

Title (en)
Ni-based single crystal super alloy

Title (de)
Monokristalline Superlegierung auf Nickelbasis

Title (fr)
Superalliage monocristallin à base de nickel

Publication
EP 1262569 A1 20021204 (EN)

Application
EP 02253782 A 20020529

Priority

- JP 2001161919 A 20010530
- JP 2002143572 A 20020517

Abstract (en)
The object of the present invention is to provide an Ni-based single crystal super alloy capable of improving strength by preventing precipitation of a TCP phase at high temperatures. This object is achieved by an Ni-based single crystal super alloy having a composition consisting of 5.0-7.0 wt % Al, 4.0-8.0 wt% Ta, 2.9-4.5 wt% Mo, 4.0-8.0 wt% W, 3.0-6.0 wt% Re, 0.01-0.50 wt% Hf, 2.0-5.0 wt% Cr, 0.1-15.0 wt% Co and 1.0-4.0 wt% Ru in terms of its weight ratio, with the remainder consisting of Ni and unavoidable impurities.

IPC 1-7
C22C 19/00

IPC 8 full level
C22C 19/05 (2006.01)

CPC (source: EP US)
C22C 19/057 (2013.01 - EP US)

Citation (search report)

- [AD] EP 0434996 A1 19910703 - GEN ELECTRIC [US]
- [PA] EP 1184473 A2 20020306 - TOSHIBA KK [JP], et al
- [A] EP 0848071 A1 19980617 - UNITED TECHNOLOGIES CORP [US]
- [A] FR 2780983 A1 20000114 - SNECMA [FR] & US 5151249 A 19920929 - AUSTIN CURTISS M [US], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 12 3 January 2001 (2001-01-03)

Cited by
EP1930455A4; CN112522543A; EP1642989A3; EP2128284A4; WO2009157556A1; WO2009157555A1; WO2017153087A1

Designated contracting state (EPC)
CH DE FR GB LI

DOCDB simple family (publication)
EP 1262569 A1 20021204; EP 1262569 A8 20030521; EP 1262569 B1 20050406; CA 2387828 A1 20021130; CA 2387828 C 20090915;
DE 60203562 D1 20050512; DE 60203562 T2 20060209; JP 2003049231 A 20030221; JP 3840555 B2 20061101; US 2003075247 A1 20030424

DOCDB simple family (application)
EP 02253782 A 20020529; CA 2387828 A 20020529; DE 60203562 T 20020529; JP 2002143572 A 20020517; US 15920202 A 20020530