

Title (en)

METHOD FOR SEPARATING A WORKPIECE

Title (de)

VERFAHREN ZUM TRENNEN EINES WERKSTÜCKS

Title (fr)

PROCÉDÉ DE SÉPARATION D'UNE PIÈCE

Publication

**EP 4210896 A1 20230719 (DE)**

Application

**EP 21765888 A 20210818**

Priority

- DE 102020123789 A 20200911
- EP 2021072942 W 20210818

Abstract (en)

[origin: WO2022053271A1] The invention relates to a method for separating a workpiece (1) along a separating line (10) using laser pulses (20) of a laser beam (2). The laser beam (2) is split into multiple sub-laser beams (26) by a beam-splitting optical unit (62), and the sub-laser beams (26) are focused onto the surface (12) and/or into the volume of the workpiece (1) by a focusing optical unit (64) such that the sub-laser beams (26) are arranged one next to another in a mutually spaced manner along the separating line (10), wherein material is removed by introducing the laser pulses (20) of the sub-laser beams (26) into the workpiece along the separating line (10), and the laser power of each sub-laser beam (26) is adapted on the basis of the material removal depth (AT) that is reached in the workpiece (1).

IPC 8 full level

**B23K 26/364** (2014.01); **B23K 26/06** (2014.01); **B23K 26/0622** (2014.01); **B23K 26/067** (2006.01); **B23K 103/00** (2006.01)

CPC (source: EP KR US)

**B23K 26/0624** (2015.10 - EP KR US); **B23K 26/0648** (2013.01 - EP KR US); **B23K 26/067** (2013.01 - US); **B23K 26/0676** (2013.01 - EP KR);  
**B23K 26/36** (2013.01 - US); **B23K 26/364** (2015.10 - EP KR); **B23K 2103/56** (2018.07 - EP KR US)

Citation (search report)

See references of WO 2022053271A1

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 102020123789 A1 20220317**; CN 116367951 A 20230630; EP 4210896 A1 20230719; KR 20230066080 A 20230512;  
US 2023211439 A1 20230706; WO 2022053271 A1 20220317

DOCDB simple family (application)

**DE 102020123789 A 20200911**; CN 202180069490 A 20210818; EP 2021072942 W 20210818; EP 21765888 A 20210818;  
KR 20237012180 A 20210818; US 202318181579 A 20230310