

Title (en)

ACOUSTIC ABSORBER, ACOUSTIC WALL AND METHOD FOR DESIGN AND PRODUCTION

Title (de)

AKUSTISCHER ABSORBER, AKUSTISCHE WAND UND VERFAHREN ZUR KONSTRUKTION UND HERSTELLUNG

Title (fr)

ABSORBEUR ACOUSTIQUE, PAROI ACOUSTIQUE ET PROCÉDÉ DE CONCEPTION ET FABRICATION

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Application

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Abstract (en)

[origin: WO2017137455A1] The invention relates to a passive sound absorber (3, 4, 6, 7, 8) comprising a closed cavity (30, 80) opening to the outside via an inlet direction (D3) via a collar passing through the front wall in order to form a Helmholtz resonator for a first frequency. According to the invention, said absorber further comprises at least one moving element, or membrane (32, 42, 62, 72a, 72b), suspended or held by suspensions (33, 43, 6140) in a position obstructing said collar in a non-sealed manner. The relative stiffness of the suspensions and of the membrane is determined such that the assembly resonates in a vibration following a "piston" movement at a second frequency different from the first frequency, producing an absorption for said second frequency or range of frequencies. A hybrid version comprises a coil (324) that is controlled to adjust the acoustic impedance of the absorber. The invention proposes an acoustic wall comprising a plurality of such absorbers produced by a repetitive structure opening through perforations, each receiving such a membrane, as well as a method for designing and producing such an absorber or wall.

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