

Title (en)
High temperature TiAl alloy

Title (de)
Hochtemperatur TiAl-Legierung

Title (fr)
Alliage TiAl haute température

Publication
EP 2905350 A1 20150812 (DE)

Application
EP 14154052 A 20140206

Priority
EP 14154052 A 20140206

Abstract (en)
[origin: US2015218675A1] The present invention relates to a TiAl alloy for use at high temperatures having the main constituents titanium and aluminum and having a proportion of aluminum of greater than or equal to 30 at. % and a matrix composed of β phase and precipitates of ω phase embedded in the matrix, with the β phase and the ω phase together making up at least 55% by volume of the microstructure, and also a process for the production thereof and the use thereof.

Abstract (de)
Die vorliegende Erfindung betrifft eine TiAl - Legierung für den Einsatz bei hohen Temperaturen mit den Hauptbestandteilen Titan und Aluminium und mit einem Aluminium - Anteil von größer oder gleich 30 at.% und einer Matrix aus β - Phase und in der Matrix eingelagerten Ausscheidungen aus ω - Phase, wobei die β - Phase und die ω - Phase zusammen mindestens 55 vol.% des Gefüges einnehmen, sowie ein Verfahren zu ihrer Herstellung und die Verwendung derselben.

IPC 8 full level
C22C 14/00 (2006.01); **C22C 1/04** (2006.01); **C22F 1/18** (2006.01)

CPC (source: EP US)

B22D 21/022 (2013.01 - EP US); **B22D 27/045** (2013.01 - EP US); **B22F 9/04** (2013.01 - EP US); **C22C 1/00** (2013.01 - EP US);
C22C 1/0458 (2013.01 - EP US); **C22C 1/047** (2023.01 - EP US); **C22C 14/00** (2013.01 - EP US); **C22C 27/02** (2013.01 - EP US);
C22C 30/00 (2013.01 - EP US); **C22F 1/183** (2013.01 - EP US); **B22F 2009/041** (2013.01 - EP US)

Citation (search report)

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- [A] WO 2012041276 A2 20120405 - MTU AERO ENGINES GMBH [DE], et al
- [A] MARTIN SCHLOFFER, BORYANA RASHKOVA, THOMAS SCHÖBERL, EMANUEL SCHWAIGHOFER, ZAOLI ZHANG, HELMUT CLEMENS, SVEA MAYER,; "Evolution of the ω phase in a B-stabilized multi-phase TiAl alloy and its effect on hardness", ACTA MATERIALIA, vol. 64, 19 November 2013 (2013-11-19), pages 241 - 252, XP002726501
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