

Title (en)

STEEL SHEET AND METHOD FOR PRODUCING SAME

Title (de)

STAHLBLECH UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

TÔLE D'ACIER ET SON PROCÉDÉ DE PRODUCTION

Publication

EP 3680358 A4 20200715 (EN)

Application

EP 18853601 A 20180907

Priority

- JP 2017173275 A 20170908
- JP 2018033286 W 20180907

Abstract (en)

[origin: EP3680358A1] A high strength steel plate, having excellent toughness not only in an inside portion of the steel plate but also in a surface layer of the steel plate, can be stably produced. The steel plate has a chemical composition containing, in mass%, C: 0.080 % or more and 0.200 % or less, Si: 0.40 % or less, Mn: 0.50 % or more and 5.00 % or less, P: 0.015 % or less, S: 0.0050 % or less, Cr: 3.00 % or less, Ni: 5.00 % or less, Al: 0.080 % or less, N: 0.0070 % or less, and B: 0.0030 % or less, the balance being Fe and inevitable impurities, wherein an equivalent carbon content CeqlIW is 0.57 % or more, an area fraction of bainite in the surface layer is 10 % or more, and a yield stress is 620 MPa or more.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 1/18** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (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 38/18** (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: CN EP KR)

C21D 1/18 (2013.01 - CN EP); **C21D 6/002** (2013.01 - EP); **C21D 6/004** (2013.01 - EP); **C21D 6/005** (2013.01 - EP); **C21D 8/02** (2013.01 - EP); **C21D 8/0205** (2013.01 - EP); **C21D 8/0226** (2013.01 - CN EP KR); **C21D 8/0273** (2013.01 - KR); **C22C 38/00** (2013.01 - EP); **C22C 38/001** (2013.01 - EP); **C22C 38/002** (2013.01 - EP); **C22C 38/005** (2013.01 - CN EP); **C22C 38/02** (2013.01 - CN EP); **C22C 38/04** (2013.01 - CN EP); **C22C 38/06** (2013.01 - CN EP); **C22C 38/08** (2013.01 - CN EP); **C22C 38/12** (2013.01 - CN EP); **C22C 38/14** (2013.01 - CN EP); **C22C 38/16** (2013.01 - CN EP); **C22C 38/18** (2013.01 - CN EP); **C22C 38/20** (2013.01 - CN); **C22C 38/22** (2013.01 - CN); **C22C 38/24** (2013.01 - CN); **C22C 38/26** (2013.01 - CN); **C22C 38/28** (2013.01 - CN); **C22C 38/32** (2013.01 - CN); **C22C 38/38** (2013.01 - CN); **C22C 38/40** (2013.01 - CN); **C22C 38/42** (2013.01 - CN EP KR); **C22C 38/44** (2013.01 - CN EP KR); **C22C 38/46** (2013.01 - CN EP KR); **C22C 38/48** (2013.01 - CN EP); **C22C 38/50** (2013.01 - CN EP); **C22C 38/54** (2013.01 - CN EP); **C22C 38/58** (2013.01 - CN EP KR); **C21D 2211/002** (2013.01 - CN); **C21D 2211/005** (2013.01 - CN); **C21D 2211/008** (2013.01 - CN)

Citation (search report)

- [XI] EP 2942414 A1 20151111 - JFE STEEL CORP [JP]
- [XI] EP 3135787 A1 20170301 - JFE STEEL CORP [JP]
- [A] EP 3120941 A1 20170125 - JFE STEEL CORP [JP]
- [A] WO 2016114146 A1 20160721 - JFE STEEL CORP [JP]
- [A] JP 2015143398 A 20150806 - JFE STEEL CORP
- [A] EP 2765210 A1 20140813 - JFE STEEL CORP [JP]
- [A] EP 2617852 A1 20130724 - JFE STEEL CORP [JP]
- See references of WO 2019050010A1

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 3680358 A1 20200715; EP 3680358 A4 20200715; CN 11105155 A 20200421; CN 11105155 B 20220121; CN 113737103 A 20211203; JP 6795083 B2 20201202; JP WO2019050010 A1 20191107; KR 102339890 B1 20211215; KR 20200034770 A 20200331; SG 11202001759Q A 20200330; WO 2019050010 A1 20190314

DOCDB simple family (application)

EP 18853601 A 20180907; CN 201880057703 A 20180907; CN 202110924659 A 20180907; JP 2018033286 W 20180907; JP 2019502269 A 20180907; KR 20207005295 A 20180907; SG 11202001759Q A 20180907