Title (en)

METHOD AND DEVICE FOR MARKING ELECTRICAL APPLIANCES WHICH ARE ARRRANGEABLE IN A ROW

Title (de)

VERFAHREN UND VORRICHTUNG ZUM MARKIEREN VON ANEINANDERREIHBAREN ELEKTRISCHEN GERÄTEN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE MARQUAGE DE DISPOSITIFS ÉLECTRIQUES POUVANT ÊTRE DISPOSÉS EN LIGNE

Publication

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Application

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Abstract (en)

[origin: WO2020200639A1] The invention relates to a method for marking electrical appliances (2) which are arrangeable in a row, and which are arranged on a support rail (1), with the aid of a laser head (21), wherein the support rail (1) is pivotable about the longitudinal axis thereof, and the laser head (21) is guided so as to be movable at least along the longitudinal axis of the support rail (1). The method comprises the following steps: - specifying a number of marking instructions, each comprising a marking content and a position and an orientation of the surface to which the marking content is to be applied; - grouping the marking instructions in marking levels (3) in such a way that all the marking instructions of one marking level (3) can be applied by the laser head (21) without a movement of the laser head (21) or of the support rail (1), wherein the marking levels (3) differ in terms of spatial coordinates and/or parameters for the laser head (21); - selecting a first one of the marking levels (3); - positioning the laser head (21) and/or pivoting the support rail (1) in accordance with the spatial coordinates of the selected marking level (3); - applying markings (5) in accordance with the marking instructions of the selected marking level (3) with the parameters for the laser head (21); and - selecting a next one of the marking levels (3) for marking on the basis of those movements of the laser head (21) and of the support rail (1) which would be necessary to enable markings in accordance with the next one of the marking levels (3) to be applied. The invention furthermore relates to a device for carrying out the method.

IPC 8 full level

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Citation (opposition)

Opponent : Phoenix Contact GmbH & Co. KG

- WO 2017125364 A1 20170727 - PHOENIX CONTACT GMBH & CO [DE]
- EP 2301706 A2 20110330 - AGIE CHARMILLES SA [CH], et al
- WO 2017125385 A1 20170727 - PHOENIX CONTACT GMBH & CO [DE]
- WO 2010057768 A1 20100527 - WEIDMUELLER INTERFACE [DE], et al
- DE 102009017266 A1 20100805 - WEIDMUELLER INTERFACE [DE]
- ANONYMOUS: "8011 Trotec Speedy 300 - Operation Manual", TROTEC, 28 July 2015 (2015-07-28), XP093183730, Retrieved from the Internet <URL:https://eecs.uq.edu.au/files/6777/Speedy-300-Manual-EN.pdf>
- ANONYMOUS: "TruMark Station 7000 mit TruMark Serie 3000 - Betriebsanleitung", TRUMPF, 13 April 2016 (2016-04-13), XP093183756
- GROSSMANN CHRISTIAN: "Durchgängig automatisiert - Effiziente Klemmenleisten-Beschriftung optimiert den Fertigungsprozess", INDUSTRIELLE AUTOMATION, 1 January 2017 (2017-01-01), pages 28 - 28, XP093183738, Retrieved from the Internet <URL:https://digital.industrielle-automation.net/industrielle-automation-2-2017/58127173/28>
- GROSSMANN CHRISTIAN: "Optimierungsansätze für den Schaltschrankbau", 1 May 2017 (2017-05-01), pages 68 - 71, XP093183743
- WEIDMÜLLER: "Bestückte Klemmleisten automatisch beschriften", TECHNIK UND WISSEN: DAS FACHMAGAZIN FÜR DIE INDUSTRIE, 20 June 2019 (2019-06-20), XP093183747, Retrieved from the Internet <URL:https://www.technik-und-wissen.ch/bestueckte-klemmleisten-automatisch-beschriften.html>

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