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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 March 2014 (06.03.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/035347 A1

(51) International Patent Classification:
H01L 21/68 (2006.01) *H01L 21/683* (2006.01)
H01L 21/677 (2006.01)

(21) International Application Number:
PCT/SG2013/000382

(22) International Filing Date:
2 September 2013 (02.09.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/696,051 31 August 2012 (31.08.2012) US

(71) Applicant: **SEMICONDUCTOR TECHNOLOGIES & INSTRUMENTS PTE LTD** [SG/SG]; Block 25, Kallang Avenue, #04-01 Kallang Basin Industrial Estate, Singapore 339416 (SG).

(72) Inventor: **LIN, Jing**; BLK856B, Tampines Street 82, #11-152, S(522856) (SG).

(74) Agent: **SIM, Charlie**; Axis Intellectual Capital Pte Ltd, 21 Science Park Road, #03-01, The Aquarius, Science Park II, Singapore 1 17628 (SG).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

(54) Title: SYSTEM AND METHOD FOR AUTOMATICALLY CORRECTING FOR ROTATIONAL MISALIGNMENT OF WAFERS ON FILM FRAMES

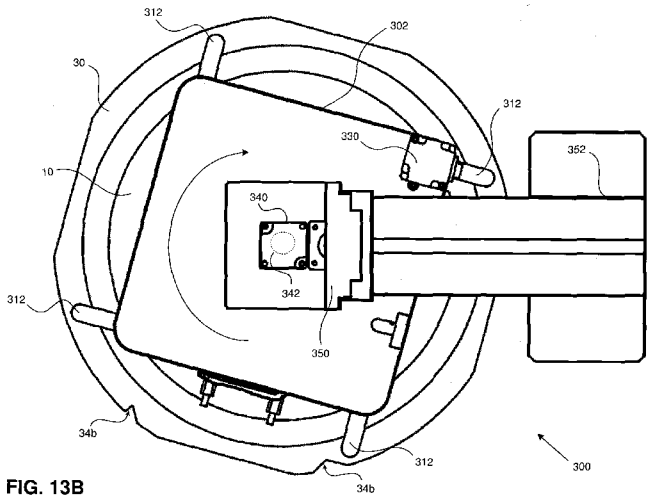


FIG. 13B

(57) Abstract: Automatically correcting for rotational misalignment of a wafer improperly mounted on a film frame includes capturing an image of portions of the wafer using an image capture device, prior to initiation of a wafer inspection procedure by an inspection system; digitally determining a rotational misalignment angle and a rotational misalignment direction of the wafer relative to the film frame and/or a set of reference axes of a field of view of the image capture device; and correcting for the rotational misalignment of the wafer by way of a film frame handling apparatus separate from the inspection system, which is configured for rotating the film frame across the rotational misalignment angle in a direction opposite to the rotational misalignment direction. Such film frame rotation can occur prior to placement of the film frame on the wafer table, without decreasing film frame handling throughput or inspection process throughput.

WO 2014/035347 A1