

Title (en)
STEEL SHEET AND METHOD FOR MANUFACTURING SAME

Title (de)
STAHLBLECH UND VERFAHREN ZUR HERSTELLUNG DAVON

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

Publication
EP 3081662 A4 20161207 (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 $[Nb]/([Ti] + [Nb] + [Mo]) \neq 0.3$ 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 9/50** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (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)

Citation (search report)

- [I] WO 2013145770 A1 20131003 - JFE STEEL CORP [JP]
- [A] JP 2009263777 A 20091112 - JFE STEEL CORP
- [A] JP 2005281842 A 20051013 - JFE STEEL KK
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- [A] JP 2013151732 A 20130808 - JFE STEEL CORP
- See references of WO 2015088040A1

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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

Designated extension state (EPC)
BA ME

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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