Title (en)

HARDENED MARTENSITIC STEEL HAVING A LOW COBALT CONTENT, PROCESS FOR MANUFACTURING A PART FROM THIS STEEL, AND PART THUS OBTAINED

Title (de)

ANGELASSENER MARTENSITISCHER STAHL, VERFAHREN ZUR HERSTELLUNG EINES TEILS AUS DEM STAHL UND DADURCH ERHALTENES TEIL

Title (fr)

ACIER MARTENSITIQUE DURCI À TENEUR FAIBLE EN COBALT, PROCÉDÉ DE FABRICATION D'UNE PIÈCE À PARTIR DE CET ACIER, ET PIÈCE AINSI OBTENUE

Publication

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Application

EP 09784484 A 20090708

Priority

- FR 2009051351 W 20090708
- FR 0854810 A 20080715

Abstract (en)

[origin: WO2010007297A1] Hardened martensitic steel having a low cobalt content, process for manufacturing a part from this steel, and part thus obtained. The steel is characterized in that its composition is, in percentages by weight: C = 0.18-0.30%; Co = 1.5 - 4%; Cr = 2-5%; Al = 1-2%; Mo + W/2 = 1-4%; V = traces - 0.3%; Nb = traces - 0.1%; B = traces - 30 ppm; Ni = 11-16%, where Ni = 7 + 3.5 Al; Si = traces - 1.0%; Mn = traces - 4.0%; Ca = traces - 20 ppm; rare earths = traces - 100 ppm; if N = 10 ppm, Ti + Zr/2 = traces - 100 ppm, where Ti + Zr/2 = 10N; if 10 ppm < N = 20 ppm, Ti + Zr/2 = traces - 150 ppm; O = traces - 50 ppm; N = traces - 20 ppm; S = traces - 20 ppm; Cu = traces - 1%; P = traces - 200 ppm, the balance being iron and inevitable impurities resulting from the smelting. Process for manufacturing a part from this steel, and part thus obtained.

IPC 8 full level

C21D 1/32 (2006.01); **C21D 6/00** (2006.01); **C21D 6/04** (2006.01); **C21D 9/00** (2006.01); **C21D 9/28** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/52** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP US)

C21D 1/32 (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C21D 6/007** (2013.01 - EP US); **C21D 6/04** (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C21D 9/28** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US); **C22C 38/52** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP US); C21D 2211/008 (2013.01 - EP US)

Citation (search report)

See references of WO 2010007297A1

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