

Title (en)
DEVICE FOR LASER-PROCESSING A WORKPIECE, USE AND METHOD

Title (de)
VORRICHTUNG ZUR LASERBEARBEITUNG EINES WERKSTÜCKS, VERWENDUNG UND VERFAHREN

Title (fr)
DISPOSITIF D'USINAGE AU LASER D'UNE PIÈCE, UTILISATION ET PROCÉDÉ

Publication
EP 3768459 A1 20210127 (DE)

Application
EP 19721524 A 20190321

Priority
• DE 102018002300 A 20180321
• DE 2019000077 W 20190321

Abstract (en)
[origin: WO2019179550A1] The invention relates to a device for processing a workpiece, substantially comprising plastic, for an at least partial regional weakening, wherein a first weakening laser beam is provided in order to achieve an at least partial regional weakening in the workpiece, particularly having a predetermined weakening wavelength and/or a weakening power, particularly a laser beam of a laser robot, and a second measuring laser beam is provided, wherein the second measuring laser beam has a measuring wavelength which differs from the weakening wavelength, and has a higher transmission than the first weakening laser beam, based on the region of the workpiece to be weakened, wherein the second measuring laser beam is to be directed substantially covering and/or parallel and/or corresponding to the first weakening laser beam, wherein a detection sensor is provided on a side of the workpiece facing away from the laser beam to detect a current power of the laser radiation of the second measuring laser beam after transmission of the second measuring laser beam through the workpiece, wherein a beam depth of the first weakening laser beam and/or a residual wall thickness after weakening by the first weakening laser beam can be indirectly determined in the workpiece, using a specified measuring laser-weakening laser relative path ratio.

IPC 8 full level
B23K 26/03 (2006.01); **B23K 26/08** (2014.01); **B23K 26/352** (2014.01); **B23K 26/36** (2014.01); **B23K 26/402** (2014.01); **B23K 26/70** (2014.01); **B60R 21/2165** (2011.01); **G01B 11/22** (2006.01); **B23K 101/00** (2006.01); **B23K 103/00** (2006.01)

CPC (source: EP)
B23K 26/032 (2013.01); **B23K 26/382** (2015.10); **B23K 26/402** (2013.01); **B29C 59/007** (2013.01); **B23K 2101/006** (2018.07); **B23K 2103/42** (2018.07); **B29C 2791/009** (2013.01)

Citation (search report)
See references of WO 2019179550A1

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

DOCDB simple family (publication)
WO 2019179550 A1 20190926; **WO 2019179550 A8 20191128**; DE 102018002300 A1 20190926; DE 112019001390 A5 20201203; EP 3768459 A1 20210127

DOCDB simple family (application)
DE 2019000077 W 20190321; DE 102018002300 A 20180321; DE 112019001390 T 20190321; EP 19721524 A 20190321