

Title (en)
High corrosion-resistant, high-strength and non-magnetic stainless steel

Title (de)
Hoch korrosionsbeständiger, hochfester und nichtmagnetischer Edelstahl

Title (fr)
Acier inoxydable non magnétique à haute résistance à la corrosion

Publication
EP 2248919 A1 20101110 (EN)

Application
EP 10004443 A 20100427

Priority
• JP 2009108189 A 20090427
• JP 2009123661 A 20090522
• JP 2010015591 A 20100127

Abstract (en)
The present invention provides a high corrosion-resistant, high-strength and non-magnetic stainless steel containing: C: 0.01% to 0.05% by mass, Si: 0.05% to 0.50% by mass, Mn: more than 16.0% by mass but 19.0% by mass or less, P: 0.040% by mass or less, S: 0.010% by mass or less, Cu: 0.50% to 0.80% by mass, Ni: 3.5% to 5.0% by mass, Cr: 17.0% to 21.0% by mass, Mo: 1.80% to 3.50% by mass, B: 0.0010% to 0.0050% by mass, O: 0.010% by mass or less, and N: 0.45% to 0.65% by mass, with the balance substantially composed of Fe and unavoidable impurities, the steel satisfying the following equations (1) to (4): $Cr + 3.3 \times Mo + 16 \times N \neq 30$ Cr / C $\neq 330$ Cr / Mn > 1.0 Ni + 3 \times Cu / Cr + Mo > 0.25 wherein [Cr], [Mo], [N], [C], [Mn], [Ni] and [Cu] represent the content of Cr, the content of Mo, the content of N, the content of C, the content of Mn, the content of Ni, and the content of Cu in the steel in terms of mass %, respectively.

IPC 8 full level
C21D 8/12 (2006.01); **C21D 9/22** (2006.01); **C22C 38/04** (2006.01); **C22C 38/18** (2006.01); **C22C 38/20** (2006.01)

CPC (source: EP US)
C21D 8/12 (2013.01 - EP US); **C21D 9/22** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/18** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP US)

Citation (applicant)
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Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
AL BA ME RS

DOCDB simple family (publication)
EP 2248919 A1 20101110; **EP 2248919 B1 20151021**; CN 101921970 A 20101222; CN 101921970 B 20140312; JP 2011006776 A 20110113; JP 5526809 B2 20140618; US 2010272593 A1 20101028

DOCDB simple family (application)
EP 10004443 A 20100427; CN 201010159146 A 20100426; JP 2010015591 A 20100127; US 76639010 A 20100423