

Title (en)

High strength hot corrosion and oxidation resistant, directionally solidified nickel base superalloy and articles

Title (de)

Hochfeste heisskorrosions- und oxidationsbeständige, gerichtet erstarrte Superlegierung auf Nickelbasis und Gegenstände

Title (fr)

Superaliage à base de nickel à haute résistance mécanique, résistant à la corrosion et à l'oxydation à chaud, solidifié directionnellement et objets en ce superalliage

Publication

EP 1329527 B1 20060510 (EN)

Application

EP 02258710 A 20021218

Priority

US 2356501 A 20011218

Abstract (en)

[origin: EP1329527A2] Corrosion and oxidation resistant, high strength, directionally solidified superalloy alloys and articles are described. The articles have a nominal composition in weight percent of about 12% Cr, 9% Co, 1.9% Mo, 3.8% W, 5% Ta, 3.6% Al, 4.1% Ti, 0.015% B, 0.1 % C, up to about 0.02 Zr, balance essentially nickel, and include no intentional additions of hafnium or zirconium, and also have a small amounts of tantalum carbide. The resultant articles have good hot corrosion resistance and superior oxidation resistance and creep properties. The articles are preferably columnar grain, but may also be single crystal. <IMAGE>

IPC 8 full level

C22C 19/03 (2006.01); **F02C 7/00** (2006.01); **C22C 19/05** (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP KR US)

C22C 19/05 (2013.01 - KR); **C22C 19/056** (2013.01 - EP US)

Cited by

WO2011047714A1; US9068251B2; EP3363923A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)

EP 1329527 A2 20030723; **EP 1329527 A3 20031022**; **EP 1329527 B1 20060510**; AT E325901 T1 20060615; CN 1322157 C 20070620; CN 1432659 A 20030730; DE 60211297 D1 20060614; DE 60211297 T2 20070426; ES 2261604 T3 20061116; IL 153479 A0 20030706; JP 2003231933 A 20030819; JP 4413492 B2 20100210; KR 100954683 B1 20100427; KR 20030051386 A 20030625; RU 2295585 C2 20070320; UA 73989 C2 20051017; US 2003111138 A1 20030619

DOCDB simple family (application)

EP 02258710 A 20021218; AT 02258710 T 20021218; CN 02154211 A 20021218; DE 60211297 T 20021218; ES 02258710 T 20021218; IL 15347902 A 20021216; JP 2002366323 A 20021218; KR 20020081052 A 20021218; RU 2002135012 A 20021216; UA 20021210223 A 20021217; US 2356501 A 20011218