

Title (en)

Ultrasound converter with acoustic impedance adjustment

Title (de)

Ultraschallwandler mit akustischer Impedanzanpassung

Title (fr)

Transducteur à ultrasons doté d'une adaptation d'impédance acoustique

Publication

EP 1911530 A1 20080416 (DE)

Application

EP 07405233 A 20070813

Priority

CH 16072006 A 20061009

Abstract (en)

The transducer (1) has a matching layer (5) that is made of a cross linked polyurethane hard foam and is connected to a piezo-ceramic disc (3). The hard foam has a hollow ball made of glass or plastic and is filled with a light filler material. The matching layer has a density in a range of 400 to 900 kilogram per meter cube, and is stable up to a temperature of 120 degree Celsius. The matching layer or transducer is coated with a protected layer in an area of a sonic radiation surface (8).

Abstract (de)

Der Ultraschallwandler (1) umfasst eine Piezokeramikscheibe (3) und eine mit dieser verbundene Anpassschicht (5) aus einem temperaturstabilen, mit einem leichten Füllmaterial versetzten Polyurethan-Hartschaum. Zum Schutz vor äusseren Einflüssen kann die Anpassschicht (5) mit einer Schutzschicht (11) überzogen sein.

IPC 8 full level

B06B 1/06 (2006.01); **G10K 9/122** (2006.01)

CPC (source: EP)

G10K 11/02 (2013.01)

Citation (search report)

- [X] DE 202004002107 U1 20050331 - SIEMENS AG [DE]
- [X] WO 0108237 A1 20010201 - MEASUREMENT SPEC INC [US], et al
- [A] DE 19630350 A1 19980129 - SIEMENS AG [DE]
- [A] EP 0116823 A1 19840829 - SIEMENS AG [DE]
- [A] EP 1430838 A1 20040623 - OLYMPUS CORP [JP], et al
- [A] DE 19742294 A1 19990401 - ELSTER PRODUKTION GMBH [DE]

Cited by

DE102010063050B4; US11842517B2; US11553295B2; US10531212B2; US11704983B2; US11098951B2; US11740018B2; US10497358B2; US10921890B2; US11531395B2; US11921928B2; US11374586B2; US11742870B2; US10444842B2; US11204644B2; US11656686B2; US11768540B2; US10101814B2; US10930123B2; US11378997B2; US11550432B2; US11886639B2; US10101811B2; US10685538B2; US11276281B2; US11550395B2; US11830351B2; US10943578B2; US11360546B2; US11715453B2; US11955109B2; US12002448B2; US10818162B2; US11727790B2; US11816267B2; US12100288B2; US10268275B2; US10496175B2; US10915177B2; US11169610B2; US11307664B2; US11714492B2; US12001610B2; DE102013110900A1; US10281567B2; US10755538B2; US10911861B2; DE102013110900B4; US11189140B2; US11529650B2; US11543507B2; US11624815B1; US11883847B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

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