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Declarations under Rule 4.17:

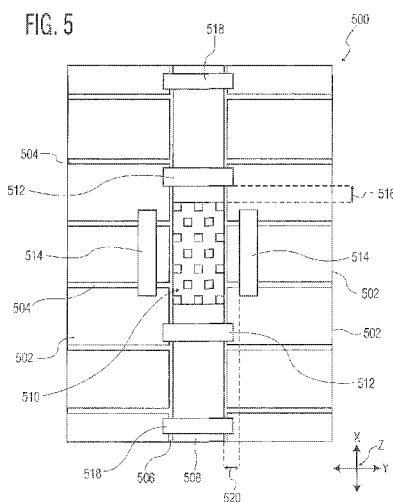
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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(54) Title: ULTRASONIC BONDING SYSTEMS AND METHODS OF USING THE SAME



(57) Abstract: An ultrasonic bonding system is provided. The ultrasonic bonding system includes a bond head assembly and a bonding tool supported by the bond head assembly. The system further includes a pressing member adapted to press against a bonding material bonded using the bonding tool. The pressing member is supported by the bond head assembly and is moveable with respect to the bond head assembly independent of the bonding tool. The ultrasonic bonding system may also be an ultrasonic ribbon bonding system or a solar cell ribbon bonding system for bonding a ribbon material to portions of a solar cell.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/030537**A. CLASSIFICATION OF SUBJECT MATTER***H01L 21/607(2006.01)i, H01L 21/60(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H01L 21/607; H01L 21/60; B23K 1/06; H01L 31/18; H01L 23/29; H01L 23/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: boning, pressing, actuator, lift, solar cell, ribbon

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | JP 2000-232187 A (MITSUI HIGH TEC INC) 22 August 2000 | 1-44, 46-47 |
| Y | See abstract; figures 1-2; paragraphs [0015]-[0024] | 45 |
| Y | US 05151377A A (HANOKA; JACK I. et al.) 29 September 1992 See abstract; figures 6-7; column 9 line 25 - column 10 line 31 | 45 |
| A | JP 2006-210679 A (FUJITSU LTD) 10 August 2006 See figure 2; paragraphs [0036]-[0044] | 1-61 |
| A | US 2003-0160084 A1 (YUZO HIGASHIYAMA) 28 August 2003 See figure 2; paragraphs [0053]-[0056] | 1-61 |

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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Date of the actual completion of the international search

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Information on patent family members

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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|--|--|
| JP 2000-232187 A | 22.08.2000 | None | |
| US 05151377A A | 29.09.1992 | CN 1057871 C CN 1065551 A EP 0528027 A1 EP 0528027 B1 JP 02-549807 B2 KR 10-1993-0700824 A WO 92-15845 A1 | 25.10.2000 21.10.1992 24.02.1993 04.06.1997 08.08.1996 16.03.1993 17.09.1992 |
| JP 2006-210679 A | 10.08.2006 | CN 100461360 C0 CN 1812065 A JP 04-583190 B2 JP 4583190 B2 TW 267418 A TW 267418 B US 2006-0169746 A1 US 2008-0087708 A1 US 7595582 B2 | 11.02.2009 02.08.2006 10.09.2010 17.11.2010 01.12.2006 01.12.2006 03.08.2006 17.04.2008 29.09.2009 |
| US 2003-0160084 A1 | 28.08.2003 | CN 1241245 C0 CN 1441475 A CN 1441475 C0 EP 1339096 A2 EP 1339096 A3 JP 03-952959 B2 JP 2003-318230 A US 6877648 B2 | 08.02.2006 10.09.2003 08.02.2006 27.08.2003 13.02.2008 01.08.2007 07.11.2003 12.04.2005 |