Title (en)

HIGH_STRENGTH_ HOT_ROLLED STEEL SHEET

Title (de)

HOCHFESTES WARMGEWALZTES STAHLBLECH

Title (fr)

TÔLE D'ACIER LAMINÉE À CHAUD À RÉSISTANCE ÉLEVÉE

Publication

EP 3330394 B1 20200826 (EN)

Application

EP 15900339 A 20150731

Priority

JP 2015071845 W 20150731

Abstract (en)

[origin: EP3330394A1] There is provided a high strength hot rolled steel sheet including a predetermined chemical composition. A structure includes, by area ratio, 80% or more of polygonal ferrite, a total of 5% or less of martensite and austenite, and a total of 5% or less of pearlite and cementite, and a remainder is at least one selected from bainitic ferrite and bainite. When a standard deviation of micro-hardness of 50 arbitrary pieces of the polygonal ferrite present within a range of ±100 μm from a central plane in a sheet thickness direction is ĀHV, the ĀHV is 30 or smaller. A grain of the polygonal ferrite contains 5×10 7 pieces/mm 2 or more of Ti-containing carbide, and in 50% or more of the Ti-containing carbide, the aspect ratio which is a ratio of a length of a long side to a length of a short side is less than 3. The tensile strength is 540 MPa or higher.

IPC 8 full level

C22C 38/00 (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 38/34** (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); **C23C 2/06** (2006.01)

CPC (source: EP KR US)

C21D 8/0226 (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/002** (2013.01 - KR); **C22C 38/02** (2013.01 - KR); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/12** (2013.01 - KR); **C22C 38/14** (2013.01 - KR); **C22C 38/34** (2013.01 - EP US); **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); **C23C 2/06** (2013.01 - KR); **C23C 2/40** (2013.01 - KR); C21D 2211/005 (2013.01 - EP KR US); C23C 2/06 (2013.01 - US)

Cited by

EP3925771A1; EP4137592A4; WO2021254719A1

Designated contracting state (EPC)

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