

Title (en)

PRECIPITATION HARDENING NICKEL ALLOY, PART MADE OF SAID ALLOY, AND MANUFACTURING METHOD THEREOF

Title (de)

AUSSCHIEDUNGSHÄRTENDE NICKELLEGIERUNG, AUS BESAGTER LEGIERUNG HERGESTELLTES TEIL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ALLIAGE À BASE NICKEL À DURCISSEMENT STRUCTURAL, PIÈCE EN CET ALLIAGE ET SON PROCÉDÉ DE FABRICATION

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Application

EP 15709520 A 20150313

Priority

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- EP 2015055346 W 20150313

Abstract (en)

[origin: WO2015136094A1] The invention relates to a precipitation hardening nickel alloy characterized in that the composition thereof is, in wt%: $18\% \leq \text{Cr} \leq 22\%$, preferably $18\% \leq \text{Cr} \leq 20\%$; $18\% \leq \text{Co} \leq 22\%$, preferably $19\% \leq \text{Co} \leq 21\%$; $4\% \leq \text{Mo} + \text{W} \leq 8\%$, preferably $5.5\% \leq \text{Mo} + \text{W} \leq 7.5\%$; traces $\leq \text{Zr} \leq 0.06\%$; traces $\leq \text{B} \leq 0.03\%$, preferably traces $\leq \text{B} \leq 0.01\%$; traces $\leq \text{C} \leq 0.1\%$, preferably traces $\leq \text{C} \leq 0.06\%$; traces $\leq \text{Fe} \leq 1\%$; traces $\leq \text{Nb} \leq 0.01\%$; traces $\leq \text{Ta} \leq 0.01\%$; traces $\leq \text{S} \leq 0.008\%$; traces $\leq \text{P} \leq 0.015\%$; traces $\leq \text{Mn} \leq 0.3\%$; traces $\leq \text{Si} \leq 0.15\%$; traces $\leq \text{O} \leq 0.0025\%$; and traces $\leq \text{N} \leq 0.0030\%$. The rest consists of nickel and impurities resulting from the production of said alloy. The Al content and Ti content moreover satisfy the following conditions: (1) $\text{Ti}/\text{Al} \leq 3$; (2) $\text{Al} + 1.2 \text{ Ti} \geq 2\%$; (3) $(0.2 \text{ Al} - 1.25)2 - 0.5 \text{ Ti} \geq 0\%$; (4) $\text{Ti} + 1.5 \text{ Al} \leq 4.5\%$. The invention also relates to a part made of said alloy and to the manufacturing method thereof.

IPC 8 full level

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Citation (search report)

See references of WO 2015136094A1

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