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(54) Lateral channel compressor

(57) In a lateral channel compressor with an impeller (12) which is arranged in a casing and which is supported so that it is rotatable around an axial rotational axis (4), said impeller comprising a plurality of impeller blades (20) which are arranged in a working area (2) which is formed

by the casing, in view of enabling a complex lateral channel geometry with a high surface quality at low manufacturing costs, it is provided that the working area (2) comprises an undercut and the casing comprises a basic casing element (6), a cover (8) and an insert (10) in order to form the undercut.

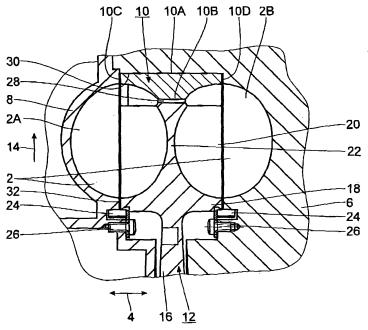


Fig. 1



EUROPEAN SEARCH REPORT

Application Number EP 06 00 0867

	DOCUMENTS CONSIDER	ED TO BE RELEVANT		
Category	Citation of document with indica of relevant passages		Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 6 425 733 B1 (ROSS 30 July 2002 (2002-07 * column 2, line 59 - * column 3, line 42 - * column 4, line 3 - * column 5, line 20 - *	-30) column 3, line 12 * line 49 * line 7 *	1,3,5, 10-12 2,6	INV. F04D23/00
L A	US 5 680 700 A (TUCKE 28 October 1997 (1997 This document complet US 6 425 733 B1 (see 50 of the latter) * the whole document	-10-28) es the disclosure of column 3, lines 47 -	1,3,5, 10-12 2,6	
Х	JP 2003 155992 A (DEN 30 May 2003 (2003-05- * abstract; figures 2	30)	1,3,5, 8-12	
X	US 5 257 916 A (TUCKE 2 November 1993 (1993 * column 3, line 44 - * column 4, line 33 - * column 5, line 1 - 1,10-13 *	-11-02) line 58 * line 49 *	1,3,5, 10,11	TECHNICAL FIELDS SEARCHED (IPC)
Х	JP 59 141795 A (NIPPON DENSO CO) 14 August 1984 (1984-08-14) * abstract; figures 1,3 *		1,3,5, 10,11	
Х	JP 11 270487 A (KEIHIN CORP) 5 October 1999 (1999-10-05) * abstract; figure 1 *		1,3,5,10	
X	JP 58 002495 A (MATSUSHITA ELECTRIC I LTD) 8 January 1983 (1983-01-08) * abstract; figures 4,5 * 		1,2,5, 10,11	
	The present search report has been	n drawn up for all claims	_	
	Place of search	Date of completion of the search		Examiner CIODCIO F
Munich 21 F 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		E : earlier patent do after the filling dat D : document cited i L : document cited i	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 8: member of the same patent family, corresponding	



EUROPEAN SEARCH REPORT

Application Number EP 06 00 0867

ategory	Citation of document with inc	dication, where appropriate,	Relevant	CLASSIFICATION OF THE
alegory	of relevant passa		to claim	APPLICATION (IPC)
	JP 02 099794 A (DAII	(IN IND LTD)	1,3,5	
	JP 02 099794 A (DAII 11 April 1990 (1990	-04 - 11)		
	* abstract; figures	1,2 *	11	
				TECHNICAL FIELDS
				SEARCHED (IPC)
	The present search report has be	een drawn up for all claims		
	Place of search	Date of completion of the sear	ch ch	Examiner
	Munich	21 February 2	007 DI	GIORGIO, F
C	ATEGORY OF CITED DOCUMENTS		inciple underlying the i	
	icularly relevant if taken alone	after the filir		shed on, or
Y: part	icularly relevant if combined with anothouseling in a same category	er D : document o	pited in the application ited for other reasons	
	inological background			

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

EP 06 00 0867

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.

21-02-2007

Patent document cited in search repo		Publication date		Patent family member(s)		Publication date
US 6425733	B1	30-07-2002	BR DE JP	0103976 10143931 2002130173	A1	21-05-2002 21-03-2002 09-05-2002
US 5680700	Α	28-10-1997	BR DE FR JP US	9601188 19607573 2732725 8284770 5586858	A1 A1 A	09-11-1999 10-10-1990 11-10-1990 29-10-1990 24-12-1990
JP 200315599	92 A	30-05-2003	NONE			
US 5257916	Α	02-11-1993	DE FR JP JP	4333204 2698663 2648660 6213090	A1 B2	01-06-199 03-06-199 03-09-199 02-08-199
JP 59141795	Α	14-08-1984	NONE			
JP 11270487	Α	05-10-1999	NONE			
JP 58002495	Α	08-01-1983	NONE			
JP 2099794	Α	11-04-1990	JP JP	1975014 7003238		27-09-199 18-01-199

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82