

Title (en)

Ni-based alloy for forging, method for manufacturing the same, and turbine component

Title (de)

Ni-basierte Schmiedelegierung, Herstellungsverfahren dafür und Turbinenkomponente

Title (fr)

Alliage à base de Ni pour le forgeage, son procédé de fabrication et composant de turbine

Publication

EP 2835434 A3 20150527 (EN)

Application

EP 14179191 A 20140730

Priority

JP 2013164148 A 20130807

Abstract (en)

[origin: EP2835434A2] An Ni-based alloy for forging of an embodiment contains, in mass%, C: 0.01 to 0.07%, Cr: 14 to 26%, Co: 10 to 15%, Mo: 5 to 12%, Al: 0.8 to 3%, Ti: 0.8 to 3%, and B: 0.001 to 0.006%, the balance being made of Ni and an unavoidable impurity, and satisfies a relation of $10 \text{ mass\%} \leq \text{Mo} + 0.176\text{Cr} + 0.037\text{Co} \leq 15 \text{ mass\%}$. Further, an average thickness of a carbide precipitated along a grain boundary is 250 nm or less.

IPC 8 full level

C22C 19/05 (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP KR)

C22C 19/03 (2013.01 - KR); **C22C 19/05** (2013.01 - EP KR); **C22C 19/055** (2013.01 - EP KR); **C22C 19/056** (2013.01 - EP KR); **C22F 1/10** (2013.01 - EP KR)

Citation (search report)

- [X] EP 2233594 A1 20100929 - TOSHIBA KK [JP]
- [X] EP 2309010 A1 20110413 - TOSHIBA KK [JP]
- [I] EP 2537608 A1 20121226 - TOSHIBA KK [JP]

Cited by

CN105170865A; US11453939B2; EP4023779A4; US11859262B2; US11131013B2; WO2020187368A1; WO2019125637A3

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)

EP 2835434 A2 20150211; **EP 2835434 A3 20150527**; **EP 2835434 B1 20170607**; CN 104342585 A 20150211; JP 2015030916 A 20150216; JP 6223743 B2 20171101; KR 20150017677 A 20150217; KR 20160046770 A 20160429

DOCDB simple family (application)

EP 14179191 A 20140730; CN 201410386619 A 20140807; JP 2013164148 A 20130807; KR 20140101004 A 20140806; KR 20160043494 A 20160408