Title (en)

FERRITIC STAINLESS STEEL AND PRODUCTION METHOD THEREFOR

Title (de)

FERRITISCHER EDELSTAHL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER INOXYDABLE À BASE DE FERRITE ET PROCÉDÉ DE PRODUCTION S'Y RAPPORTANT

Publication

EP 3121304 A1 20170125 (EN)

Application

EP 15764119 A 20150225

Priority

- JP 2014058880 A 20140320
- JP 2015000954 W 20150225

Abstract (en)

Provided is a ferritic stainless steel that has excellent corrosion resistance and displays good brazing properties when brazing is carried out at high temperature using a Ni-containing brazing metal. These effects are obtained as a result of the steel having a chemical composition containing, in mass%: 0.003% to 0.020% of C; 0.05% to 1.00% of Si; 0.10% to 0.50% of Mn, 0.05% or less of P; 0.01% or less of S; 16.0% to 25.0% of Cr; 0.05% to 0.35% of Ti; 0.005% to 0.05% of Al; and 0.005% to 0.025% of N, the balance being Fe and incidental impurities, and as a result of a nitrogen-enriched layer being created that has a nitrogen concentration peak value of 0.05 mass% to 0.30 mass% at a depth of within 0.05 μm of a surface of the steel.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 9/46** (2006.01); **C22C 38/28** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR US)

C21D 1/06 (2013.01 - EP US); **C21D 1/74** (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C21D 8/005** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP KR US); **C22C 38/004** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP KR US); **C22C 38/32** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP KR US); **C22C 38/54** (2013.01 - EP KR US); **C23C 8/02** (2013.01 - EP US); **C23C 8/26** (2013.01 - EP KR US); **C23C 8/80** (2013.01 - EP US); **C23G 1/00** (2013.01 - EP US); **C23G 1/081** (2013.01 - EP US); **C23G 1/086** (2013.01 - EP US); C21D 6/002 (2013.01 - EP US)

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3121304 A1 20170125; **EP 3121304 A4 20170426**; **EP 3121304 B1 20190206**; CN 106103773 A 20161109; CN 106103773 B 20180227; JP 5846339 B1 20160120; JP WO2015141145 A1 20170406; KR 101830561 B1 20180220; KR 20160122824 A 20161024; US 2017088912 A1 20170330; WO 2015141145 A1 20150924; WO 2015141145 A8 20160707

DOCDB simple family (application)

EP 15764119 A 20150225; CN 201580014082 A 20150225; JP 2015000954 W 20150225; JP 2015528799 A 20150225; KR 20167025496 A 20150225; US 201515126827 A 20150225