

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 3305930 A4 20181205 (EN)

Application
EP 16800100 A 20160526

Priority
• JP 2015106755 A 20150526
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Abstract (en)
[origin: EP3305930A1] A steel sheet improved in hardenability and material formability having a predetermined chemical composition, characterized in that, in the metal structure of the steel sheet, an average grain size of carbides is 0.4 μm to 2.0 μm , an area ratio of pearlite is 6% or less, when a number of carbides in ferrite grains is A and a number of carbides at ferrite grain boundaries is B, $B/A > 1$, and when an X-ray diffraction intensity at $\{211\}\langle 011 \rangle$ at a plane of a part of 1/2 sheet thickness of the steel sheet is denoted by "I1" and an X-ray diffraction intensity at $\{100\}\langle 011 \rangle$ is denoted by "I0", $I1/I0 < 1$ is satisfied, and the steel sheet has a Vickers hardness of 100 HV to 150 HV.

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 38/06** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/38** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP KR US)
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Citation (search report)
• [Y] JP 2010235977 A 20101021 - NISSHIN STEEL CO LTD
• [Y] JP 5660220 B2 20150128
• [Y] JP 2011168842 A 20110901 - NIPPON STEEL CORP
• [Y] JP 2008274416 A 20081113 - NIPPON STEEL CORP
• [Y] US 2010282376 A1 20101111 - KIMURA HIDEYUKI [JP], et al
• [A] JP 2015081359 A 20150427 - JFE STEEL CORP
• [A] JP 5641086 B2 20141217
• [A] JP 2006265604 A 20061005 - JFE STEEL KK
• [A] JP 5499984 B2 20140521
• [A] US 2013167985 A1 20130704 - SAITO HAYATO [JP], et al
• See references of WO 2016190396A1

Cited by
EP3901302A4

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