Title (en)

HIGH-STRENGTH STAINLESS STEEL WIRE HAVING EXCELLENT HEAT DEFORMATION RESISTANCE, HIGH-STRENGTH SPRING, AND METHOD FOR MANUFACTURING SAME

Title (de)

HOCHFESTER ROSTFREIER STAHLDRAHT MIT HERVORRAGENDER WÄRMEVERFORMUNGSBESTÄNDIGKEIT, HOCHFESTE FEDER UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

CÂBLE EN ACIER INOXYDABLE À RÉSISTANCE ÉLEVÉE AYANT UNE EXCELLENTE RÉSISTANCE À LA DÉFORMATION THERMIQUE, RESSORT À RÉSISTANCE ÉLEVÉE ET LEUR PROCÉDÉ DE FABRICATION

Publication

EP 2832876 B1 20191120 (EN)

Application

EP 13767507 A 20130327

Priority

- JP 2012076870 A 20120329
- JP 2013062817 A 20130325
- JP 2013058992 W 20130327

Abstract (en)

[origin: EP2832876A1] A high-strength stainless steel wire includes, by mass%, C: 0.02% to 0.12%, N: 0.005% to 0.03%, Si: 0.1% to 2.0%, Mn: 0.1% to 2.0%, Ni: 6.8% to 9.0%, Cr: 12.0% to 14.4%, Mo: 1.0% to 3.0%, Al: 0.5% to 2.0%, and a balance consisting of Fe and unavoidable impurities, in which an amount of C and N is controlled in a range of 0.05% #¤ (C + N) #¤ 0.13%, a deformation induced martensite formation index MdS value is 15 to 60, an amount of deformation induced martensite is 80 vol% to 99 vol%, and a tensile strength is 1800 MPa to 2200 MPa. MdS = 551 - 462 #¢ C + N - 9.2 #¢ Si - 8.1 #¢ Mn - 29 #¢ Ni + Cu - 13.7 #¢ Cr - 18.5 #¢ Mo

IPC 8 full level

C22C 38/00 (2006.01); **B21C 1/00** (2006.01); **C21D 6/00** (2006.01); **C21D 8/06** (2006.01); **C21D 9/02** (2006.01); **C21D 9/52** (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 38/50** (2006.01); **C22C 38/58** (2006.01); **F16F 1/02** (2006.01)

CPC (source: EP)

B21C 1/003 (2013.01); **C21D 6/004** (2013.01); **C21D 8/065** (2013.01); **C21D 9/52** (2013.01); **C22C 38/00** (2013.01); **C22C 38/002** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/06** (2013.01); **C22C 38/42** (2013.01); **C22C 38/44** (2013.01); **C22C 38/46** (2013.01); **C22C 38/48** (2013.01); **C22C 38/50** (2013.01); **C22C 38/58** (2013.01); B21C 37/04 (2013.01); C21D 9/02 (2013.01); C21D 2211/008 (2013.01)

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