20/10/04
20040611131

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 November 2003 (06.11.2003)

PCT

(10) International Publication Number
WO 03/092069 A1

(51) International Patent Classification[7]: H01L 23/544

(21) International Application Number: PCT/KR03/00841

(22) International Filing Date: 25 April 2003 (25.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2002-0023108 26 April 2002 (26.04.2002) KR
10-2003-0009877 17 February 2003 (17.02.2003) KR

(71) Applicant *(for all designated States except US)*: **EO TECHNICS CO., LTD.** [KR/KR]; 864-4, Gwanyang2-dong, Dongan-gu, Anyang-city, Kyungki-do 431-062 (KR).

(72) Inventors; and

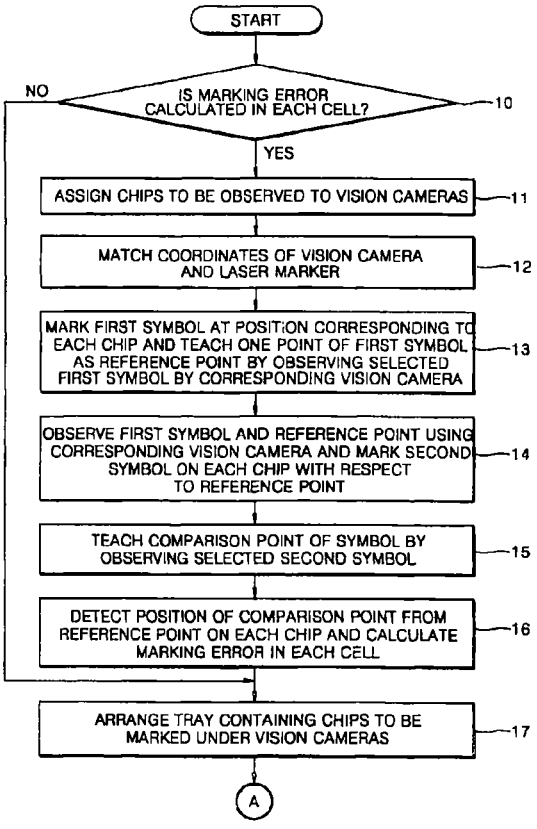
(75) Inventors/Applicants *(for US only)*: **KIM, Byoung-Hwan** [KR/KR]; 504-107 Eunhasoo Apt., 1103-5, Bisan-dong, Dongan-gu, Anyang-city, Kyungki-do 431-050 (KR). **LEE, Jeong-Ku** [KR/KR]; 217-1205 Woosung-2cha Apt., 634, Yeonsu2-dong, Yeonsu-gu, Inchcon-city 406-819 (KR). **BYUN, Young-Sik** [KR/KR]; 102-1106 Seogang Apt., Daeya-dong, Siheung-city, Kyungki-do 429-808 (KR). **KWON, Goo-Cheol** [KR/KR]; 1047-8, Bisan3-dong, Dongan-gu, Anyang-city, Kyungki-do 431-053 (KR). **KIM, Tae-Jung** [KR/KR]; 562-8, Anyang8-dong, Manan-gu, Anyang-city, Kyungki-do 430-018 (KR).

(74) Agent: **LEE, Young-Pil**; The Cheonghwa Building, 1571-18, Seocho-dong, Seocho-gu, Seoul 137-874 (KR).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

[Continued on next page]

(54) Title: METHOD OF CALIBRATING MARKING IN LASER MARKING SYSTEM



(57) Abstract: In a method for calibrating marking in a laser marking system, (a) each chip is assigned to be observed to a corresponding vision camera, (b) a coordinate of the vision camera and a coordinate of the laser marker are matched, (c) a predetermined first symbol is marked on a chip or at a position corresponding to the chip, a selected first symbol is observed using the corresponding vision camera, and one point of the first symbol is taught as a reference point, (d) the first symbol and the reference point of the chip are observed using the corresponding vision camera and a second symbol is marked on the chip with respect to the reference point, (e) the second symbol on a selected chip is observed and one point of the second symbol is taught as a comparison point, and (f) a position of the comparison point is detected from the reference point on the chip and the marking error in each cell is calculated.

WO 03/092069 A1

162162

ACTION