

Title (en)
METHOD OF PRODUCING OR REPAIRING TURBINE OR ENGINE COMPONENTS, AND A COMPONENT, NAMELY A TURBINE OR ENGINE COMPONENT

Title (de)
VERFAHREN ZUR HERSTELLUNG ODER REPARATUR VON TURBINEN- ODER TRIEBWERKSBAUTEILEN, SOWIE BAUTEIL, NÄMLICH TURBINEN- ODER TRIEBWERKSBAUTEIL

Title (fr)
PROCÉDÉ DE FABRICATION OU DE RÉPARATION DE COMPOSANTS DE TURBINES OU DE MOTEURS AINSI QUE COMPOSANT, À SAVOIR COMPOSANT DE TURBINE OU DE MOTEUR

Publication
EP 2051829 A1 20090429 (DE)

Application
EP 07722486 A 20070531

Priority
• DE 2007000971 W 20070531
• DE 102006026704 A 20060608

Abstract (en)
[origin: WO2007140748A1] The invention relates to a method of producing or repairing single-crystalline turbine or engine components, in which a braze filler metal is heated to a temperature which is greater than or equal to the melting temperature of this braze filler metal. The molten mass, thus produced, of the braze filler metal is then introduced into a crack formed in the turbine or engine component or into a gap formed between two turbine or engine components. The temperature of the braze filler metal is then controlled in a non-isothermal manner during an epitaxial solidification process of this braze filler metal. This method, which can be used, for example, in connection with turbine or engine components made of a nickel-base alloy, has the advantage over conventional methods that it permits a quicker brazing repair of turbine or engine components, in particular in the case of large gap or crack widths, and in addition this method can bring about a state in which the repaired regions again have a single-crystalline structure and thus have the corresponding high mechanical strength, oxidation resistance and re-melting temperature.

IPC 8 full level
B23K 1/00 (2006.01); **F01D 5/00** (2006.01); **F01D 25/00** (2006.01)

CPC (source: EP US)
B23K 1/0018 (2013.01 - EP US); **B23K 35/30** (2013.01 - EP US); **B23P 6/007** (2013.01 - EP US); **F01D 5/005** (2013.01 - EP US); **B23K 2101/001** (2018.07 - EP US); **F05D 2230/238** (2013.01 - EP US); **F05D 2300/607** (2013.01 - EP US); **Y10T 29/49233** (2015.01 - EP US); **Y10T 29/49318** (2015.01 - EP US); **Y10T 428/12493** (2015.01 - EP US); **Y10T 428/12944** (2015.01 - EP US)

Citation (search report)
See references of WO 2007140748A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
DE 102006026704 A1 20071213; EP 2051829 A1 20090429; JP 2009540173 A 20091119; JP 5054100 B2 20121024; US 2010291405 A1 20101118; US 8555500 B2 20131015; WO 2007140748 A1 20071213

DOCDB simple family (application)
DE 102006026704 A 20060608; DE 2007000971 W 20070531; EP 07722486 A 20070531; JP 2009513543 A 20070531; US 30388007 A 20070531