

Title (en)

METHOD FOR PROCESSING A SUBSTRATE USING A PUNCH

Title (de)

VERFAHREN ZUR BEARBEITUNG EINES SUBSTRATS MIT EINEM STANZSTEMPEL

Title (fr)

PROCÉDÉ DE TRAITEMENT D'UN SUBSTRAT AU MOYEN D'UN POINÇON

Publication

EP 3509806 A1 20190717 (DE)

Application

EP 17765409 A 20170907

Priority

- DE 102016217044 A 20160907
- EP 2017072523 W 20170907

Abstract (en)

[origin: WO2018046627A1] The invention relates to a method for processing a substrate (100) using a punch, the substrate (100) extending at least partially in a plane (206), wherein the method comprises the following steps: an opening (208) is punched out in the part of the substrate (100) extending in the plane (206) using the punch, wherein, during the punching process, the punch (204) is in a first punching position relative to the plane (206); after the punching process, the punch (204) and the substrate (100) are made to carry out a relative movement in a direction parallel to the plane (206), wherein, as a result of the relative movement, the punch (204) is positioned over a desired filling material (202) in a second punching position relative to the plane (206); in the second punching position, a filling element (102) is punched out from the desired filling material (202) using the punch, the filling element (102) remaining in the punch (204); the punch (204) and the substrate (100) are made to carry out another relative movement in a direction parallel to the plane (206), wherein, as a result of the relative movement, the punch (204) is positioned over the opening (208) in the substrate (100) in the first punching position relative to the plane (206); the filling element (102) remaining in the punch (204) is inserted into the opening (208) of the substrate (100) using the punch (204).

IPC 8 full level

B23K 20/10 (2006.01); **B26D 1/00** (2006.01); **B26D 5/02** (2006.01); **B26D 7/01** (2006.01); **B26D 7/08** (2006.01); **B26D 7/27** (2006.01); **B26F 1/44** (2006.01); **B42D 25/40** (2014.01); **G06K 19/00** (2006.01); **G06K 19/07** (2006.01)

CPC (source: EP)

B26D 5/02 (2013.01); **B26D 7/015** (2013.01); **B26D 7/086** (2013.01); **B26D 7/27** (2013.01); **B26F 1/44** (2013.01); **B42D 25/40** (2014.10); **B42D 25/475** (2014.10); **B26D 2001/0053** (2013.01); **B26F 2001/4427** (2013.01); **B42D 25/23** (2014.10); **B42D 25/351** (2014.10)

Citation (search report)

See references of WO 2018046627A1

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)

DE 102016217044 A1 20180308; **DE 102016217044 B4 20230420**; EP 3509806 A1 20190717; EP 3509806 B1 20221026; WO 2018046627 A1 20180315

DOCDB simple family (application)

DE 102016217044 A 20160907; EP 17765409 A 20170907; EP 2017072523 W 20170907