

Title (en)
STEEL PLATE AND METHOD FOR MANUFACTURING SAME

Title (de)
STAHLPLATTE UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
TÔLE D'ACIER ET PROCÉDÉ PERMETTANT DE FABRIQUER CETTE DERNIÈRE

Publication
EP 3081662 B1 20191113 (EN)

Application
EP 14869973 A 20141210

Priority

- JP 2013257401 A 20131212
- JP 2014083321 W 20141210

Abstract (en)
[origin: EP3081662A1] A steel plate includes a predetermined chemical composition, in which B is controlled to be less than 0.0003 %, and the balance is Fe and incidental impurities. The steel plate also includes precipitates containing Ti, Nb, and Mo and having a mean particle size of 20 nm or less, the relationship $[Nb]/([Ti] + [Nb] + [Mo]) \times 100 \geq 0.3$ being satisfied, where [Ti] is the Ti content, [Nb] is the Nb content, and [Mo] is the Mo content, thereby providing a thick, high tensile strength steel plate that is suitable for use in steel structures such as marine structures, ships, pressure vessels, and penstocks, has a yield stress (YS) of 460 MPa or greater, and has excellent low-temperature toughness of the heat-affected zone in a multilayer weld (CTOD property) and excellent strength and toughness after Post Weld Heat Treatment (PWHT property).

IPC 8 full level
C21D 8/02 (2006.01); **C21D 9/46** (2006.01); **C21D 9/50** (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 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
C21D 8/02 (2013.01 - EP KR US); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP KR US); **C21D 8/0263** (2013.01 - EP KR US); **C21D 9/46** (2013.01 - EP US); **C21D 9/50** (2013.01 - EP KR US); **C22C 38/00** (2013.01 - KR); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/08** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP KR US); **C22C 38/14** (2013.01 - EP KR US); **C22C 38/16** (2013.01 - EP US); **C22C 38/38** (2013.01 - KR); **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 US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP KR US); **C21D 2211/004** (2013.01 - EP KR US)

Cited by
CN111270169A; EP3604592A4; EP3950997A4

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 3081662 A1 20161019; **EP 3081662 A4 20161207**; **EP 3081662 B1 20191113**; CN 105980588 A 20160928; CN 105980588 B 20180427; JP 5950045 B2 20160713; JP WO2015088040 A1 20170316; KR 101846759 B1 20180406; KR 20160088375 A 20160725; US 2016312327 A1 20161027; WO 2015088040 A1 20150618; WO 2015088040 A8 20160506

DOCDB simple family (application)
EP 14869973 A 20141210; CN 201480067195 A 20141210; JP 2014083321 W 20141210; JP 2015524556 A 20141210; KR 20167016202 A 20141210; US 201415103093 A 20141210