

Title (en)
ULTRASONIC TRANSDUCER FOR USE IN A FLUID MEDIUM

Title (de)
ULTRASCHALLWANDLER ZUM EINSATZ IN EINEM FLUIDEN MEDIUM

Title (fr)
TRANSDUCTEUR D'ULTRASONS DESTINÉ À ÊTRE EMPLOYÉ DANS UN FLUIDE

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Application
EP 09765072 A 20091126

Priority

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Abstract (en)
[origin: WO2010072506A1] The invention relates to an ultrasonic transducer (110) for use in a fluid medium. The ultrasonic transducer (110) comprises at least one piezoelectric transducer element (112) and at least one adjustment body (116) for promoting vibration coupling between the piezoelectric transducer element (112) and the fluid medium. The ultrasonic transducer (110) furthermore comprises at least one equalization body (118) introduced between the piezoelectric transducer element (112) and the adjustment body (116) in order to reduce thermal stresses, especially at least one intermediate layer, wherein the equalization body (118) has a thermal expansion coefficient (CTEZwischen) that ranges between a thermal expansion coefficient (CTEPiezo) of the piezoelectric transducer element (112) and a thermal expansion coefficient (CTEAnpass) of the adjustment body (116). The equalization body (118) has at least one homogenous and/or macroscopically at least substantially isotropic material, especially a material mixture.

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