

Title (en)

Superalloy optimized for high-temperature performance in high-pressure turbine disks

Title (de)

Superlegierung mit optimiertem Hochtemperaturwirkungsgrad in Hochdruckturbinenscheiben

Title (fr)

Superaliage optimise pour performance a haute temperature dans disques de turbine a haute pression

Publication

**EP 1201777 B1 20040204 (EN)**

Application

**EP 00308571 A 20000929**

Priority

EP 00308571 A 20000929

Abstract (en)

[origin: EP1201777A1] A superalloy has a composition of, in weight percent, from about 16.0 percent to about 22.4 percent cobalt, from about 6.6 percent to about 14.3 percent chromium, from about 1.4 percent to about 3.5 percent tantalum, from about 1.9 percent to about 4.0 percent tungsten, from about 1.9 percent to about 3.9 percent molybdenum, from about 0.03 percent to about 0.10 percent zirconium, from about 0.9 percent to about 3.0 percent niobium, from about 2.4 percent to about 4.6 percent titanium, from about 2.6 percent to about 4.8 percent aluminum, from 0 to about 2.5 percent rhenium, from about 0.02 percent to about 0.10 percent carbon, from about 0.02 percent to about 0.10 percent boron, balance nickel and minor amounts of impurities. The superalloy is advantageously utilized in aircraft gas turbine disks.

IPC 1-7

**C22C 19/05**

IPC 8 full level

**C22C 1/04** (2006.01); **C22C 19/05** (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP)

**C22C 1/0441** (2013.01); **C22C 19/056** (2013.01); **C22C 19/057** (2013.01); **C22F 1/10** (2013.01); **B22F 2003/248** (2013.01); **B22F 2998/00** (2013.01); **B22F 2998/10** (2013.01)

Cited by

EP1797981A3; EP1813690A1; US7138020B2; CN103341586A; CN114672696A; US11898228B2; US10138534B2; US10309229B2; US10266919B2; US10422024B2; EP1710322A1; US8147749B2; US6974508B1; US7708846B2; EP3450583A1; EP4123044A4; JP2023520951A; EP2628810A1; US9783873B2; US7553384B2; EP2628811A1; US9752215B2; EP3231881A1; WO2022222225A1; EP3421622A1; EP3995594A1

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