

Search strategy

Query

(WAVEFORM AND SPEAKER AND THICKNESS AND (LIQUID OR SOLID))/AB/TI/TX AND (G01B)/IPC
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4 Documents

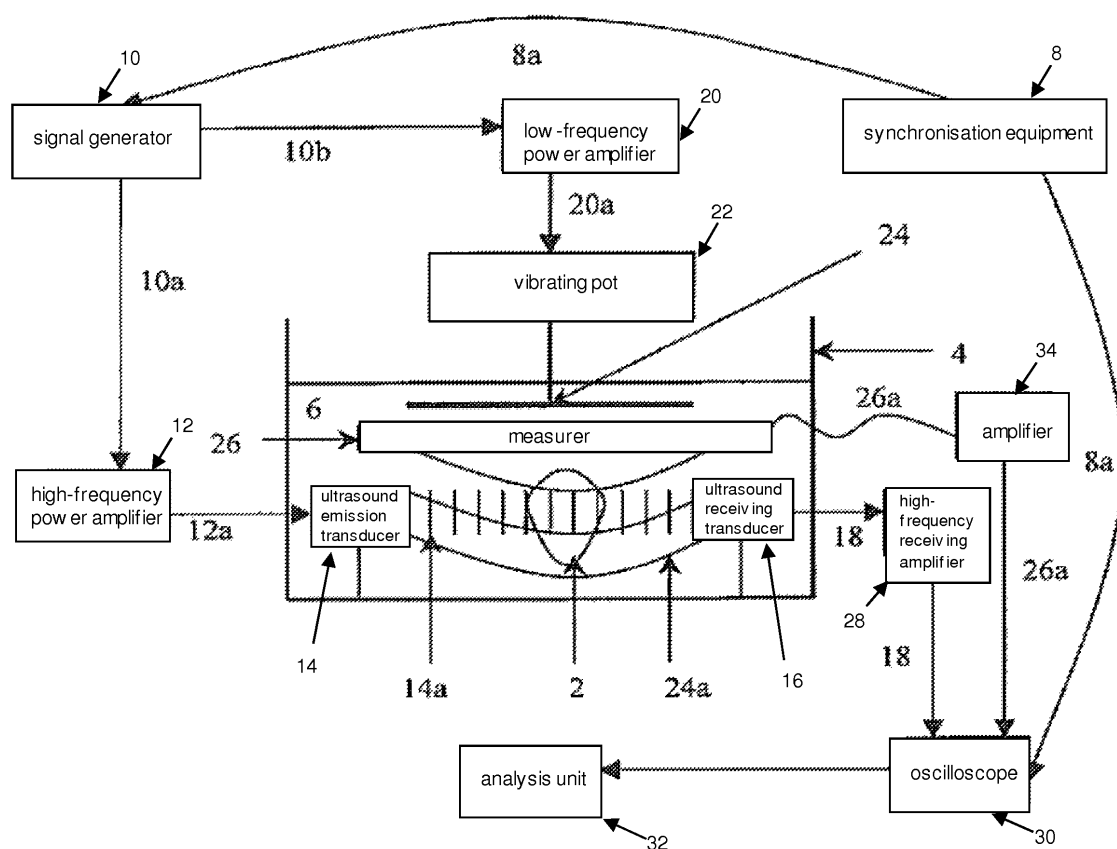
Publication numbers	Title	Current assignees
EP2294401 A1	Acoustic device for localized contactless measurement of elastic and dissipative non-linearities and viscoelasticity	UNIVERSITE FRANCOIS RABELAIS TOURS, ...
JP11276478 A	Ultrasonic probe and ultrasonograph	FUKUDA DENSHI
EP-874351 A2	Ultrasonic transmitter-receiver	PANASONIC
EP1500913 A2	An opto-acoustoelectric device and methods for analyzing mechanical vibration and sound	TOSHIBA

Family 1/4 - FAMPAT - ©Questel

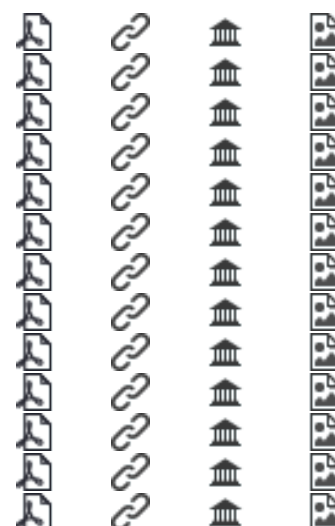
Title

(EP2294401)

Acoustic device for localized contactless measurement of elastic and dissipative non-linearities and viscoelasticity

Images**Publication numbers with kind code & date**

EP2294401	B1	2017-09-13	EP2294401
CA2728745	C	2016-05-10	CA2728745
FR2932887	B1	2016-02-05	FR2932887
BRPI0910165	A2	2015-10-20	BR200910165
JP5640001	B2	2014-10-31	JP5640001
US8616060	B2	2013-12-31	US8616060
JP2011525619	A	2011-09-22	JP2011525619
CN102124328	A	2011-07-13	CN102124328
US20110154901	A1	2011-06-30	US20110154901
EP2294401	A1	2011-03-16	EP2294401
CA2728745	A1	2010-01-21	CA2728745
WO2010/007234	A1	2010-01-21	WO201007234
FR2932887	A1	2009-12-25	FR2932887

**Abstract**

(EP2294401)

The invention relates to an acoustic method and device for localized, contactless, measurement of elastic and dissipative non-linearities and dynamic non-linear viscoelasticity in a medium subjected to a low-frequency acoustic stress and probed by ultrasonic pulses or wave trains. For this purpose, the invention relates to an acoustic, localized and contactless device for measuring elastic and dissipative nonlinearities and viscoelasticity of a specimen (2), characterized in that it comprises: means (10, 20, 22, 24) for transmitting a low-frequency acoustic wave (24a) and means (26, 34, 30) for receiving said low-frequency acoustic wave, which means are capable of creating a low-frequency periodic variation of the hydrostatic

pressure in the specimen (2); means (10, 12, 14) for generating high-frequency ultrasonic pulses (14a) and means (16, 28, 30) for receiving said pulses; and an analysis unit (32) that includes a model for calculating the modulations in the time of flight and in the amplitude of the ultrasonic pulses (14a) that are induced by the low-frequency acoustic wave (24a) passing through the specimen (2), so as to quantify the elastic and dissipative non-linearities and the non-linear viscoelasticity of the specimen (2).

Inventors

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Latest standardized assignees - inventors removed

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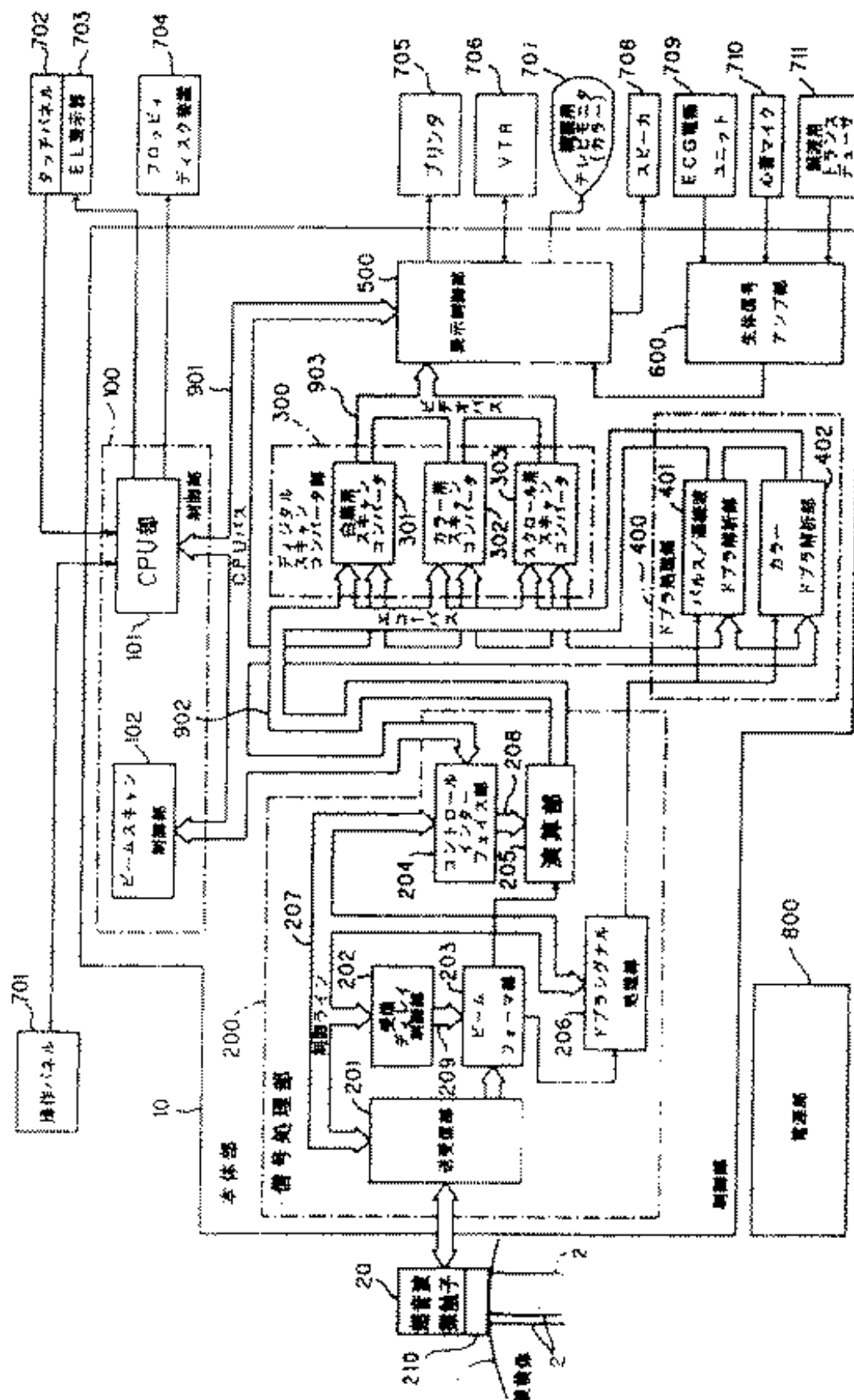
Family 2/4 - FAMPAT - ©Questel

Title

(JP11276478)

Ultrasonic probe and ultrasonograph

Images



[JP4125416](#)

B2

2008-05-16

JP4125416

[JP11276478](#)

A

1999-10-12

JP11276478

Abstract

(JP11276478)

PROBLEM TO BE SOLVED: To provide an ultrasonic probe suitable for transmitting a basic wave and for receiving an ultrasonic wave containing a higher harmonic wave and an ultrasonograph suitable for such an ultrasonic probe in the ultrasonic probe to receive an ultrasonic wave returned by being reflected in a specimen by transmitting the ultrasonic wave in the specimen by being applied to the specimen and the ultrasonograph to which the ultrasonic probe is connected and which generates an image based on a received signal obtained by receiving the ultrasonic wave by the ultrasonic probe by transmitting the ultrasonic wave in the specimen by impressing voltage on the ultrasonic probe.

SOLUTION: An ultrasonic probe and an ultrasonograph have a first piezoelectric layer 212 which is composed of a plurality of arranged first piezoelectric elements 2121 having first acoustic impedance ($Z_{(sub\ 1)}$) and bears transmission/ reception of an ultrasonic wave of a central frequency ($f_{(sub\ 1)}$) and a second piezoelectric layer 213 which is composed of a plurality of arranged second piezoelectric elements 2131 having second acoustic impedance $Z_{(sub\ 2)}$ ($Z_{(sub\ 2)} < Z_{(sub\ 1)}$), is superposed on the first piezoelectric layer 212 and bears transmission/reception of an ultrasonic wave having a central frequency $f_{(sub\ 2)} = 2f_{(sub\ 1)}$.

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Inventors

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Title

(EP-874351)

Ultrasonic transmitter-receiver

Images

FIG. 1A

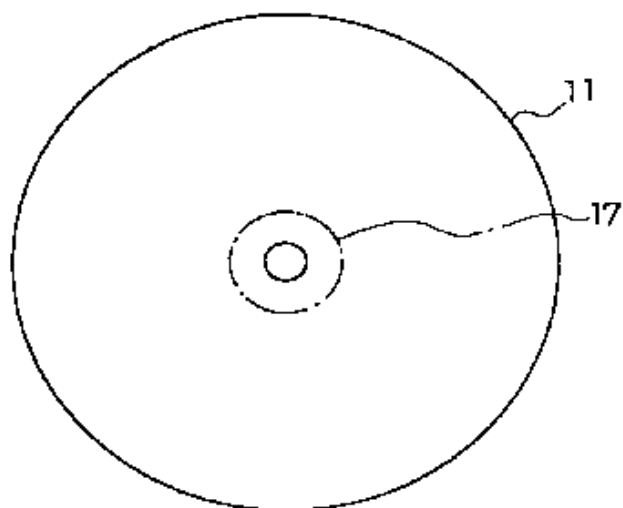
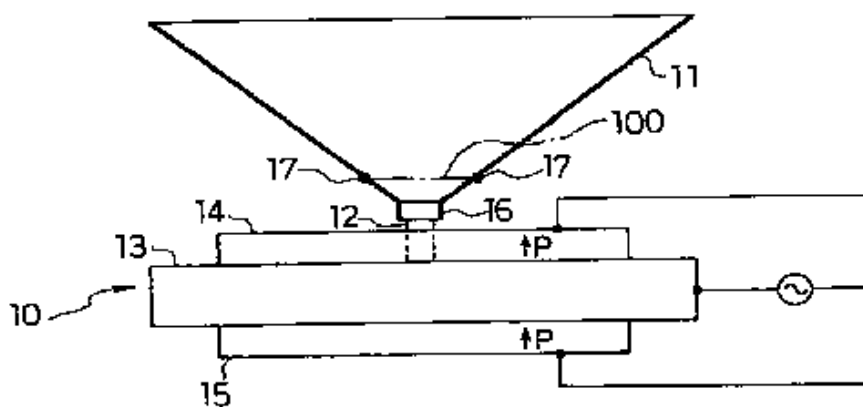


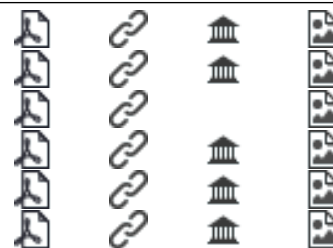
FIG. 1B

**Publication numbers with kind code & date**

DE69721728	T2	2004-03-25	DE69721728
DE69721728	D1	2003-06-12	DE69721728
EP0874351	B1	2003-05-07	EP-874351
CN1090887	C	2002-09-11	CN1090887C
KR100296052	B1	2001-10-24	KR100296052



US6087760	A	2000-07-11	US6087760
EP0874351	A3	2000-03-01	EP-874351
KR19980079513	A	1998-11-25	KR19980079513
JP10294995	A	1998-11-04	JP10294995
CN1197199	A	1998-10-28	CN1197199
EP0874351	A2	1998-10-28	EP-874351

**Abstract**

(EP0874351)

In an ultrasonic transmitter-receiver for an apparatus for measuring the position or distance of an object, a composite vibrating unit is constructed with a piezoelectric vibrator (10) and a cone (11), wherein a substantial conical vertex of the cone is connected to a center of vibration of the piezoelectric vibrator, and a node of vibration (17) is generated on the cone at positions symmetrical about its center axis when the piezoelectric vibrator vibrates with deflection. <IMAGE>

Inventors

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Latest standardized assignees - inventors removed

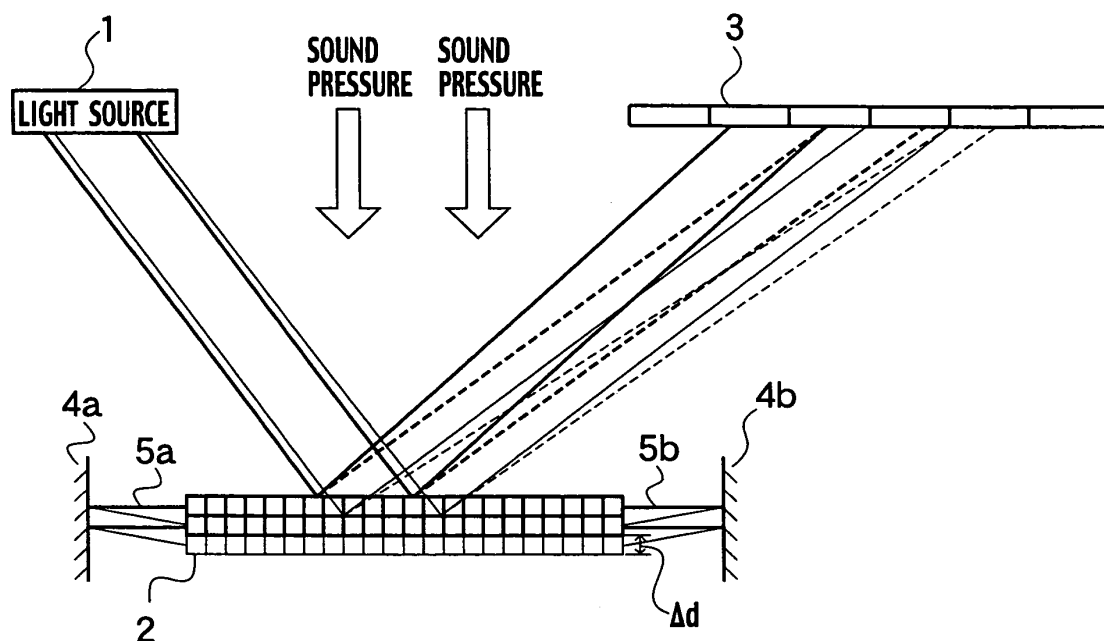
PANASONIC

Family 4/4 - FAMPAT - ©Questel

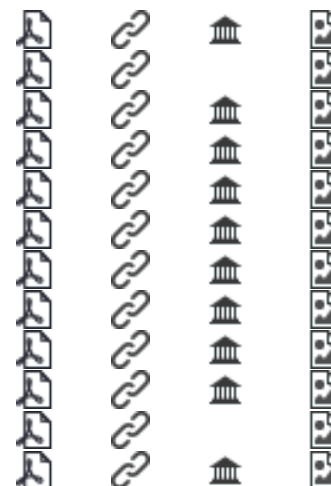
Title

(EP1500913)

An opto-acoustoelectric device and methods for analyzing mechanical vibration and sound

Images**Publication numbers with kind code & date**

JP4071730	B2	2008-01-25	JP4071730
KR100777851	B1	2007-11-21	KR100777851
US20070028695	A1	2007-02-08	US20070028695
JP3884444	B2	2006-11-24	JP3884444
US7134343	B2	2006-11-14	US7134343
JP2005283160	A	2005-10-13	JP2005283160
JP2005278019	A	2005-10-06	JP2005278019
US20050052724	A1	2005-03-10	US20050052724
JP2005045463	A	2005-02-17	JP2005045463
CN1578540	A	2005-02-09	CN1578540
KR20050012675	A	2005-02-02	KR20050012675
EP1500913	A2	2005-01-26	EP1500913

**Abstract**

(EP1500913)

An opto-acoustoelectric device encompasses a diaphragm (2) having a diffraction grating, the diaphragm is susceptible to a vibration driven by an external force; a light source (1) oriented to irradiate the diffraction grating; and a photo detector (3) configured to detect the light diffracted by the diffraction grating and to convert the detected light into an electric signal. The electric signal corresponds to a displacement of the vibration in the diaphragm. <IMAGE>

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