

## Title (en)

Envelopes or walls presenting adjustable sound insulation and/or absorption properties

## Title (de)

Hülle oder Wände mit verstellbaren Schalldämmungs- und/oder Schallabsorptionseigenschaften

## Title (fr)

Enveloppes ou parois présentant des propriétés ajustables d'isolement et/ou d'absorption acoustique

## Publication

**EP 1246162 A1 20021002 (FR)**

## Application

**EP 01870065 A 20010327**

## Priority

EP 01870065 A 20010327

## Abstract (en)

Acoustic insulating container or partition which consists of a basic low-density medium, e.g. a gas such as air, hydrogen or nitrogen, containing a periodic repetition in two dimensions of a base cell with at least one angular geometric motif. <??>Acoustic insulating container or partition which consists of a basic low-density medium, e.g. a gas such as air, hydrogen or nitrogen, containing a periodic repetition in two dimensions of a base cell with at least one angular geometric motif. The motif has at least two sides forming a structure of juxtaposed materials with strongly contrasting acoustic impedances, i.e. densities and/or wave propagation velocities. The angular motifs can have a right-angled cross-section with sides of the same or different lengths, a cross-section in the shape of an H, I, U or C, or solid or hollow tubes or bars, and the spaces between the motifs can be wholly or partly filled with a preferably porous acoustically absorbent material that replaces the basic medium. The motifs are of high density, made from metals or alloys such as iron, steel, aluminum, mercury and lead, or glass, concrete, plaster, ceramic, minerals, polymers or wood, or from tubes filled with a liquid such as water, oil or a gel.

## Abstract (fr)

La présente invention se rapporte à un dispositif d'isolement et/ou de correction acoustique dans le domaine des ondes de fréquence audible, c'est-à-dire entre 15 Hz et 20 kHz, et de préférence comprises entre 100 et 5000 Hz, caractérisé en ce qu'il présente, au sein d'un milieu de base, une répétition périodique à deux dimensions d'une cellule de base, ladite cellule comprenant au moins un motif géométrique anguleux, ledit motif étant constitué d'au moins deux côtés, pour former une structure de matériaux juxtaposés présentant de forts contrastes d'impédances acoustiques, c'est-à-dire de densités et/ou de vitesses de propagation desdites ondes. <IMAGE>

## IPC 1-7

**G10K 11/175**; **G10K 11/16**

## IPC 8 full level

**G10K 11/16** (2006.01); **G10K 11/175** (2006.01)

## CPC (source: EP)

**G10K 11/16** (2013.01)

## Citation (applicant)

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- [X] PATENT ABSTRACTS OF JAPAN vol. 015, no. 320 (P - 1238) 15 August 1991 (1991-08-15)

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