

Title (en)

HIGH MN STEEL SHEET AND METHOD FOR PRODUCING SAME

Title (de)

HOCHFESTES MN-STAHLEBLECH UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

TÔLE D'ACIER À HAUTE TENEUR EN MN ET PROCÉDÉ DE PRODUCTION DE CELLE-CI

Publication

EP 3553195 A4 20191016 (EN)

Application

EP 17879107 A 20171201

Priority

- JP 2016005080 W 20161208
- JP 2017043245 W 20171201

Abstract (en)

[origin: EP3553195A1] A high-Mn steel plate and a manufacturing method therefor are provided. The high-Mn steel plate has a component composition containing, in mass%, C: 0.20 to 0.70%, Si: 0.05 to 1.0%, Mn: 15 to 30%, P: 0.028% or less, S: 0.02% or less, Al: 0.01 to 0.1%, Cr: 0.5 to 7.0%, Ni: 0.03 to 0.30%, N: 0.0010 to 0.0200%, and one or two or more of Nb: 0.003 to 0.030%, V: 0.03 to 0.10%, and Ti: 0.003 to 0.040%, with the balance being Fe and incidental impurities, where: a microstructure 0.5 mm under a surface of the steel plate includes austenite as a base phase; and 25% or more of the austenite, in area ratio, has an equivalent circle diameter of 10 μ m or more and an aspect ratio of a major axis to a minor axis of 3 or more.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/12** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR)

C21D 6/005 (2013.01 - EP); **C21D 8/02** (2013.01 - KR); **C21D 8/0226** (2013.01 - EP); **C21D 8/0263** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C22C 38/001** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP); **C22C 38/12** (2013.01 - EP); **C22C 38/48** (2013.01 - EP); **C22C 38/50** (2013.01 - EP); **C22C 38/58** (2013.01 - EP KR); **C21D 2211/001** (2013.01 - EP KR)

Citation (search report)

- [X] JP 2016196703 A 20161124 - NIPPON STEEL & SUMITOMO METAL CORP
- [AD] JP 2016084529 A 20160519 - NIPPON STEEL & SUMITOMO METAL CORP
- [A] WO 2016052397 A1 20160407 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] ICHIRO DAIGO ET AL: "Comparison of Tramp Elements Compositions in Steel Bars between Japan and China", TETSU TO HAGANE: JOURNAL OF THE IRON AND STEEL INSTITUTE OF JAPAN, vol. 100, no. 6, 1 January 2014 (2014-01-01), JP, pages 756 - 760, XP055510095, ISSN: 0021-1575, DOI: 10.2355/tetsutohagane.100.756
- See references of WO 2018105510A1

Cited by

EP4249621A4; US11959157B2

Designated contracting state (EPC)

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BA ME

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EP 3553195 A1 20191016; **EP 3553195 A4 20191016**; **EP 3553195 B1 20210519**; BR 112019010870 A2 20191001; BR 112019010870 B1 20230411; CN 110050082 A 20190723; CN 110050082 B 20210622; JP 6418358 B1 20181107; JP WO2018105510 A1 20181206; KR 102309644 B1 20211006; KR 20190077470 A 20190703; KR 20210072140 A 20210616; PH 12019501270 A1 20191216; TW 201825694 A 20180716; TW I653343 B 20190311; WO 2018104984 A1 20180614; WO 2018105510 A1 20180614

DOCDB simple family (application)

EP 17879107 A 20171201; BR 112019010870 A 20171201; CN 201780075814 A 20171201; JP 2016005080 W 20161208; JP 2017043245 W 20171201; JP 2018512637 A 20171201; KR 20197015408 A 20171201; KR 20217017558 A 20171201; PH 12019501270 A 20190606; TW 106142964 A 20171207