

Title (en)
STEEL SHEET AND PRODUCTION METHOD THEREFOR

Title (de)
STAHLPLATTE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TÔLE D'ACIER ET SON PROCÉDÉ DE PRODUCTION

Publication
EP 3633060 A4 20200506 (EN)

Application
EP 18922100 A 20180820

Priority
JP 2018030676 W 20180820

Abstract (en)
[origin: EP3633060A1] A steel plate according to an aspect of the present invention has a chemical composition within a predetermined range, in which a total area ratio of martensite and bainite in a thickness middle portion is 99% or more, an average value of a prior austenite grain size in the thickness middle portion is less than 80 μm , Ceq is 0.750% to 0.800%, $\text{Al} \times \text{N}$ is 2.0×10^{-4} or more, Ti/N is 3.4 or less, $4 \times f/g \geq 9.00$ is satisfied, a three-point average of C-direction Charpy at -20°C in the thickness middle portion is 47 J or more, hardnesses of a surface layer and the thickness middle portion are 350 or more by HB, and a plate thickness is more than 200 mm.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 1/02** (2006.01); **C21D 1/18** (2006.01); **C21D 8/02** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/18** (2006.01); **C22C 38/40** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR)
C21D 1/02 (2013.01 - EP); **C21D 1/18** (2013.01 - EP); **C21D 8/02** (2013.01 - EP); **C21D 8/0226** (2013.01 - EP KR); **C21D 8/0263** (2013.01 - KR); **C21D 8/0273** (2013.01 - KR); **C22C 38/001** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/18** (2013.01 - EP); **C22C 38/40** (2013.01 - EP); **C22C 38/42** (2013.01 - KR); **C22C 38/44** (2013.01 - KR); **C22C 38/46** (2013.01 - KR); **C22C 38/54** (2013.01 - EP)

Citation (search report)

- [XA] EP 3351650 A1 20180725 - JFE STEEL CORP [JP]
- [XAY] EP 2757171 A1 20140723 - JFE STEEL CORP [JP]
- [YA] JP 2017186647 A 20171012 - KOBE STEEL LTD
- [A] WO 2011142285 A1 20111117 - NIPPON STEEL CORP [JP], et al
- [A] EP 3098331 A1 20161130 - JFE STEEL CORP [JP]
- See references of WO 2020039485A1

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 3633060 A1 20200408; **EP 3633060 A4 20200506**; **EP 3633060 B1 20211229**; AU 2018430608 A1 20200305; AU 2018430608 B2 20210204; CN 111083928 A 20200428; CN 111083928 B 20201120; JP 6493645 B1 20190403; JP WO2020039485 A1 20200827; KR 102115277 B1 20200526; KR 20200022387 A 20200303; WO 2020039485 A1 20200227

DOCDB simple family (application)
EP 18922100 A 20180820; AU 2018430608 A 20180820; CN 201880041321 A 20180820; JP 2018030676 W 20180820; JP 2018562695 A 20180820; KR 20197037386 A 20180820