

Title (en)

MARTENSITE STAINLESS STEEL OF HIGH CORROSION RESISTANCE

Title (de)

MARTENSITISCHER ROSTFREIER STAHL MIT HOHEM KORROSIONSWIDERSTAND

Title (fr)

ACIER INOXYDABLE MARTENSITIQUE A HAUTE RESISTANCE A LA CORROSION

Publication

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Application

EP 98932588 A 19980717

Priority

- JP 9803243 W 19980717
- JP 19400097 A 19970718

Abstract (en)

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

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CPC (source: EP)

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Cited by

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

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