Title (en)

METHOD FOR PRODUCING A HEAVY-DUTY COMPONENT MADE OF AN ALPHA+GAMMA TITANIUM ALUMINIDE ALLOY FOR PISTON ENGINES AND GAS TURBINES, IN PARTICULAR JET ENGINES

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES HOCHBELASTBAREN BAUTEILS AUS EINER ALPHA+GAMMA-TITANALUMINID-LEGIERUNG FÜR KOLBENMASCHINEN UND GASTURBINEN, INSBESONDERE FLUGTRIEBWERKE

Title (fr)

PROCEDE DE PRODUCTION D'UN COMPOSANT TRES RESISTANT EN ALLIAGE D'ALUMINURE DE TITANE ALPHA+GAMMA POUR MACHINES A PISTON ET TURBINES A GAZ, EN PARTICULIER GROUPES MOTOPROPULSEURS

Publication

EP 3067435 B2 20211124 (DE)

Application

EP 16153407 A 20160129

Priority

DE 102015103422 A 20150309

Abstract (en)

[origin: JP2016166418A] PROBLEM TO BE SOLVED: To provide a method for production of a highly stressable component from an α+γ- titanium aluminide alloy.SOLUTION: There is provided the method for production of a highly stressable component from an α+γ- titanium aluminide alloy for a reciprocating-piston engine and a gas turbine, especially an aircraft engine. The alloy used is a TiAl alloy having a composition containing, by atom%, Al:40 to 48%, Nb:2 to 8%, at least one kind of β-phase-stabilization element selected from Mo, V, Ta, Cr, Mn, Ni, Cu, Fe, Si:0.1 to 9%, B:0 to 0.5% and the balance Ti and smelting-related impurities, wherein deformation is carried out in a single stage starting from a preform with a volume distribution varying over the longitudinal axis, wherein the component is deformed isothermally in the β-phase region at a logarithmic deformation rate of 0.01 to 0.5 s.SELECTED DRAWING: None

IPC 8 full level

C22C 14/00 (2006.01); **C22F 1/18** (2006.01)

CPC (source: EP US)

C21D 1/26 (2013.01 - EP US); **C21D 1/30** (2013.01 - EP US); **C21D 8/00** (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C22C 14/00** (2013.01 - EP US); **C22C 30/00** (2013.01 - EP US); **C22F 1/002** (2013.01 - EP US); **C22F 1/02** (2013.01 - EP US); **C22F 1/16** (2013.01 - EP US); **C22F 1/183** (2013.01 - EP US)

Citation (opposition)

Opponent :

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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

DOCDB simple family (publication)

DE 102015103422 B3 20160714; EP 3067435 A1 20160914; EP 3067435 B1 20170726; EP 3067435 B2 20211124; JP 2016166418 A 20160915; JP 6200985 B2 20170920; PL 3067435 T3 20180131; PL 3067435 T5 20220314; US 10196725 B2 20190205; US 2016265096 A1 20160915

DOCDB simple family (application)

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