

Title (en)

Ni-base alloy member and method of producing the same.

Title (de)

Bauelement aus Nickelbasis-Legierung und Verfahren zur Herstellung davon.

Title (fr)

Élément de construction en alliage à base de nickel et procédé pour sa fabrication.

Publication

EP 0091279 A1 19831012 (EN)

Application

EP 83301811 A 19830330

Priority

JP 5578082 A 19820402

Abstract (en)

A nickel-base alloy with high stress corrosion cracking resistance and suitable for use as material for springs and bolts used in nuclear reactors consists essentially of, by weight, up to 0,15%C, up to 1%Si, up to 1,5%Mn, 14 to 25%Cr, up to 30%Fe, 0,2 to 2%Al, 0,5 to 3%Ti, 0,7 to 4,5%Nb and the balance substantially Ni, the high stress corrosion cracking resistance of this alloy in high-purity water at high temperatures and pressures (typically 288 DEG C, 86kg(cm<2>)) is obtained by 1) cold plastic working at a ratio of at least 40% between the solution heat treatment and the direct aging treatment or 2) cold plastic working at a ratio of beyond 25% between the solution heat treatment and a two-stepped aging treatment.

IPC 1-7

C22F 1/10; **C22C 19/05**

IPC 8 full level

C22C 19/05 (2006.01); **C22F 1/00** (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP)

C22C 19/058 (2013.01); **C22F 1/10** (2013.01)

Citation (search report)

- [A] FR 2277901 A2 19760206 - CREUSOT LOIRE [FR]
- [A] GB 1135003 A 19681127 - INT NICKEL LTD
- [A] FR 2089069 A5 19720107 - UNITED AIRCRAFT CORP
- [A] FR 2434206 A1 19800321 - WESTINGHOUSE ELECTRIC CORP [US]

Cited by

US8197748B2; EP0338574A1; CN104988356A; EP0402168A1; EP1340825A3; EP0260510A3; EP0178785A3; EP0226458A3; US4761190A; EP0384013A1; EP0235075A3; EP0242251A1; FR2596066A1; GB2199592A; GB2199592B; US6918972B2

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