly bench : the various types of simulated floors

- Homogenous floors; Hollow core slabs; Interjoist floors,
- Alveolar slabs,
- Coverings for hard ground,
 - Floating screeds,
 - Heating floors,
 - Floating floors,
 - Tiling/Stone floors on mini screeds,
- Flexible floorings,
 - Homogeneous,
 - Multilayer,
- Ceiling,
 - Suspended plasterboards,
 - Plafonnettes,
 - Suspended ceilings,
 - ...



The user friendly interface



THE USER FRIENDLY INTERFACE

is customizable on the screen and in printing which facilitates its adaptation according to your needs.

A database containing the most common materials coupled with a variety of basic models allows the user to simulate from very simple floors to very complex floors.

The possibility of creating new materials and the re-use of the existing assemblies brings a comfort and a matchless flexibility of use.

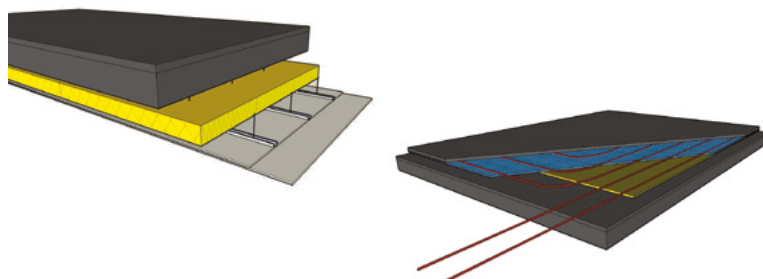
The automation of the calculations and their speed of execution allows major interactivity between the modifications of the features and the results obtained.

Assistance in the creation of floors allows the user to become operational very quickly.

The results

THE RESULTS

are presented as graphs and / or customizable tables with global values in L_w , L_{nTA} , ΔL_w and ΔL_A conforming to international standards (ISO 717-2, ...) and by one-third octave or octave.



Intitulé	Style	L_n dB(A)	L_{nw} dB
RE Béton armé 14 cm	RE ←	82	78
Béton armé 14 cm	L —	81	76
RE dalle 14 cm + plancher chauffant	RE →	71	63
Dalle 14 cm + plancher chauffant	L —	70	61
RE plancher chauffant	RE ↔		
Plancher chauffant	DL —		

Intitulé	Style	Résultats par bande d'octave (Fréquence centrale en Hz)									
		31.5	63	125	250	500	1000	2000	4000	8000	
RE Béton armé 14 cm	RE ←			74	77	75	76	75	75		
Béton armé 14 cm	L —	60	65	70	73	74	75	75	73	64	
RE dalle 14 cm + plancher chauffant	RE →			71	77	70	59	50	42		
Dalle 14 cm + plancher chauffant	L —	54	60	66	73	70	55	46	39	36	
RE plancher chauffant	RE ↔			2		5	16	27	33		
Plancher chauffant	DL —	6	6	4		4	20	30	35	28	



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