

Title (en)
Completely martensitic steel alloy

Title (de)
Vollmartensitsche Stahllegierung

Title (fr)
Alliage d'acier complètement martensitique

Publication
EP 0866145 A2 19980923 (DE)

Application
EP 98810193 A 19980309

Priority
DE 19712020 A 19970321

Abstract (en)
A novel fully martensitic hardenable steel has the composition (by wt.) 8-15% Cr, up to 15% Co, up to 4% Mn, up to 4% Ni, up to 8% Mo, up to 6% W, 0.5-1.5% V, up to 0.15% Nb, up to 0.04% Ti, up to 0.4% Ta, up to 0.02% Zr, up to 0.02% Hf, NOTGREATER 50 ppm B, up to 0.1% C, 0.12-0.25% N, balance Fe and impurities, the sum of Mn + Ni being less than 4% and the sum of Mo + W being less than 8%. Also claimed is a heat treatment process for the above steel, comprising solution annealing at 1150-1250 degrees C for 0.5-15 hrs., cooling to room temperature and then tempering at 600-820 degrees C for 0.5-25 hrs.

Abstract (de)
Ein vollmartensitischer Vergütungsstahl (AP) besteht im wesentlichen aus: (gemessen in Gew.-%) 8 bis 15% Cr, bis 15% Co, bis 4% Mn, bis 4%Ni, bis 8% Mo, bis 6%W, 0.5 bis 1.5%V, bis 0.15%Nb, bis 0.04%Ti, bis 0.4%Ta, bis 0.02% Zr, bis 0.02% Hf, maximal 50 ppm B, bis 0.1%C und 0.12-0.25%N, wobei der Gehalt an Mn+Ni kleiner als 4% und der Gehalt an Mo+W kleiner als 8% ist, Rest Eisen und übliche erschmelzungsbedingte Verunreinigungen. <IMAGE>

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IPC 8 full level
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CPC (source: EP US)
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Cited by
EP1203831A3; EP1754798A1; EP1158067A1; DE10025808A1; US8147748B2; US6592685B2; US7985304B2; US6464804B2; WO2008119638A1; EP2116626A1; US7686898B2; US10563293B2; US11725267B2

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