

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
31 August 2023 (31.08.2023)



(10) International Publication Number  
**WO 2023/163653 A2**

(51) International Patent Classification:  
Not classified

(21) International Application Number:  
PCT/SG2023/050093

(22) International Filing Date:  
17 February 2023 (17.02.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10202201929Q 25 February 2022 (25.02.2022) SG

(71) Applicant: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10, Connexis North, Singapore 138632 (SG).

(72) Inventors: **WONG, Voon Kean**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). **CHEN, Shuting**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). **YAO, Kui**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG).

(74) Agent: **ONG, Jean Li, Magdelene**; Marks & Clerk Singapore LLP, Tanjong Pagar Post Office, P.O. Box 636, Singapore 910816 (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, 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, 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, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: COMPUTER-IMPLEMENTED METHOD FOR DETERMINING DEPTH AND LOCATION OF LOCALISED THINNING IN PLATE STRUCTURE

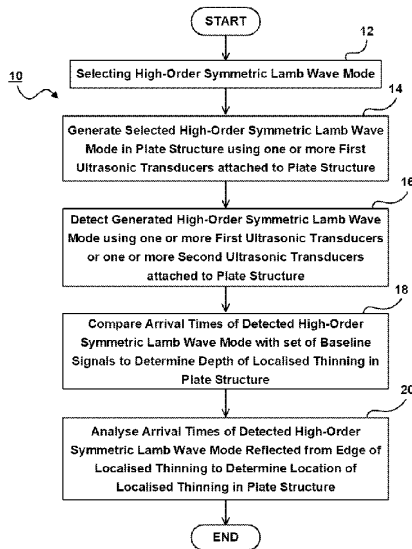


FIG. 1A

(57) Abstract: A computer-implemented method (10) for determining depth and location of localised thinning in a plate structure is provided. The computer-implemented method (10) for determining depth and location of localised thinning in the plate structure includes executing on one or more processors the steps of: selecting (12) a high-order symmetric Lamb wave mode; generating (14) the selected high-order symmetric Lamb wave mode in the plate structure using one or more first ultrasonic transducers attached to the plate structure; detecting (16) the generated high-order symmetric Lamb wave mode using the 0 one or more first ultrasonic transducers or one or more second ultrasonic transducers attached to the plate structure; comparing (18) arrival times of the detected high-order symmetric Lamb wave mode with a set of baseline signals to determine the depth of the localised thinning in the plate structure; and analysing (20) the arrival times of the detected high-order symmetric Lamb wave mode reflected from an edge of the localised thinning to determine the location of the localised thinning in the plate structure.

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