Title (en)

Device for reducing the propagation of sound, vibration and pressure shocks in a liquid

Title (de)

Vorrichtung zur Verminderung der Ausbreitung von Schall, Schwingungen und Druckstößen in einer Flüssigkeit

Title (fr)

Dispositif pour réduire la propagation du son, des oscillations et coups de bélier dans un liquide

Publication

EP 2657410 B2 20211201 (DE)

Application

EP 13159505 A 20130315

Priority

DE 102012206907 A 20120426

Abstract (en)

[origin: EP2657410A2] The device has attenuation bodies (2) fillable with gas and a carrier (3), at which attenuation bodies are arranged to each other in relative position. The carrier comprises a frame (4) with horizontally linkage elements (5). The frame comprises multiple frame areas composed of horizontally linkage elements that are coupled with one another over ropes, where a highest frame area is designed as float with assigned winches for the ropes. A pressure line for the introduction of gas into the attenuation bodies is integrated in the frame.

IPC 8 full level

E02B 17/00 (2006.01); **E02D 13/00** (2006.01)

CPC (source: EP)

E02B 17/00 (2013.01); E02D 13/005 (2013.01)

Citation (opposition)

Opponent :

- WO 2009121336 A2 20091008 - ELMER KARL-HEINZ [DE]
- DE 4439773 A1 19960515 - DOERPINGHAUS ERNST H [DE]
- JP 2012014061 A 20120119 - YOKOHAMA RUBBER CO LTD
- DE 102004043128 A1 20060309 - MENCK GMBH [DE]
- WO 2008123761 A1 20081016 - IEV INTERNAT LTD [CN], et al
- JP S59217824 A 19841208 - JAPAN DEV & CONSTRUCTION
- US 2005083783 A1 20050421 - BASKERVILLE ANDREW J [US], et al
- DE 202009003172 U1 20090625 - NOVOSHITSKIY ALEXEI V [RU]

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CN103774682A; CN110029965A; CN103774681A; AU2015203983B2; EP3092636A4; US9410403B2; US9488026B2; WO2015095192A3; WO2015103581A1; US11812221B2; US9343059B2; US9607601B2; EP3092636B1

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

DOCDB simple family (publication)

EP 2657410 A2 20131030; **EP 2657410 A3 20131218**; **EP 2657410 B1 20160914**; **EP 2657410 B2 20211201**; DE 102012206907 A1 20131031; DE 102012206907 B4 20240201; DK 2657410 T3 20170102; DK 2657410 T4 20220221

DOCDB simple family (application)

EP 13159505 A 20130315; DE 102012206907 A 20120426; DK 13159505 T 20130315