

Title (en)

MARTENSITE STAINLESS STEEL OF HIGH CORROSION RESISTANCE

Title (de)

MARTENSITISCHER ROSTFREIER STAHL MIT HOHEM KORROSIONSWIDERSTAND

Title (fr)

ACIER INOXYDABLE EN MARTENSITE A HAUTE RESISTANCE A LA CORROSION

Publication

**EP 1026273 A4 20051214 (EN)**

Application

**EP 98932588 A 19980717**

Priority

- JP 9803243 W 19980717
- JP 19400097 A 19970718

Abstract (en)

[origin: EP1026273A1] A high-strength and high-toughness martensitic stainless steel, which is excellent in corrosion resistance to carbon dioxide, and which has no risk of cracking, even if used as welded under cathodic protection. The steel has the following basic composition (1) and satisfies the following condition (2). (1) The composition containing, on a mass basis, C: not greater than 0.04%, Cr: 7-15%, Ni: 0.7-8.0%, Al: 0.001-0.20%, or further containing one or more of Si, Mn, Cu, S, Nb, Ti, Zr, Mo, W, Ca, Mg, and La in a specified amount. (2) The following inequalities (1) and (2) are satisfied.  $M=98+47C-1.1Cr+1.4Ni-150Al-200Nb-50Ti-200Zr-22(Mo+0.5W) \geq 50$   $P \leq 0.046-0.0008HRC$  where the symbols of the elements in the inequalities (1)-1 to (1)-4 and (2) indicate the contents (% by mass) of the respective elements, and HRC in the inequality (2) indicates the Rockwell C-scale hardness of the steel as quenched. <IMAGE>

IPC 1-7

**C22C 38/00**; **C22C 38/40**; **C22C 38/42**; **C22C 38/50**

IPC 8 full level

**C22C 38/00** (2006.01); **C22C 38/40** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP)

**C22C 38/001** (2013.01); **C22C 38/002** (2013.01); **C22C 38/40** (2013.01); **C22C 38/50** (2013.01)

Citation (search report)

- [A] EP 0273279 A2 19880706 - NISSHIN STEEL CO LTD [JP]
- [A] PATENT ABSTRACTS OF JAPAN vol. 018, no. 430 (C - 1236) 11 August 1994 (1994-08-11)
- See references of WO 9904052A1

Cited by

EP1306458A3; EP1826285A4; EP1403391A4; EP1584699A4; NO337858B1; US8168008B2; EP1717328A4; US7361236B2; WO03033754A1; US8157930B2

Designated contracting state (EPC)

DE FR GB IT NL SE

DOCDB simple family (publication)

**EP 1026273 A1 20000809**; **EP 1026273 A4 20051214**; **EP 1026273 B1 20071219**; CA 2296349 A1 19990128; CA 2296349 C 20041102; DE 69838879 D1 20080131; DE 69838879 T2 20081204; JP 3555579 B2 20040818; NO 20000232 D0 20000117; NO 20000232 L 20000306; WO 9904052 A1 19990128

DOCDB simple family (application)

**EP 98932588 A 19980717**; CA 2296349 A 19980717; DE 69838879 T 19980717; JP 2000503256 A 19980717; JP 9803243 W 19980717; NO 20000232 A 20000117