

Title (en)

HIGHLY HEAT-RESISTANT NICKEL-BASED ALLOY AND ITS USE

Title (de)

HOCHWARMFESTE NICKELBASISLEGIERUNG UND VERWENDUNG DERSELBEN

Title (fr)

ALLIAGE A BASE DE NICKEL A HAUTE RESISTANCE A LA CHALEUR ET SON UTILISATION

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Application

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Priority

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Abstract (en)

[origin: DE4411228A1] Highly heat and oxidation-resistant, hot and cold-formable nickel-based alloy with a massive nitrogen content, consisting (in mass %) of 0.001 to 0.15 % carbon, 0.10 to 3.0 % silicon, max. 0.5 % manganese, max. 0.015 % phosphorus, max. 0.005 % sulphur, 25 to 35 % chromium, max. 5.0 % iron, max. 0.3 % aluminium, 0.25 to 1.2 % nitrogen, 0.001 to 0.01 % boron, 0.01 to 0.5 % yttrium, cerium, lanthanum, zirconium, hafnium and tantalum alone or in combination, the remainder being constituted of nickel and the usual admixtures from the production process, in which the nickel content is at least 64.0 %. The invention also concerns the use of this alloy as a material for objects which are required to be resistant to oxidation and carbonisation at temperatures in the 750 to 1200 DEG C range, e.g. for gas turbines, furnace components and heat conductors.

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