

Title (en)
Composition absorbing acoustic waves, particularly for submarine environment

Title (de)
Werkstoff zur Schalldämpfung, insbesondere für Unterwasseranwendungen

Title (fr)
Matériau absorbant les ondes sonores, notamment en acoustique sous-marine

Publication
EP 0740287 A1 19961030 (FR)

Application
EP 96400782 A 19960411

Priority
FR 9505050 A 19950427

Abstract (en)
The absorbent material consists of a panel (5) of a viscoelastic material, in which metal rods (6) are embedded. The panel is made, for example, from a polyurethane-type resin such as Hexcel UR 267 (RTM) and measuring 900 x 900 mm by 40 mm thick, while the metal rods are of steel and measure 20 mm long by 2 mm in diameter, with a minimum number of air bubbles trapped in the panel. The volume of the rods represents 7.3 per cent of the total volume of the panel. The panel has a reflection coefficient of the order of -15 db at atmospheric pressure and -10 db at 40 bars or a depth of 400 m at frequencies of 20 kHz and above. The same performance is obtained at frequencies below 20 kHz by increasing the panel thickness to 50 mm. In a variant of the design the metal rods can be replaced by mineral or synthetic fibres.

Abstract (fr)
L'invention concerne un matériau absorbant les ondes sonores, notamment pour des applications sous-marines, comprenant une matrice viscoélastique dans laquelle sont réparties des tiges. Les tiges sont réparties aléatoirement ou périodiquement. Elles sont en métal. <IMAGE>

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IPC 8 full level
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CPC (source: EP US)
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Citation (search report)

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