

Title (en)

LOW-FREQUENCY ELECTRO-ACOUSTIC TRANSDUCER AND METHOD OF GENERATING ACOUSTIC WAVES

Title (de)

ELEKTROAKUSTISCHER NIEDERFREQUENZWANDLER UND VERFAHREN ZUR ERZEUGUNG VON SCHALLWELLEN

Title (fr)

TRANSDUCTEUR ÉLECTRO-ACOUSTIQUE BASSE FRÉQUENCE ET PROCÉDÉ DE GÉNÉRATION D'ONDES ACOUSTIQUES

Publication

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Application

EP 12707834 A 20120131

Priority

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Abstract (en)

[origin: WO2012104549A2] The present invention relates to a submersible electro-acoustic transducer that can be immersed in an immersion fluid for underwater acoustic communication or for underwater acoustic tomography, said transducer comprising two horns, a counterweight, two electro-acoustic motors, placed on either side of the counterweight, said motors being aligned along an axis of symmetry, the opposite ends of said motors being linked respectively to a horn, the assembly constituted by said electro-acoustic motors, said counterweight and said horns being able to generate a longitudinal electro-acoustic mode of resonance. According to the invention, said transducer comprises a rigid and hollow cylindrical piece extending around said counterweight, said cylindrical piece having an axis coinciding with the axis of symmetry of the transducer, the interior of said cylindrical piece forming a fluid cavity able to be filled by said immersion fluid, said electro-acoustic motors and said cylindrical piece being dimensioned so that said fluid cavity forms an acoustic coupling between said longitudinal electro-acoustic mode of resonance of said transducer and a circumferential mode of resonance of said cylindrical piece when said fluid cavity is filled with said immersion fluid.

IPC 8 full level

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- EP 0684084 A1 19951129 - FRANCE ETAT [FR]
- US 2007080609 A1 20070412 - JOHNSON BENJAMAN R [US], et al

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