

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 November 2006 (09.11.2006)

PCT

(10) International Publication Number
WO 2006/118545 A2

(51) International Patent Classification:
G01N 3/30 (2006.01)

(21) International Application Number:

PCT/SG2006/000107

(22) International Filing Date: 27 April 2006 (27.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/676,196 29 April 2005 (29.04.2005) US

(71) Applicants (for all designated States except US):
AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH [SG/SG]; 20 Biopolis Way, #07-01 Centros, Singapore 138668 (SG). **INSTRON SINGAPORE PTE LTD** [SG/SG]; 16A, Science Park Drive, #02-04, Singapore Science Park, Singapore 118228 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TSAI, Kuo Tsing** [MY/SG]; Block 16A, Science Park Drive, #02-04, Singapore 118228 (SG). **WONG, Ee Hua** [SG/SG]; Blk 20, Choa Chu Kang Street 64, #23-02, Singapore 689093 (SG). **RAJOO, Ranjan s/o** [SG/SG]; Block 759, Choa Chu Kang North 5, #04-157, Singapore 680759 (SG).

(74) Agent: **BOGSCH, Adam**; Viering, Jentschura & Partner, Rochor Post Office, Rochor Road, P.O. Box 1088, Singapore 911833 (SG).

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

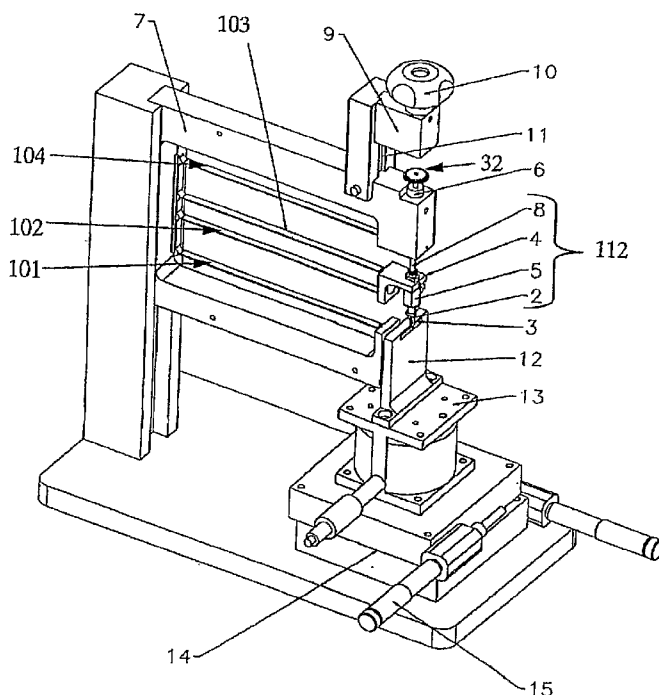
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: MICRO-IMPACT TESTING APPARATUS



(57) Abstract: A micro-impact testing apparatus for measuring the impact characteristics of a microelectronics specimen exposed to an impact thereon. The apparatus comprises of a specimen holder for receiving a specimen to be tested, and an impact device. The impact device comprises of an impact head, a support member, at least one connecting element and a first flexural spring. The support member is connected to the connecting element in that the first flexural spring is firmly attached with its one end to the support member and with its other end to the connecting element. A second flexural spring, being at least substantially identical to said first flexural spring, is firmly attached with its one end to the connecting element and with its other end to the impact head so that the ends of the first and second flexural springs define, in an unloaded state of the flexural springs, a rectangle. The impact head is moveable transversally with respect to the first and second flexural springs along a linear line between a spring-loaded position and an impact position thereof. The specimen holder is aligned with the impact device such that the specimen is arranged in said impact position of the impact head so that the impact head is capable of impacting on the specimen after traveling from its loaded position towards its impact position along said linear line upon release thereof from said loaded position.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.