

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
31 October 2024 (31.10.2024)



(10) International Publication Number
WO 2024/226291 A1

(51) International Patent Classification:
H01L 23/00 (2006.01) *B23K 20/00* (2006.01)

(21) International Application Number:
PCT/US2024/023733

(22) International Filing Date:
09 April 2024 (09.04.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/461,352 24 April 2023 (24.04.2023) US

(71) Applicant: **KULICKE AND SOFFA INDUSTRIES, INC.** [US/US]; 1005 Virginia Drive, Fort Washington, PA 19034 (US).

(72) Inventors; and

(71) Applicants: **XU, Tao** [US/US]; 1005 Virginia Drive, Fort Washington, PA 19034 (US). **BENHACENE, Yahia**; 1005 Virginia Drive, Fort Washington, PA 19034 (US). **TANG, Stanley**; 1005 Virginia Drive, Fort Washington, PA 19034 (US).

(72) Inventors: **DE ALVA, Jose, De Jesus Lozano**; 1005 Virginia Drive, Fort Washington, PA 19034 (US). **ITO, Robert**; 1005 Virginia Drive, Fort Washington, PA 19034

(US). **DANIELS, Frank, Jr.**; 1005 Virginia Drive, Fort Washington, PA 19034 (US).

(74) Agent: **SPLETZER, Christopher, M.**; Kulicke And Soffa Industries, Inc., 1005 Virginia Drive, Fort Washington, PA 19034 (US).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,

(54) Title: METHODS OF CUTTING A WIRE ON A WIRE BONDING SYSTEM, AND RELATED CUTTING BLADES AND WIRE BONDING SYSTEMS

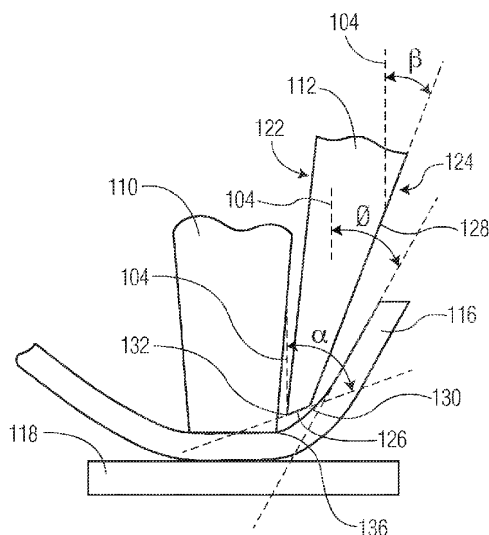


FIG. 3B

(57) Abstract: A wire bonding system is provided herein. The wire bonding system includes a bonding tool. The wire bonding system also includes a cutting blade disposed adjacent to the bonding tool. The cutting blade defines a face on a side of the cutting blade adjacent a tip of the cutting blade. The face is configured to contact wire prior to a cutting operation.

WO 2024/226291 A1

[Continued on next page]

SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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