Title (en)

Single crystal nickel-based superalloy with high solvus gamma prime phase

Title (de)

Monokristalline Superlegierung auf Nickelbasis mit hoher Gamma-prime-phase

Title (fr)

Superalliage monocristallin à base de nickel à haut solvus phase gamma prime

Publication

EP 0971041 A1 20000112 (FR)

Application

EP 99401533 A 19990621

Priority

FR 9808693 A 19980707

Abstract (en)

A nickel base superalloy, having specified contents of rhenium and ruthenium, is new. A nickel base superalloy has the composition (by wt.) 3.5-7.5% Cr, 0-1.5% Mo, 1.5-5.5% Re, 0-5.5% Ru, 3.5-8.5% W, 5-6.5% Al, 0-2.5% Ti, 4.5-9% Ta, 0.08-0.12% Hf, 0.08-0.12% Si, balance Ni and impurities.

Abstract (fr)

Le superalliage selon l'invention, adapté à la fabrication de pièces de turbomachines par solidification monocristalline, possède la composition en masse suivante: Cr, 3,5 à 7,5 %; Mo, 0 à 1,5 %; Re, 1,5 à 5,5 %; Ru, 0 à 5,5 %; W, 3,5 à 8,5 %; Al, 5 à 6,5 %; Ti, 0 à 2,5 %; Ta, 4,5 à 9 %; Hf, 0,08 à 0,12 %; Si, 0,08 à 0,12 %, le complément à 100 % étant constitué par Ni et les impuretés éventuelles.

IPC 1-7

C22C 19/05; C30B 11/00

IPC 8 full level

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

CPC (source: EP)

C22C 19/057 (2013.01)

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