

Title (en)

NICKEL-CHROMIUM-ALUMINIUM ALLOY WITH GOOD FORMABILITY, CREEP STRENGTH AND CORROSION RESISTANCE

Title (de)

NICKEL-CHROM-ALUMINIUM-LEGIERUNG MIT GUTER VERARBEITBARKEIT, KRIECHFESTIGKEIT UND KORROSIONSBESTÄNDIGKEIT

Title (fr)

ALLIAGE NICKEL-CHROME-ALUMINIUM AVEC BONNE FORMABILITÉ, LA RÉSISTANCE AU FLUAGE ET À LA CORROSION

Publication

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Application

**EP 13731273 A 20130515**

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Abstract (en)

[origin: WO2013182177A1] The invention relates to a nickel-chromium-aluminum-iron alloy comprising (in wt.-%) 24 to 33% chromium, 1.8 to 4.0% aluminum, 0.10 to 7.0% iron, 0.001 to 0.50% silicon, 0.005 to 2.0% manganese, 0.00 to 0.60% titanium, 0.0002 to 0.05% each of magnesium and/or calcium, 0.005 to 0.12% carbon, 0.001 to 0.050% nitrogen, 0.0001 to 0.020% oxygen, 0.001 to 0.030% phosphorus, not more than 0.010% sulfur, not more than 2.0% molybdenum, not more than 2.0% tungsten, the remainder nickel and the usual process-related impurities, wherein the following relations must be satisfied:  $Cr + Al \geq 28$  (2a) and  $Fp \leq 39.9$  (3a) with  $Fp = Cr + 0.272 \cdot Fe + 2.36 \cdot Al + 2.22 \cdot Si + 2.48 \cdot Ti + 0.374 \cdot Mo + 0.538 \cdot W - 11.8 \cdot C$  (4a), wherein Cr, Fe, Al, Si, Ti, Mo, W and C is the concentration of the respective elements in % by mass.

IPC 8 full level

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