

Title (en)  
REDUCED COST STEEL FOR HYDROGEN TECHNOLOGY WITH HIGH RESISTANCE TO HYDROGEN-INDUCED IMBRITTEMENT

Title (de)  
KOSTENREDUZIERTER STAHL FÜR DIE WASSERSTOFFTECHNIK MIT HOHER BESTÄNDIGKEIT GEGEN WASSERSTOFFINDUZIERTE VERSPRÖDUNG

Title (fr)  
ACIER À COÛT RÉDUIT POUR LA TECHNIQUE DE L'HYDROGÈNE, À HAUTE RÉSISTANCE CONTRE LA FRAGILISATION INDUITE PAR DE L'HYDROGÈNE

Publication  
**EP 2850215 B1 20180103 (DE)**

Application  
**EP 13731695 A 20130515**

Priority  
• DE 102012104260 A 20120516  
• EP 2013060084 W 20130515

Abstract (en)  
[origin: WO2013171277A1] An austenitic steel for hydrogen technology has the following composition: 0.01-0.4% by mass of carbon, <= 5% by mass of silicon, 0.3-30% by mass of manganese, 10.5-30% by mass of chromium, 4-12.5% by mass of nickel, <= 3% by mass of molybdenum, <= 0.2% by mass of nitrogen, <= 5% by mass of aluminum, <= 5% by mass of copper, <= 5% by mass of tungsten, <= 0.1% by mass of boron, <= 3% by mass of cobalt, <= 0.5% by mass of tantalum, <= 2% by mass of at least one of the elements: niobium, titanium, vanadium, hafnium and zirconium, <= 0.3% by mass of at least one of the elements yttrium, scandium, lanthanum, cerium and neodymium, remainder: iron and smelting-related steel-accompanying elements.

IPC 8 full level  
**C21D 8/00** (2006.01); **C21D 6/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/34** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/48** (2006.01); **C22C 38/54** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP US)  
**C21D 6/001** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/34** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US); **F02M 21/0206** (2013.01 - EP); **F02M 21/0218** (2013.01 - EP); **F02M 21/0296** (2013.01 - EP); **C21D 2211/001** (2013.01 - EP US)

Citation (examination)  
US 2009159602 A1 20090625 - HATANO MASA HARU [JP], et al

Cited by  
EP4032999A1; WO2022157247A1; EP4415084A2

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)  
**DE 102012104260 A1 20131121**; CN 104302790 A 20150121; EP 2850215 A1 20150325; EP 2850215 B1 20180103; US 10513764 B2 20191224; US 2015167134 A1 20150618; WO 2013171277 A1 20131121

DOCDB simple family (application)  
**DE 102012104260 A 20120516**; CN 201380025169 A 20130515; EP 13731695 A 20130515; EP 2013060084 W 20130515; US 201414541420 A 20141114