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(81) 指定国(除另有指明, 要求每一种可提供的国家保护): 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,

(54) Title: SUBSTRATE DETECTION APPARATUS

(54) 发明名称: 基板检测装置

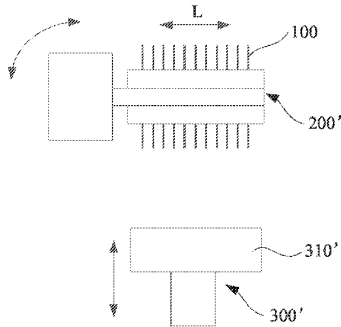


图 1

(57) Abstract: Disclosed in the present invention is a substrate detection apparatus. The substrate detection apparatus comprises an illumination unit, an imaging unit, a storage unit, a search unit, and a determination unit. The illumination unit is used for irradiating illumination light to an imaging region including a plurality of substrates, wherein the plurality of substrates are inserted into a plurality of holding slots of a substrate holder; the imaging unit is used for capturing the imaging region and generating a captured image, wherein the captured image includes a plurality of pixel blocks for representing side surfaces of the plurality of substrates; the storage unit is used for storing a reference grid, a plurality of detection positions and a reference width of the side surface of a single substrate, wherein the reference grid comprises a search area and a defect area, and the plurality of detection positions comprise at least two detection positions configured for each holding slot; the search unit is used for searching, on each detection position, for pixel blocks of the captured image that are located in an image in the reference grid, and outputting search information of the pixel blocks in the reference grid; and the determination unit is used for determining, on the basis of the search information, the holding state of the plurality of substrates in the corresponding holding slots. By means of the present invention, there being abnormal substrates on a substrate holder can be discovered in a timely manner.

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SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ,
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TD, TG)。

本国际公布:
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本发明公开了一种基板检测装置, 包括光照部、拍摄部、存储部、搜索部和判断部, 光照部用于向包含多个基板在内的拍摄区域照射照明光, 其中多个基板插入基板支架的多个保持槽中; 拍摄部用于对拍摄区域进行拍摄并生成拍摄图像, 拍摄图像包含表示多个基板侧面的多个像素块; 存储部用于存储基准格、多个检测位和单个基板的侧面的基准宽度, 其中, 基准格包括搜索区和不良区, 多个检测位包括为每个保持槽配置的至少两个检测位, 搜索部用于在各检测位对拍摄图像位于基准格内的图像中的像素块进行搜索, 并输出基准格中像素块的搜索信息; 判断部用于基于搜索信息, 判断多个基板在对应的保持槽的保持状态。本发明能够及时发现基板支架上有异常的基板。