

Title (en)

FERRITIC-AUSTENITIC STAINLESS STEEL EXCELLENT IN CORROSION RESISTANCE AND WORKABILITY

Title (de)

FERRITISCH-AUSTENITISCHER EDELSTAHL MIT HERVORRAGENDER KORROSIONSBESTÄNDIGKEIT UND BEARBEITBARKEIT

Title (fr)

ACIER INOXYDABLE FERRITIQUE-AUSTÉNITIQUE PRÉSENTANT UNE EXCELLENTE RÉSISTANCE À LA CORROSION ET UNE EXCELLENTE APTITUDE AU FAÇONNAGE

Publication

EP 3434802 A1 20190130 (EN)

Application

EP 18188353 A 20080801

Priority

- JP 2007202016 A 20070802
- JP 2007222259 A 20070829
- EP 08792317 A 20080801
- JP 2008064260 W 20080801

Abstract (en)

The present invention relates to ferritic-austenitic stainless steel oriented to have low Ni which is excellent in corrosion resistance, particularly in corrosion resistance in a neutral chloride environment, and has high "uniform elongation" - a factor governing workability - and a method of production for the same. There are independently provided ferritic-austenitic stainless steels and methods of production for the same particularly having a corrosion resistance in a neutral chloride environment satisfying PI value(=Cr+3Mo+10N-Mn)÷18% and having a uniform elongation satisfying $-10 \times \frac{Md}{110}$ (where $Md = 551 - 462 \{ \{C\} + [N] \} - 9.2[Si] - 8.1[Mn] - 13.7[Cr] - 29[Ni] - 29[Cu] - 18.5[Mo]$, where [] is composition (mass%) in the austenite phase, and { } is average composition (mass%)).

IPC 8 full level

C22C 38/00 (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/18** (2006.01); **C22C 38/38** (2006.01); **C22C 38/42** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)

C21D 6/004 (2013.01 - EP KR US); **C21D 6/005** (2013.01 - EP KR US); **C21D 8/0226** (2013.01 - EP KR US); **C21D 8/0236** (2013.01 - EP KR US); **C21D 8/0263** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/18** (2013.01 - EP KR US); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/58** (2013.01 - EP KR US); **C21D 2211/001** (2013.01 - EP KR US); **C21D 2211/005** (2013.01 - EP KR US)

Citation (applicant)

- JP H1171643 A 19990316 - USINOR
- WO 0227056 A1 20020404 - AVESTAPOLARIT AKTIEBOLAG PUBL [SE], et al
- JP 2006169622 A 20060629 - JFE STEEL KK
- JP 2006183129 A 20060713 - JFE STEEL KK
- JP H10219407 A 19980818 - KAWASAKI STEEL CO
- JP 2006200035 A 20060803 - JFE STEEL KK
- JP 2006233308 A 20060907 - JFE STEEL KK
- JP H05247594 A 19930924 - SUMITOMO METAL IND
- JOURNAL OF THE ISI, vol. 63, 1977, pages 772
- STAINLESS STEEL HANDBOOK, pages 622
- CURRENT ADVANCES IN MATERIALS AND PROCESSES, vol. 18, 2005, pages 607
- SEIICHI SUZUKI, MICROSCOPY, vol. 39, no. 2, pages 121 - 124

Citation (search report)

- [X] EP 0889145 A1 19990107 - USINOR [FR]
- [X] EP 1715073 A1 20061025 - JFE STEEL CORP [JP]
- [A] JP H02305940 A 19901219 - NIPPON STEEL CORP
- [AD] JP 2006233308 A 20060907 - JFE STEEL KK
- [A] JP 2007154283 A 20070621 - JFE STEEL KK

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 MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 2172574 A1 20100407; **EP 2172574 A4 20170607**; **EP 2172574 B1 20190123**; CN 101765671 A 20100630; CN 101765671 B 20120111; EP 3434802 A1 20190130; EP 3434802 B1 20200701; ES 2717840 T3 20190625; ES 2817436 T3 20210407; KR 101185978 B1 20120926; KR 101253326 B1 20130411; KR 20100011989 A 20100203; KR 20120011098 A 20120206; US 2010126644 A1 20100527; US 2013118650 A1 20130516; WO 2009017258 A1 20090205

DOCDB simple family (application)

EP 08792317 A 20080801; CN 200880100675 A 20080801; EP 18188353 A 20080801; ES 08792317 T 20080801; ES 18188353 T 20080801; JP 2008064260 W 20080801; KR 20097026935 A 20080801; KR 20127001606 A 20080801; US 201213621473 A 20120917; US 45291808 A 20080801