

Title (en)
AUSTENITE BASED STAINLESS STEEL AND METHOD OF DEHYDROGENATING THE SAME

Title (de)
EDELSTAHL AUF AUSTENITBASIS UND VERFAHREN ZU SEINER DEHYDROGENIERUNG

Title (fr)
ACIER INOXYDABLE AUSTÉNITIQUE ET SON PROCÉDÉ DE DÉSHYDROGÉNATION

Publication
EP 2108710 A4 20100714 (EN)

Application
EP 07829327 A 20071005

Priority
• JP 2007069589 W 20071005
• JP 2007022467 A 20070131

Abstract (en)
[origin: EP2108710A1] By focusing on the non-diffusible hydrogen that causes hydrogen embrittlement of austenitic stainless steel, the present invention provides an austenitic stainless steel in which the non-diffusible hydrogen is removed by maintaining the austenitic stainless steel in a vacuum of 0.2 Pa or less and heating at a heating temperature of 200 °C to 500 °C for 460 hours or less to remove the hydrogen (H) contained therein to a level of 0.00007 mass% (0.7 mass ppm) or less.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 3/06** (2006.01); **C21D 6/00** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
C21D 3/06 (2013.01 - EP KR US); **C21D 6/004** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C21D 2211/001** (2013.01 - EP KR US); **C21D 2211/008** (2013.01 - EP KR US)

Citation (search report)
• [X] US 2002040744 A1 20020411 - KANISAWA HIDEO [JP], et al
• [X] JP 2002146483 A 20020522 - NIPPON STEEL CORP, et al
• [X] US 2003089428 A1 20030515 - MURAKAMI YUKITAKA [JP], et al
• [A] Y. MURAKAMI, H. MATSUNAGA: "The effect of hydrogen on fatigue properties of steels used for fuel cell systems", INTERNATIONAL JOURNAL OF FATIGUE, vol. 28, 2 May 2006 (2006-05-02), pages 1509 - 1520, XP002581927, DOI: 10.1016/j.ijfatigue.2005.06.059
• See references of WO 2008093453A1

Citation (examination)
EP 0964072 A1 19991215 - MITSUBISHI HEAVY IND LTD [JP]

Cited by
FR3084375A1; US2016032434A1; US9945016B2; EP3017072A4; AU2014286035B2; WO2015001177A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2108710 A1 20091014; EP 2108710 A4 20100714; CA 2649355 A1 20080807; CN 101443469 A 20090527; CN 101443469 B 20121024; JP 2008208451 A 20080911; KR 20090109466 A 20091020; US 2009263269 A1 20091022; US 2010154939 A1 20100624; WO 2008093453 A1 20080807

DOCDB simple family (application)
EP 07829327 A 20071005; CA 2649355 A 20071005; CN 200780017282 A 20071005; JP 2007069589 W 20071005; JP 2007262057 A 20071005; KR 20087025288 A 20071005; US 30170707 A 20071005; US 68833510 A 20100115