



SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

Application Number

EP 08 85 8444

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 2006/004289 A1 (TIAN WEI-CHENG [US] ET AL) 5 January 2006 (2006-01-05) * paragraphs [0002], [0030], [0035], [0043], [0044], [0067], [0069] * -----	1-8	INV. A61B8/00 B06B1/02
Y	ERGUN A S ET AL: "CAPACITIVE MICROMACHINED ULTRASONIC TRANSDUCERS: THEORY AND TECHNOLOGY", JOURNAL OF AEROSPACE ENGINEER, AMERICAN SOCIETY OF CIVIL ENGINEERS, NEW YORK, NY, USA, vol. 16, no. 2, 1 April 2003 (2003-04-01), pages 76-84, XP009040263, ISSN: 0893-1321, DOI: 10.1061/(ASCE)0893-1321(2003)16:2(76) * page 1 - page 3 * -----	1-8	
Y	WO 2007/058056 A1 (HITACHI LTD) 24 May 2007 (2007-05-24) * abstract *	6 -/-	TECHNICAL FIELDS SEARCHED (IPC)

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

INCOMPLETE SEARCH

The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.

Claims searched completely :

Claims searched incompletely :

Claims not searched :

Reason for the limitation of the search:

see sheet C

2

Place of search	Date of completion of the search	Examiner
The Hague	31 July 2017	Lorne, Benoît
CATEGORY OF CITED DOCUMENTS		
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		

EPO FORM 1503 03.82 (P04E20)

T : theory or principle underlying the invention
E : earlier patent document, but published on, or
after the filing date

D : document cited in the application

L : document cited for other reasons

.....

& : member of the same patent family, corresponding document



PARTIAL EUROPEAN SEARCH REPORT

Application Number

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	TECHNICAL FIELDS SEARCHED (IPC)
A	<p>-& US 2009/299192 A1 (ASAFUSA KATSUNORI [JP] ET AL) 3 December 2009 (2009-12-03) * paragraph [0071] - paragraph [0073] * * paragraphs [0081], [0084], [0085], [0090], [0094], [0130] *</p> <p>-----</p> <p>GOKSEN G YARALIOGLU ET AL: "Calculation and Measurement of Electromechanical Coupling Coefficient of Capacitive Micromachined Ultrasonic Transducers", IEEE TRANSACTIONS ON ULTRASONICS, FERROELECTRICS AND FREQUENCY CON, IEEE, US, vol. 50, no. 4, 1 April 2003 (2003-04-01), pages 449-456, XP008136293, ISSN: 0885-3010, DOI: 10.1109/TUFFC.2003.1197968 * abstract *</p> <p>-----</p>	1-8	



**INCOMPLETE SEARCH
SHEET C**

Application Number
EP 08 85 8444

Claim(s) completely searchable:
1-8

Claim(s) not searched:
9-13

Reason for the limitation of the search:

Independent claims 1,9,10,11,12 and 13 do not comply with rule 43, paragraph 2.
The search has been restricted to the subject-matter indicated by the applicant [claims 1-8] in his letter of 09.06.2017 filed in reply to the invitation pursuant to Rule 62a(1) EPC

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 85 8444

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

31-07-2017

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 2006004289	A1	05-01-2006	CN FR JP JP US	1714754 A 2881913 A1 5113994 B2 2006020313 A 2006004289 A1		04-01-2006 11-08-2006 09-01-2013 19-01-2006 05-01-2006

WO 2007058056	A1	24-05-2007	CN EP JP JP US WO	101309644 A 1952767 A1 4812771 B2 W02007058056 A1 2009299192 A1 2007058056 A1		19-11-2008 06-08-2008 09-11-2011 30-04-2009 03-12-2009 24-05-2007

US 2009299192	A1	03-12-2009	CN EP JP JP US WO	101309644 A 1952767 A1 4812771 B2 W02007058056 A1 2009299192 A1 2007058056 A1		19-11-2008 06-08-2008 09-11-2011 30-04-2009 03-12-2009 24-05-2007

专利名称(译)	超声波诊断设备和超声波探头		
公开(公告)号	EP2223654A4	公开(公告)日	2017-09-06
申请号	EP2008858444	申请日	2008-12-10
[标]申请(专利权)人(译)	株式会社日立医药		
申请(专利权)人(译)	日立医疗器械股份有限公司		
当前申请(专利权)人(译)	日立医疗器械股份有限公司		
[标]发明人	ASAUSA KATSUNORI KISHI SHINICHIRO		
发明人	ASAUSA, KATSUNORI KISHI, SHINICHIRO		
IPC分类号	A61B8/00		
CPC分类号	B06B1/0292 A61B8/00 A61B8/4483		
优先权	2007321718 2007-12-13 JP		
其他公开文献	EP2223654A1		
外部链接	Espacenet		

摘要(译)

一种超声波诊断装置，包括：超声波探头，具有多个振动元件，其机电耦合系数根据从偏置电压供给单元提供的偏置电压的大小而变化；超声波图像构建单元，用于基于反射构建超声波图像从超声波探头接收的回波信号和用于显示超声波图像的显示单元；配备有用于计算相对于振动元件的塌陷电压的偏置电压的大小的计算单元，用于存储所计算的大小的存储单元；偏置电压和控制单元，用于使偏置电压提供单元根据所存储的偏置电压的大小将偏置电压提供给振动元件。

 SUPPLEMENTARY EUROPEAN SEARCH REPORT <small>under Rule 14(3) and Rule 25 of the European Patent Convention</small> <small>This report shall be considered, for the purposes of Article 14(3) and Rule 25(1) of the European Patent Convention, as a search report</small>		Application Number EP 08 85 844
DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	List of documents with indication, where appropriate, of the relevant parts	Classification of the invention (IPC)
Y	<p>US 2006/004289 A1 [TIAN WEI-CHENG] [US] ET AL. “A COUPLED MICROSTRUCTURE HAVING A MICROMACHINED ULTRASONIC TRANSDUCERS: THE TRANSDUCERS ARE COUPLED TO A SOLID STATE SOLUTI</p> <p>YUAN, TIAN WEI-CHENG, CHINESE ACADEMY OF AEROSPACE ENGINEERING, CHINESE ACADEMY OF CIVIL ENGINEERS, NEW YORK, NY, USA, vol. 2006, no. 004289, 20060211, pages 76-84, XP00950263 (2003-04-01), ISSN 1090-6438 (20030132)(2003)16:2;(76) 10,160,000 (ASCI)0891,001</p> <p>* abstract * page 1 - page 3</p>	1-8 INT A61B/00 B66B1/02
Y	<p>WO 2007/050856 A1 [HITACHI LTD] “A MICROSTRUCTURE AND A METHOD FOR MANUFACTURING THE SAME”</p> <p>YOSHIOKA, TOSHIYUKI, HITACHI LTD, TOKYO, JP, vol. 2007, no. 050856, 20070524, pages 1-10, XP00950263 (2003-04-01), ISSN 1090-6438 (20030132)(2003)16:2;(76) 10,160,000 (ASCI)0891,001</p> <p>* abstract *</p>	6 -/- =-
The supplementary European search report has been based on the last set of claims valid at the time of filing.		
INCOMPLETE SEARCH		
The European Patent Office has not been able to complete the present search, or one or more of the claims, because the search has been discontinued or that only a partial search (X00, 65) has been carried out.		
Claims searched completely		
Claims searched incompletely		
Claims not searched		
Reasons for the limitation of the search:		
see sheet C		
SEARCHED DOCUMENTS The Hague		Date of completion of the search 31 July 2017
CATEGORY OF CITED DOCUMENTS		SEARCHER Lorre, Benefit
X particularly relevant & taken into account A of interest, but not particularly relevant D of interest, but not particularly relevant T technical content of the document I intermediate document		
2. There is/are a/are principle underlying the invention: C a/are public domain D a/are prior art E a/are relevant for other reasons F a/are not relevant G a/are not of the same family, corresponding H a/are not relevant		