

Title (en)
AUSTENITIC STAINLESS STEEL

Title (de)
AUSTENITISCHER EDELSTAHL

Title (fr)
ACIER INOXYDABLE AUSTÉNITIQUE

Publication
EP 2199419 A1 20100623 (EN)

Application
EP 08836524 A 20081002

Priority
• JP 2008067905 W 20081002
• JP 2007259387 A 20071003
• JP 2007259654 A 20071003

Abstract (en)
An austenitic stainless steel, which comprises by mass%, C: 0.04 to 0.18%, Si # 1.5%, Mn # 2.0%, Ni: 6 to 30%, Cr: 15 to 30%, N: 0.03 to 0.35%, sol. Al # 0.03% and further contains one or more elements selected from Nb # 1.0%, V # 0.5% and Ti # 0.5%, with the balance being Fe and impurities, and among the impurities P # 0.04%, S # 0.03%, Sn # 0.1%, As # 0.01%, Zn < 0.01%, Pb # 0.01% and Sb # 0.01%, and satisfy the conditions $P1 = S + \{(P + Sn)/2\} + \{(As + Zn + Pb + Sb)/5\} \# 0.06$ and $0.2 \# P2 = Nb + 2(V + Ti) \# 1.7 - 10 \times P1$ has high strength and excellent resistance to cracking due to grain boundary embrittlement in the welded portion during the use at high temperatures. Therefore, the said steel can be suitably used as materials for constructing machines and equipment, such as power plant boilers, which are to be used at high temperatures for a long period of time.

IPC 8 full level
C22C 38/60 (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/52** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR US)
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AL BA MK RS

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