Title (en)

TITANIUM ALUMINIDE ALLOY MATERIAL FOR HOT FORGING, FORGING METHOD FOR TITANIUM ALUMINIDE ALLOY MATERIAL, AND FORGED BODY

Title (de)

TITAN-ALUMINID-LEGIERUNGSMATERIAL FÜR WARMSCHMIEDEN, SCHMIEDEVERFAHREN FÜR TITANALUMINID-LEGIERUNGSMATERIAL UND GESCHMIEDETER KÖRPER

Title (fr)

MATÉRIAU D'ALLIAGE D'ALUMINURE DE TITANE POUR FORGEAGE À CHAUD, PROCÉDÉ DE FORGEAGE POUR MATÉRIAU D'ALLIAGE D'ALUMINURE DE TITANE, ET CORPS FORGÉ

Publication

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Application

EP 20773214 A 20200227

Priority

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- JP 2020007922 W 20200227

Abstract (en)

A TiAl alloy material for hot forging has a chemical composition including, by atom, Al of 43.0% or greater and 45.0% or less, Nb of 4.0% or greater and 6.0% or less, Cr of 1.5% or greater and 3.5% or less, and Ti and inevitable impurities as a residue. The TiAl alloy material for hot forging may further include boron as necessary. The TiAl alloy material for hot forging is prepared and kept at a temperature within a range of a phase equilibrium temperature of any of a β-phase, a (β+α) phase, and a (β+α+γ) phase in a phase diagram of a TiAl alloy so as to be forged in a non-oxidizing atmosphere. The TiAl alloy material for hot forging is subjected to a first heat treatment and a second heat treatment after forging. This improves isothermal forgeability of the TiAl alloy material, so as to execute the hot forging at a lower forging temperature.

IPC 8 full level

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CPC (source: EP US)

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