

Title (en)
NI-BASE ALLOY MEMBER AND METHOD OF PRODUCING THE SAME

Publication
EP 0091279 B1 19861210 (EN)

Application
EP 83301811 A 19830330

Priority
JP 5578082 A 19820402

Abstract (en)
[origin: EP0091279A1] 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.

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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 (examination)
• EP 0056480 A2 19820728 - HITACHI LTD [JP], et al
• EP 0066361 A2 19821208 - HUNTINGTON ALLOYS [US]
• "Metals Handbook" 9th Ed., Vol. 3, 1980, page 211

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

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