Title (en)

NICKEL-BASED SUPER-HEAT-RESISTANT ALLOY AND GAS TURBINE COMPONENT USING SAME

Title (de)

AUF NICKEL BASIERENDE SUPERWÄRMEBESTÄNDIGE LEGIERUNG UND GASTURBINENBAUTEIL DAMIT

Title (fr)

ALLIAGE A BASE DE NICKEL A HAUTE RESISTANCE THERMIQUE ET CONSTITUANT DE TURBINE A GAZ L'UTILISANT

Publication

EP 1715068 B1 20120801 (EN)

Application

EP 04807451 A 20041221

Priority

- JP 2004019094 W 20041221
- JP 2003435037 A 20031226

Abstract (en)

[origin: US2008008618A1] A Ni-base superalloy of the present invention essentially includes, by weight %, Co: 9 to 11%, Cr: 9 to 12%, Mo: up to 1%, W: 6 to 9%, Al: 4 to 5%, Ti: 4 to 5%, Nb: up to 1%, Ta: up to 3%, Hf: 0.5 to 2.5%, Re: up to 3%, C: 0.05 to 0.15%, B: 0.005 to 0.015%, Zr: up to 0.05%, and the balance of Ni and inevitable impurities. This alloy, as a component material of an industrial gas turbine, has an excellent resistance to corrosion at high temperatures to deal with low-quality fuel and a resistance to oxidation at high temperatures and high-temperature strength to deal with improvement in thermal efficiency due to high-temperature demands and can ensure a high yield at a casting process.

IPC 8 full level

C22C 19/05 (2006.01)

CPC (source: EP US)

C22C 19/056 (2013.01 - EP US); **C22C 19/057** (2013.01 - EP US)

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DOCDB simple family (publication)

US 2008008618 A1 20080110; EP 1715068 A1 20061025; EP 1715068 A4 20091111; EP 1715068 B1 20120801; JP 4911753 B2 20120404; JP WO2005064027 A1 20071220; US 2010047110 A1 20100225; WO 2005064027 A1 20050714

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US 58424404 A 20041221; EP 04807451 A 20041221; JP 2004019094 W 20041221; JP 2005516587 A 20041221; US 58518409 A 20090908