

Title (en)

TIAL-BASED ALLOY, PROCESS FOR PRODUCTION OF THE SAME, AND ROTOR BLADE COMPRISING THE SAME

Title (de)

TIAL-LEGIERUNG, HERSTELLUNGSVERFAHREN DAFÜR UND ROTORSCHAUFEL, DIE SIE UMFASST

Title (fr)

ALLIAGE À BASE DE TIAL ET SON PROCÉDÉ DE FABRICATION, ET LAME DE ROTOR LE COMPRENANT

Publication

EP 2251445 A4 20111214 (EN)

Application

EP 09720943 A 20090130

Priority

- JP 2009051539 W 20090130
- JP 2008062690 A 20080312

Abstract (en)

[origin: EP2251445A1] A hot-forged TiAl-based alloy having excellent oxidation resistance and high strength at high temperatures, and a process for producing such an alloy. A TiAl-based alloy comprising Al: (40+a) atomic % and Nb: b atomic %, with the remainder being Ti and unavoidable impurities, wherein a and b satisfy formulas (1) and (2) below. $0 \leq a \leq 23 + a \leq b \leq 7 + a$ Also, a TiAl-based alloy comprising Al: (40+a) atomic % and Nb: b atomic %, and further comprising one or more elements selected from the group consisting of V: c atomic %, Cr: d atomic % and Mo: e atomic %, with the remainder being Ti and unavoidable impurities, wherein a to e satisfy formulas (3) to (9) shown below. $0 \leq a \leq 23 + a \leq b + 1.0 \leq c + 1.8 \leq d + 3.8 \leq e \leq 7 + a \leq b \leq 2c \leq 0 \leq d \leq 0 \leq e \leq 0 \leq c + d + e > 0$

IPC 8 full level

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Citation (search report)

- [X] US 6051084 A 20000418 - TETSUI TOSHIMITSU [JP]
- [E] EP 2075349 A2 20090701 - GEESTHACHT GKSS FORSCHUNG [DE]
- [X] EP 1127949 A2 20010829 - MITSUBISHI HEAVY IND LTD [JP]
- See references of WO 2009113335A1

Cited by

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