

Title (en)

AUSTENITIC STEEL MATERIAL HAVING EXCELLENT HYDROGEN-EMBRITTLEMENT RESISTANCE

Title (de)

AUSTENITISCHES STAHLMATERIAL MIT HERVORRAGENDER BESTÄNDIGKEIT GEGEN WASSERSTOFFVERSPRÖDUNG

Title (fr)

MATÉRIAU EN ACIER AUSTÉNITIQUE PRÉSENTANT UNE EXCELLENTE RÉSISTANCE À LA FRAGILISATION PAR L'HYDROGÈNE

Publication

EP 3395989 B1 20200715 (EN)

Application

EP 16879356 A 20161222

Priority

- KR 20150184291 A 20151222
- KR 2016015085 W 20161222

Abstract (en)

[origin: EP3395989A1] Disclosed is an austenitic material having excellent hydrogen-embrittlement resistance, comprising, by weight, 0.1-0.5% of C, 5% or less (0% exclusive) of Cu, 1% or less (0% exclusive) of N, a content of Mn satisfying Mn #¥-10.7C+24.5, 10% or less of Cr, 5% or less of Ni, 5% or less of Mo, 4% or less of Si, 5% or less of Al, and a balance amount of Fe and inevitable impurities, with a T-EI 2 /T-EI 1 ratio of 0.5 or higher, wherein T-EI 1 is an elongation at break according to a tensile test at 25°C under an atmospheric condition of 1 atm and T-EI 2 is an elongation at break according to a tensile test at 25°C under a hydrogen condition of 70 MPa.

IPC 8 full level

C21D 6/00 (2006.01); **C21D 8/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/16** (2006.01); **C22C 38/38** (2006.01); **C22C 38/44** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)

C21D 6/004 (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 8/005** (2013.01 - EP US); **C22C 38/001** (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 US); **C22C 38/08** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP US); **C22C 38/16** (2013.01 - EP KR US); **C22C 38/38** (2013.01 - EP US); **C22C 38/44** (2013.01 - KR); **C22C 38/58** (2013.01 - EP KR US); **C21D 2211/001** (2013.01 - EP KR US); **C21D 2211/008** (2013.01 - EP US)

Cited by

WO2021152222A1; FR3106898A1

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

DOCDB simple family (publication)

EP 3395989 A1 20181031; **EP 3395989 A4 20181114**; **EP 3395989 B1 20200715**; CA 3009463 A1 20170629; CA 3009463 C 20200922; CN 108431275 A 20180821; JP 2019505675 A 20190228; JP 6703608 B2 20200603; KR 20180085797 A 20180727; US 2019010590 A1 20190110; WO 2017111489 A1 20170629

DOCDB simple family (application)

EP 16879356 A 20161222; CA 3009463 A 20161222; CN 201680075016 A 20161222; JP 2018533257 A 20161222; KR 2016015085 W 20161222; KR 20187019341 A 20161222; US 201616065062 A 20161222