

Title (en)

LOW-FREQUENCY COUPLING SOUND ABSORBING STRUCTURE

Title (de)

SCHALLABSORBIERENDE STRUKTUR MIT NIEDERFREQUENTER KOPPLUNG

Title (fr)

STRUCTURE D'ABSORPTION SONORE À COUPLAGE BASSE FRÉQUENCE

Publication

**EP 3706114 A4 20210728 (EN)**

Application

**EP 19884417 A 20191029**

Priority

- CN 201811359437 A 20181115
- CN 2019113918 W 20191029

Abstract (en)

[origin: EP3706114A1] A low-frequency coupling sound-absorbing structure includes a peripheral chamber, a resonance chamber arranged inside the peripheral chamber, and an extension tube structure arranged inside the resonance chamber, wherein one end of the extension tube structure is connected to a chamber wall of the resonance chamber through a corresponding through hole; and the peripheral chamber includes the micro-perforated plate, the back plate, the first side plate, and the second side plate, wherein the micro-perforated plate is provided with multiple micro-hole structures, the micro-perforated plate is opposite to the back plate, and the first side plate is opposite to the second side plate. The low-frequency coupling sound-absorbing structure in this application can increase the acoustic impedance of the sound-absorbing structure by providing the resonance chamber with the extension tube structure in the peripheral chamber with the micro-hole structure, which improves the sound-absorption coefficient, widens the sound-absorption frequency band, and shifts the sound-absorption frequency band to the low frequency, thereby realizing low-frequency sound absorption and improving the product performance.

IPC 8 full level

**G10K 11/172** (2006.01)

CPC (source: CN EP)

**G10K 11/162** (2013.01 - CN); **G10K 11/172** (2013.01 - CN EP)

Citation (search report)

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- [XY] EP 2487677 A1 20120815 - CHINESE ACAD INST ACOUSTICS [CN]
- [X] US 2013186707 A1 20130725 - RICHTER CHRISTOPH [DE]
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- [Y] CN 107514066 A 20171226 - INST ACOUSTICS CAS
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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3706114 A1 20200909; EP 3706114 A4 20210728; EP 3706114 B1 20230531**; CN 109147750 A 20190104; WO 2020098477 A1 20200522

DOCDB simple family (application)

**EP 19884417 A 20191029**; CN 201811359437 A 20181115; CN 2019113918 W 20191029