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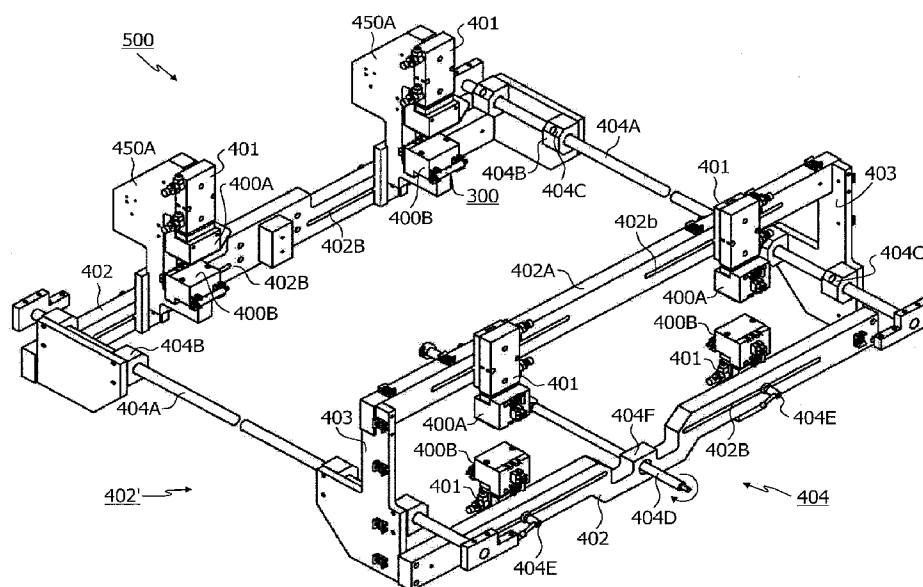
— *with international search report*

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

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(54) Title: BOND HEAD ASSEMBLY AND SYSTEM



(S7) Abstract: An inductive thermal bonding system includes at least one inductive bonding or heating member containing a magnetic E-shaped inductive core and a coil bounding a central member of the E-shaped inductive core. A rigid cover plate allows high and predictable temperature rate-of-change during use and reduced thermal cycling time without risk of detriment. Adaptive solid copper pads on multiplayer bonding regions minimize bonding errors and improve reliability. A cooling system is provided for adaptively cooling both the bond head and the bonded stack. Single and paired inductive heating members may be employed, and may also be alternatively controlled and positioned to aid generation of multiplayer bonding subassemblies distant from an edge of a multiplayer sheet construct.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/77178

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B23K 1/002 (2008.01)

USPC - 228/100, 219/616

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)

IPC (8) - B23K 1/002 (2008.01)

USPC - 228/100, 219/616

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 219/617, 85.1, 615

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

PUBWEST (PGPB,USPT,USOC,EPAB,JPAB) Terms - "E shaped" copper circuit board susceptor inductor bond axis x-axis y-axis motion movement slide center coil ferrite core DUETTO embedded etched resin induction

Google - E-shaped ferrite core; induction copper ring susceptor; induction bond-head motion controller; solder containment

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,101,086 A (DION, ET AL.) 31 Mar 1992 (31.03.1992), col 2, ln 27-35; col 2, ln 58-67; col 3, ln 14-36; col 3, ln 54-63; FIG. 3	1, 2, 4, 6-9, 11, 13-14 --- 3, 5, 10, 12, 19-22
Y	US 5,322,207 A (FOGAL, ET AL.) 21 Jun 1994 (21.06.1994), col 3, ln 65-67; col 4, ln 3-15	3, 5, 10, 12, 19-22
Y	US 6,229,124 B1 (TRUCCO) 08 May 2001 (08.05.2001), col 11, ln 20-27; col 11, ln 48-64;	15-18
Y	US 5,916,469 A (SCOLES, ET AL.) 29 Jun 1999 (29.06.1999), col 5, ln 28-35	15-18
Y	US 6,878,633 B2 (RASKIN, ET AL.) 12 Apr 2005 (12.04.2005), col 8, ln 2-13	17-18

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"&" document member of the same patent family

Date of the actual completion of the international search

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