

Title (en)
SUPER DUPLEX STAINLESS STEEL HAVING EXCELLENT YIELD STRENGTH AND IMPACT TOUGHNESS AND MANUFACTURING METHOD THEREFOR

Title (de)
SUPERDUPLEXEDELSTAHL MIT HERVORRAGENDER STRECKGRENZE UND SCHLAGZÄHIGKEIT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
ACIER INOXYDABLE SUPER DUPLEX PRÉSENTANT UNE EXCELLENTE LIMITE D'ÉLASTICITÉ ET RÉSISTANCE AUX CHOCS ET SON PROCÉDÉ DE FABRICATION

Publication
EP 3239340 A1 20171101 (EN)

Application
EP 15873621 A 20151222

Priority
• KR 20140191169 A 20141226
• KR 2015014114 W 20151222

Abstract (en)
The present disclosure relates to super duplex stainless steel having excellent yield strength and impact toughness, wherein a reduction ratio and a heat treatment temperature are controlled so as to improve mechanical properties. The super duplex stainless steel having excellent yield strength and impact toughness according to one embodiment of the present disclosure is thick super duplex stainless steel having a thickness of 30 mm or greater, and includes, in weight%, Cr: 24% to 26%, Ni: 6.0% to 8.0%, Mo: 3.5% to 5.0%, N: 0.24% to 0.32%, and the remainder being Fe and inevitable impurities, wherein a microstructure includes a ferrite phase, an austenite phase and a secondary austenite phase, and grain size is 25 μm or less.

IPC 8 full level
C22C 38/44 (2006.01); **C21D 1/26** (2006.01); **C21D 8/02** (2006.01); **C22C 38/18** (2006.01)

CPC (source: CN EP KR US)
C21D 1/26 (2013.01 - CN EP KR US); **C21D 6/004** (2013.01 - EP US); **C21D 8/02** (2013.01 - EP KR US); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0226** (2013.01 - CN EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/001** (2013.01 - CN EP US); **C22C 38/18** (2013.01 - KR); **C22C 38/44** (2013.01 - CN EP KR US); **C21D 8/0426** (2013.01 - EP US); **C21D 2211/001** (2013.01 - CN EP US); **C21D 2211/004** (2013.01 - EP US); **C21D 2211/005** (2013.01 - CN 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 3239340 A1 20171101; **EP 3239340 A4 20180725**; CN 107109603 A 20170829; CN 107109603 B 20190507; JP 2018501403 A 20180118; KR 101668532 B1 20161024; KR 20160080316 A 20160708; US 2017327923 A1 20171116; WO 2016105094 A1 20160630

DOCDB simple family (application)
EP 15873621 A 20151222; CN 201580071309 A 20151222; JP 2017528546 A 20151222; KR 20140191169 A 20141226; KR 2015014114 W 20151222; US 201515536356 A 20151222