Title (en)

TITANIUM ALLOY AND METHOD OF MANUFACTURING TITANIUM ALLOY MATERIAL

Title (de)

TITANLEGIERUNG UND VERFAHREN ZUR HERSTELLUNG VON TITANLEGIERUNGSMATERIAL

Title (fr)

ALLIAGE DE TITANE ET PROCEDE DE FABRICATION DE MATERIAU EN ALLIAGE DE TITANE

Publication

EP 1772528 B1 20130130 (EN)

Application

EP 04745513 A 20040602

Priority

JP 2004007614 W 20040602

Abstract (en)

[origin: EP1772528A1] Titanium alloys with a sufficient cold workability and excellent superplasticity characteristics as shown in the (1) and (2) below, and a method for manufacturing a titanium alloy material as shown in the (3) below are provided. (1) A titanium alloy consisting of, by mass %, Al of 2.0 to 4.0%, V of 4.0 to 9.0%, Zr of 0 to 2.0%, Sn of 0 to 3.0% and the balance being Ti and impurities. (2) A titanium alloy consisting of, by mass %, Al of 2.0 to 4.0%, V of 4.0 to 9.0%, Zr of 0 to 2.0%, Sn of 0 to 3.0%, further one or more elements selected from Fe of 0.20 to 1.0%, Cr of 0.01 to 1.0%, Cu of 0.01 to 1.0% and Ni of 0.01 to 1.0%, and the balance being Ti and impurities, wherein Veq obtained by the following equation (1) is in a range of 4.0 to 9.5: Veq = V + 1.9 #¢ Cr + 3.75 #¢ Fe where a symbol on a right side of the equation (1) means a content of each element. (3) A method for manufacturing titanium alloy materials, wherein the titanium alloy described in (1) or (2) is subjected to a cold working at a cross-section reduction rate of 40% or more.

IPC 8 full level

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CPC (source: EP US)

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