

Title (en)
DEVICE AND METHOD THE PRODUCTION AND SECONDARY MACHINING OF LAYERS APPLIED BY LASER CLADDING

Title (de)
VORRICHTUNG UND VERFAHREN ZUM HERSTELLUNG UND NACHBEARBEITEN VON SCHICHTEN AUFGETRAGEN DURCH LASERAUFTRAGSCHWEISSEN

Title (fr)
DISPOSITIF ET PROCÉDÉ DE FABRICATION ET D'USINAGE SECONDAIRE DE COUCHES APPLIQUÉES PAR REVÊTEMENT AU LASER

Publication
EP 4117850 A1 20230118 (DE)

Application
EP 20780558 A 20200909

Priority
• DE 102020106823 A 20200312
• DE 2020100787 W 20200909

Abstract (en)
[origin: CA3171144A1] The invention relates to a device (1) for laser cladding, a method (100) for operating such a device, and a component (4') produced using such a method and/or such a device comprising a laser cladding unit (2) having at least one laser cladding head (3) disposed thereon, one or more material sources (5) for supplying the laser cladding head with a material (M) to be applied, and a laser beam source (6) for supplying the laser cladding head with laser light (L) for carrying out the laser cladding, wherein the device is designed to apply material layers (42, 43, 44) from an adjacent application weld signature (MS) to a surface (41) of a component (4) in the form of at least a first layer (42) made from a material (M) that comprises structures (42s) projecting from the surface of the first layer and having a first hardness (H1), and a second layer (43) applied thereto made from a material (M) having a second hardness (H2) that is less than the first hardness, and the application process is controlled so that the second layer at least partly covers the structures projecting from the first layer.

IPC 8 full level
B23K 26/00 (2014.01); **B23K 26/03** (2006.01); **B23K 26/342** (2014.01); **B23K 26/36** (2014.01); **B23K 26/40** (2014.01); **B23K 28/02** (2014.01); **B23K 103/16** (2006.01); **B23K 103/18** (2006.01)

CPC (source: EP KR US)
B23K 26/0093 (2013.01 - EP KR US); **B23K 26/03** (2013.01 - EP KR US); **B23K 26/342** (2015.10 - EP KR US); **B23K 26/36** (2013.01 - EP); **B23K 26/40** (2013.01 - EP KR US); **B23K 28/02** (2013.01 - EP KR US); **B23K 2103/16** (2018.07 - EP); **B23K 2103/166** (2018.07 - EP KR US); **B23K 2103/18** (2018.07 - EP KR US); **Y02P 10/25** (2015.11 - EP)

Citation (search report)
See references of WO 2021180257A1

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 102020106823 A1 20210916; CA 3171144 A1 20210916; CN 115379918 A 20221122; EP 4117850 A1 20230118; KR 20220140032 A 20221017; MX 2022011193 A 20230105; US 2023136257 A1 20230504; WO 2021180257 A1 20210916

DOCDB simple family (application)
DE 102020106823 A 20200312; CA 3171144 A 20200909; CN 202080099263 A 20200909; DE 2020100787 W 20200909; EP 20780558 A 20200909; KR 20227034600 A 20200909; MX 2022011193 A 20200909; US 202017910282 A 20200909