Title (en)

COLD-WORKABLE TI ALLOY

Title (de)

KALTVERFORMBARE T -LEG ERUNG

Title (fr)

ALLIAGE DE TI FORME A FROID

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2007051637A1] The invention makes it possible to produce workpieces from titanium alloys in a low-cost cold-working process. This is achieved by means of a (a+ß) titanium alloy with approximately 2 - 4.0% by weight of aluminium, approximately 4 - 5.5% by weight of vanadium, and approximately 4.5 - 6.0% by weight of molybdenum, which is made suitable for cold working while maintaining adequate strength of the workpiece produced by the additional alloying components of approximately 0.5 - 1.5% by weight of zirconium and approximately 0.5 - 1.5% by weight of tin. Furthermore, the cold workability is achieved according to the invention by means of a heat treatment process, comprising the steps of: annealing the titanium alloy at a lower annealing temperature that lies between 160° and 230° below the transformation temperature (ß-transus) and cooling the titanium alloy to ambient temperature. The titanium alloy is preferably first annealed at an upper annealing temperature, which lies between 50° and 100° below the transformation temperature (ß-transus).

IPC 8 full level

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