

Title (en)  
HIGH STRENGTH AND DUCTILITY ALPHA/BETA TITANIUM ALLOY

Title (de)  
HOCHFESTE UND HOCH LEITFÄHIGE ALPHA-/BETA-TITANLEGIERUNG

Title (fr)  
ALLIAGE DE TITANE ALPHA/BÊTA À HAUTES RÉSISTANCE ET DUCTILITÉ

Publication  
**EP 2619340 A1 20130731 (EN)**

Application  
**EP 11760619 A 20110907**

Priority

- US 201113108045 A 20110516
- US 90385110 A 20101013
- US 88869910 A 20100923
- US 2011050603 W 20110907

Abstract (en)  
[origin: US2012076686A1] An alpha/beta titanium alloy comprising, in percent by weight based on total alloy weight: 3.9 to 4.5 aluminum; 2.2 to 3.0 vanadium; 1.2 to 1.8 iron; 0.24 to 0.30 oxygen; up to 0.08 carbon; up to 0.05 nitrogen; up to 0.015 hydrogen ; titanium; and up to a total of 0.30 of other elements. A non-limiting embodiment of the alpha/beta titanium alloy comprises an aluminum equivalent value in the range of 6.4 to 7.2, exhibits a yield strength in the range of 120 ksi (827.4 MPa) to 155 ksi (1,069 MPa), exhibits an ultimate tensile strength in the range of 130 ksi (896.3 MPa) to 165 ksi (1,138 MPa), and exhibits a ductility in the range of 12 to 30 percent elongation.

IPC 8 full level  
**A61L 27/06** (2006.01); **B62D 29/00** (2006.01); **C22C 14/00** (2006.01); **C22F 1/18** (2006.01)

CPC (source: EP KR RU US)  
**A61L 27/06** (2013.01 - EP RU US); **B62D 29/00** (2013.01 - RU); **B62D 29/008** (2013.01 - EP US); **C22C 14/00** (2013.01 - EP KR RU US); **C22F 1/18** (2013.01 - EP RU US); **C22F 1/183** (2013.01 - EP KR US)

Citation (search report)  
See references of WO 2012039929A1

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)  
**US 2012076686 A1 20120329**; AU 2011305924 A1 20130328; AU 2011305924 B2 20160407; BR 112013005248 A2 20180502; BR 112013005248 B1 20191001; CA 2809035 A1 20120329; CN 103097559 A 20130508; EP 2619340 A1 20130731; IL 224802 A 20170529; JP 2013539822 A 20131028; JP 6104164 B2 20170329; KR 102056035 B1 20191213; KR 20130099001 A 20130905; KR 20180049165 A 20180510; KR 20190040094 A 20190416; MX 2013002312 A 20130509; MX 368806 B 20191017; NZ 607852 A 20150529; PE 20131367 A1 20131125; RU 2013118571 A 20141027; RU 2616676 C2 20170418; TW 201224163 A 20120616; TW 201708555 A 20170301; TW I572721 B 20170301; TW I631222 B 20180801; WO 2012039929 A1 20120329

DOCDB simple family (application)  
**US 201113108045 A 20110516**; AU 2011305924 A 20110907; BR 112013005248 A 20110907; CA 2809035 A 20110907; CN 201180043312 A 20110907; EP 11760619 A 20110907; IL 22480213 A 20130219; JP 2013530169 A 20110907; KR 20137004042 A 20110907; KR 20187011862 A 20110907; KR 20197010036 A 20110907; MX 2013002312 A 20110907; NZ 60785211 A 20110907; PE 2013000621 A 20110907; RU 2013118571 A 20110907; TW 100134192 A 20110922; TW 105136978 A 20110922; US 2011050603 W 20110907