

Title (en)

DEVICE AND PROCESS FOR MAGNETIC RESONANCE ELASTOGRAPHY (MRE)

Title (de)

VORRICHTUNG UND VERFAHREN FÜR DIE MAGNETRESONANZELASTOGRAPHIE (MRE)

Title (fr)

DISPOSITIF ET PROCÉDÉ D'ÉLASTOGRAPHIE PAR RÉSONANCE MAGNÉTIQUE (ERM)

Publication

EP 2007281 A1 20081231 (DE)

Application

EP 07724354 A 20070412

Priority

- EP 2007003417 W 20070412
- DE 102006018863 A 20060413
- EP 06090057 A 20060413
- DE 102006037160 A 20060801
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Abstract (en)

[origin: WO2007118710A1] The invention relates to a device to produce mechanical oscillations in a research object using magnetic resonance elastography (MRE) with a membrane that can be set into periodic motion (312) and a transmission element (4, 400) for the transmission of periodic motion of the membrane (312) onto the research object (1), whereby the membrane (312) is connected to the transmission element (4, 400) by means of a mounting medium (311, 320, 321, 322) in such a way that periodic motion of the membrane is transmitted over the mounting medium (311, 320, 321, 322) to the transmission element(4, 400). A second aspect relates to the invention of a device with a step motor to generate periodic motion and a transmission element for the transmission of the periodic motion of the step motor to the research object in order to generate mechanical oscillation therein. The invention also relates to a procedure for the magnetic resonant elastographic determination of biomechanical characteristics of tissue with steps: c) excitation of mechanical oscillations using a frequency of $f < \nu$ in which ν is the tissue to be researched; d) proof of mechanical oscillation within the tissue using magnetic resonance, whereby a periodic magnetic field with a repeat time of $T_R = 1/f < \nu$ is used on the tissue.

IPC 8 full level

A61B 5/055 (2006.01)

CPC (source: EP US)

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Cited by

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