

Title (en)  
Nickel-based alloy

Title (de)  
Legierung auf Nickelbasis

Title (fr)  
Alliage à base de nickel

Publication  
**EP 1840232 A1 20071003 (FR)**

Application  
**EP 07105258 A 20070329**

Priority  
FR 0651145 A 20060331

Abstract (en)  
Alloy comprises (wt.%): chromium (11.5-13.5); cobalt (11.5-16); molybdenum (3.4-5); tungsten (3-5); aluminum (2.2-3.2); titanium (3.5-5); niobium (0.5-2); hafnium (0.25-0.35); zirconium (0-0.07); carbon (0.015-0.03); boron (0.01-0.02); and nickel (100). Independent claims are included for: (1) a process for fabricating a part, comprising manufacturing a draft of the part, or the part itself, from the alloy powder by a powder metallurgical technique; and (2) a part of turbo machine, which is made of the alloy.

Abstract (fr)  
L'invention concerne des alliages, ou superalliages, à base de nickel (Ni) comprenant essentiellement les éléments suivants dans les teneurs indiquées en pourcentages en poids: Cr : 11,5 à 13,5 %; Co : 11,5 à 16,0 %; Mo : 3,4 à 5,0 %; W : 3,0 à 5,0 %; Al : 2,2 à 3,2 %; Ti : 3,5 à 5,0 %; Nb : 0,5 à 2,0 %; Hf : 0,25 à 0,35 %; Zr : 0 à 0,07 %; C : 0,015 à 0,030 %; B : 0,01 à 0,02 %; et Ni : complément à 100 %. Utilisation pour la réalisation de disques de turbine ou de compresseur de turbomachines, selon des procédés de métallurgie des poudres.

IPC 8 full level  
**C22C 19/05** (2006.01)

CPC (source: EP US)  
**C22C 1/0433** (2013.01 - EP US); **C22C 19/05** (2013.01 - EP US); **C22C 19/056** (2013.01 - EP US); **C22F 1/10** (2013.01 - EP US)

Citation (search report)  
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• [A] EP 0849370 A1 19980624 - UNITED TECHNOLOGIES CORP [US]  
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• [A] WO 9518875 A1 19950713 - UNITED TECHNOLOGIES CORP [US]  
• [A] FLAGEOLET ET AL: "On the role of gamma particles within gamma' precipitates on damage accumulation in the P/M nickel-base superalloy N18", MATERIALS SCIENCE AND ENGINEERING A: STRUCTURAL MATERIALS: PROPERTIES, MICROSTRUCTURE & PROCESSING, LAUSANNE, CH, vol. 399, no. 1-2, 15 June 2005 (2005-06-15), pages 199 - 205, XP005006437, ISSN: 0921-5093

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Designated contracting state (EPC)  
DE FR GB IT

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**EP 1840232 A1 20071003; EP 1840232 B1 20090513**; CA 2583140 A1 20070930; CA 2583140 C 20150317; DE 602007001092 D1 20090625; FR 2899240 A1 20071005; FR 2899240 B1 20080627; JP 2007277721 A 20071025; JP 5398123 B2 20140129; RU 2007111861 A 20081010; RU 2433197 C2 20111110; US 2007227630 A1 20071004

DOCDB simple family (application)  
**EP 07105258 A 20070329**; CA 2583140 A 20070329; DE 602007001092 T 20070329; FR 0651145 A 20060331; JP 2007091967 A 20070330; RU 2007111861 A 20070330; US 69420407 A 20070330