Title (en)

BELT GRINDER FOR CREATING SURFACE STRUCTURES

Title (de)

BANDSCHLEIFMASCHINE ZUM ERZEUGEN VON OBERFLÄCHENSTRUKTUREN

Title (fr)

MEULEUSE À BANDE POUR CRÉER DES STRUCTURES DE SURFACE

Publication

EP 4192647 A1 20230614 (DE)

Application

EP 21763273 A 20210809

Priority

- DE 102020120968 A 20200810
- EP 2021072168 W 20210809

Abstract (en)

[origin: WO2022034026A1] A workpiece (10) passes through a belt grinder (100) for grinding and structuring a flat workpiece (10) in a predefined direction of passage (P1) past at least one machining region of a structuring device (200). The structuring device (200) comprises at least one endless grinding belt (210) which is guided via deflecting elements (212, 214, 216) in at least one direction of revolution (P3) and the width of which extends substantially across the working width of the belt grinder (100, 120), and is guided via deflecting elements (212, 214, 216), the longitudinal axes of which are oriented transversely to the direction of passage (P1) of the workpiece (10). Furthermore, the structuring device (200) comprises an endless pressing belt (220) which is configured and arranged such that it exerts a force from the inside on the grinding belt (210) in a pressing region (229), wherein the endless pressing belt (220) is able to be driven with the aid of a drive unit. The direction of revolution (P2) of the pressing belt (220) runs, at least in the pressing region (229), transversely to the direction of revolution (P3) of the grinding belt (210). The structuring device (200) and the transport unit (110) are configured and arranged such that the workpiece (10) guided past the structuring device (200) comes into contact with the machining region of the grinding belt (210). The structuring device (200) comprises a control unit (510) which controls the drive unit of the pressing belt (220) such that the drive unit selectively drives the endless pressing belt (220) in a first direction of revolution (P2) or in a second direction of revolution that is opposite to the first direction of revolution (P2).

IPC 8 full level

B24B 7/19 (2006.01); **B24B 7/06** (2006.01); **B24B 21/08** (2006.01); **B24B 21/18** (2006.01)

CPC (source: EP US)

B24B 7/06 (2013.01 - EP); **B24B 7/19** (2013.01 - EP); **B24B 21/04** (2013.01 - US); **B24B 21/08** (2013.01 - EP); **B24B 21/18** (2013.01 - EP)

Citation (search report)

See references of WO 2022034026A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

DE 102020120968 A1 20220210; EP 4192647 A1 20230614; US 2023294235 A1 20230921; WO 2022034026 A1 20220217

DOCDB simple family (application)

DE 102020120968 A 20200810; EP 2021072168 W 20210809; EP 21763273 A 20210809; US 202118019055 A 20210809