

Title (en)

Highly temperature resistant lightweight construction alloy made of NiAl

Title (de)

Hochwarmfeste Leichtbaulegierung aus NiAl

Title (fr)

Alliage pour construction légère résistant à la chaleur en NiAl

Publication

**EP 2832872 A2 20150204 (DE)**

Application

**EP 14176757 A 20140711**

Priority

DE 102013214767 A 20130729

Abstract (en)

[origin: US2015315919A1] Disclosed is a material on the basis of intermetallic nickel aluminides for applications which require a high high-temperature strength. The material comprises more than 50 at. % nickel and ternary Laves phases. Also disclosed is a component of a turbomachine produced from the material.

Abstract (de)

Die vorliegende Erfindung betrifft einen Werkstoff für Anwendungen, die eine hohe Warmfestigkeit erfordern, auf Basis von intermetallischen Nickelaluminiden, wobei der Werkstoff mehr als 50 at.% Nickel und ternäre Laves - Phasen umfasst, sowie ein daraus hergestelltes Bauteil einer Strömungsmaschine, insbesondere eines Flugzeugtriebwerks.

IPC 8 full level

**C22C 19/00** (2006.01); **C22C 19/03** (2006.01)

CPC (source: EP US)

**C22C 19/007** (2013.01 - EP US); **C22C 19/03** (2013.01 - US); **F01D 5/28** (2013.01 - US); **F01D 9/02** (2013.01 - US); **F05D 2220/30** (2013.01 - US); **F05D 2300/177** (2013.01 - US)

Citation (applicant)

- US 5935349 A 19990810 - SAUTHOFF GERHARD [DE], et al
- ARTIKELN B. ZEUMER; G.SAUTHOFF: "Intermetallic NiAl-Ta alloys with strengthening Laves phase for high-temperature applications I. Basic properties", INTERMETALLICS, vol. 5, 1997, pages 563 - 577, XP004092045, DOI: doi:10.1016/S0966-9795(97)00031-9
- B. ZEUMER; G. SAUTHOFF: "Deformation behaviour of intermetallic NiAl-Ta alloys with strengthening Laves phase for high-temperature applications II. Effects of alloying with Nb and other elements", INTERMETALLICS, vol. 5, 1997, pages 641 - 649, XP004098783, DOI: doi:10.1016/S0966-9795(97)00046-0

Cited by

CN106011539A

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 2832872 A2 20150204**; **EP 2832872 A3 20150527**; **EP 2832872 B1 20160504**; DE 102013214767 A1 20150129; ES 2581298 T3 20160905; US 2015315919 A1 20151105

DOCDB simple family (application)

**EP 14176757 A 20140711**; DE 102013214767 A 20130729; ES 14176757 T 20140711; US 201414341955 A 20140728