

Title (en)  
HOT-ROLLED STEEL SHEET AND METHOD FOR PRODUCING SAME

Title (de)  
HEISSGEWALZTES STAHLBLECH UND VERFAHREN ZUR HERSTELLUNG DAVON

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

Publication  
**EP 3279353 A1 20180207 (EN)**

Application  
**EP 16771783 A 20160330**

Priority  
• JP 2015075329 A 20150401  
• JP 2016001834 W 20160330

Abstract (en)  
A hot rolled steel sheet comprises: a predetermined chemical composition; a microstructure in which a total area ratio of a tempered bainite phase and a tempered martensite phase is 70% or more, a total area ratio of a coarse pearlite phase, a martensite phase, and a retained austenite phase is 10% or less, the tempered bainite phase and the tempered martensite phase have laths with an average width of 1.0  $\mu\text{m}$  or less as a substructure, a proportion of Fe-based carbides with an aspect ratio of 5 or less in Fe-based carbides precipitated inside and at boundaries of the laths is 80% or more, and MC-type carbides with an average particle size of 20 nm or less are dispersed and precipitated inside and at the boundaries of the laths; and an average dislocation density of  $1.0 \times 10^{14} \text{ m}^{-2}$  or more and  $5.0 \times 10^{15} \text{ m}^{-2}$  or less.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 6/00** (2006.01); **C21D 6/02** (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 38/08** (2006.01); **C22C 38/10** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/22** (2006.01); **C22C 38/28** (2006.01); **C22C 38/38** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP US)  
**C21D 1/25** (2013.01 - EP US); **C21D 6/005** (2013.01 - US); **C21D 6/008** (2013.01 - US); **C21D 6/02** (2013.01 - US); **C21D 8/0205** (2013.01 - US); **C21D 8/0226** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 9/46** (2013.01 - US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/08** (2013.01 - EP US); **C22C 38/10** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/16** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP US); **C22C 38/60** (2013.01 - EP US); **C21D 8/0273** (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/004** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US)

Cited by  
US11965223B2; EP4083241A4

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