

Title (en)

METHOD FOR FORGING A TITANIUM ALLOY THERMOMECHANICAL PART

Title (de)

VERFAHREN ZUM SCHMIEDEN EINES THERMOMECHANISCHEN TEILS AUS EINER TITANLEGIERUNG

Title (fr)

PROCEDE DE FORGEAGE D'UNE PIECE THERMOMECHANIQUE EN ALLIAGE DE TITANE.

Publication

EP 2344290 B1 20210721 (FR)

Application

EP 09748827 A 20090922

Priority

- FR 2009051780 W 20090922
- FR 0856337 A 20080922

Abstract (en)

[origin: WO2010031982A1] The invention relates to a method for forging a thermomechanical part and comprises the following steps: - providing a billet produced in a titanium alloy having a beta transus temperature T_b ; - carrying out at least one step of forging a blank of said billet at a temperature T_1 lower than the beta transus temperature T_b from before carrying out the forging operation whereby a blank is completed; carrying out a step of final forging said blank at a temperature T_2 greater than the beta transus temperature T_b from before carrying out the forging operation whereby a blank is completed. Said forging operation from the blank-forging step characteristically carries out, on every point of said billet, a deformation greater than a minimum deformation rate. The invention is useful for a rotating part of a turbine engine.

IPC 8 full level

B21K 3/04 (2006.01); **C22F 1/18** (2006.01)

CPC (source: EP US)

B21J 1/04 (2013.01 - EP US); **B21K 3/04** (2013.01 - EP US); **C22C 14/00** (2013.01 - EP US); **C22F 1/183** (2013.01 - EP US)

Citation (examination)

JP H1177212 A 19990323 - SUMITOMO METAL IND

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

FR 2936172 A1 20100326; **FR 2936172 B1 20120706**; BR PI0919264 A2 20151215; CA 2737412 A1 20100325; CN 102159340 A 20110817; CN 102159340 B 20140827; EP 2344290 A1 20110720; EP 2344290 B1 20210721; JP 2012502803 A 20120202; RU 2011115813 A 20121027; RU 2510680 C2 20140410; US 2011192509 A1 20110811; WO 2010031982 A1 20100325

DOCDB simple family (application)

FR 0856337 A 20080922; BR PI0919264 A 20090922; CA 2737412 A 20090922; CN 200980137246 A 20090922; EP 09748827 A 20090922; FR 2009051780 W 20090922; JP 2011527386 A 20090922; RU 2011115813 A 20090922; US 200913120048 A 20090922