

Title (en)

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

Title (de)

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

Title (fr)

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

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Application

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Abstract (en)

[origin: WO2013182178A1] The invention relates to a nickel-chromium alloy comprising (in wt.-%) 29 to 37% chromium, 0.001 to 1.8% aluminum, 0.10 to 7.0% iron, 0.001 to 0.50% silicon, 0.005 to 2.0% manganese, 0.00 to 1.00% titanium and/or 0.00 to 1.10% niobium, 0.0002 to 0.05% each of magnesium and/or calcium, 0.005 to 12% carbon, 0.001 to 0.050% nitrogen, 0.001 to 0.030% phosphorus, 0.0001 to 0.020% oxygen, 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: $Cr + Al \geq 30$ (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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