European Patent Office

Application Number
EP 05 74 8839

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-21

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

European Patent Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 05 74 8839

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-21

A capacitive ultrasonic probe device having multiple capacitive transducer cells with a common electrode, being arrayed in two directions along a generally cylindrical shape; and manufacturing method thereof.

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2. claims: 22-46

A capacitive ultrasonic probe device comprising a transducer configured to emit an axial ultrasonic wave and an ultrasonic propagation medium including angular components.

European Patent Office

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 05 74 8839

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 499 348 B1 (MAMAYEK DONALD S [US]) 31 December 2002 (2002-12-31) * column 2, line 34 - line 54 * * column 3, line 61 - column 5, line 26 * * figures 4-6 *	1-12,16, 20,21	INV. A61B8/12 B06B1/06 G01S15/89
Y		13-15, 17-19	
Y	US 5 951 478 A (HWANG JUIN-JET [US] ET AL) 14 September 1999 (1999-09-14) * column 3, line 49 - column 4, line 9 * * figure 1 *	13-15,19	
Y	WO 94/17734 A (ENDOSONICS CORP [US]) 18 August 1994 (1994-08-18)	17,18	
A	* page 8, line 32 - page 9, line 3 * * page 18, line 14 - line 24 * * figure 2 *	1-16,19	
A	US 6 558 330 B1 (AYTER SEVIG [US] ET AL) 6 May 2003 (2003-05-06) * the whole document *	1-21	TECHNICAL FIELDS SEARCHED (IPC) A61B B06B G01S G01H G10K A61N
A	US 2002/087083 A1 (NIX ELVIN LEONARD [GB] ET AL) 4 July 2002 (2002-07-04) * paragraph [0055] - paragraph [0076] * * figures 2,3 *	1-21	
A	PUA E C ET AL: "REAL-TIME CYLINDRICAL CURVILINEAR 3-D ULTRASOUND IMAGING" ULTRASONIC IMAGING, DYNAMEDIA INC., SILVER SPRING, MD, US, vol. 25, no. 3, July 2003 (2003-07), pages 137-150, XP001186286 ISSN: 0161-7346 * the whole document *	1-21	

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

Place of search	Date of completion of the search	Examiner
Munich	11 September 2007	Montes, Pau

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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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

EPO FORM 1503 03.82 (P04C04)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 05 74 8839

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.

11-09-2007

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专利名称(译)	静电容量型超声波探头装置		
公开(公告)号	EP1762182A4	公开(公告)日	2008-06-11
申请号	EP2005748839	申请日	2005-06-09
[标]申请(专利权)人(译)	奥林巴斯株式会社		
申请(专利权)人(译)	OLYMPUS CORPORATION		
当前申请(专利权)人(译)	OLYMPUS CORPORATION		
[标]发明人	ADACHI HIDEO C O OLYMPUS CORPORATION SAWADA YUKIHIKO C O OLYMPUS CORPORATION IMAHASHI TAKUYA C O OLYMPUS CORPORATION OMURA MASAYOSHI DECEASED OMURA ETSUKO HEIR MIZUNUMA AKIKO C O OLYMPUS CORPORATION OTANI SHUJI C O OLYMPUS CORPORATION MURAKAMI MIYUKI C O OLYMPUS CORPORATION NEMOTO KIYOSHI C O OLYMPUS CORPORATION SUZUKI KOZABURO C O OLYMPUS CORPORATION SHIMODA NAOMI C O OLYMPUS CORPORATION		
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IPC分类号	A61B8/12 B06B1/02 B06B1/06 G01S7/52 G01S15/89		
CPC分类号	A61B8/12 A61B8/445 A61B8/4483 A61B8/4488 A61B8/4494 A61B2562/028 B06B1/0292 G01S7/5202 G01S7/52038 G01S15/8954 G01S15/8963		
优先权	2004172970 2004-06-10 JP 2004180191 2004-06-17 JP		
其他公开文献	EP1762182B1 EP1762182A1		
外部链接	Espacenet		

摘要(译)

在圆柱形护套25的尖端部分内，设置电容式超声换能器33，其是二维排列在圆柱面的外表面上的阵列型。电容式超声换能器单元38采用沿圆柱面的纵向排列的m个电容式超声换能器元件37作为分割单元，从而提供一种布置，其中各个电容式超声换能器单元38易于沿圆周方向设置，由此径向扫描或可以在体腔内进行。

DOCUMENTS CONSIDERED TO BE RELEVANT

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A	US 6 558 330 B1 (AYTER SEVIG [US] ET AL) 6 May 2003 (2003-05-06) * the whole document *	1-21	TECHNICAL FIELDS SEARCHED (IPC) A61B B06B G01S G01H G10K A61N
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D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document