

Title (en)  
HIGH-STRENGTH STEEL PLATE AND METHOD FOR PRODUCING SAME

Title (de)  
HOCHFESTE STAHLPLATTE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
PLAQUE D'UN ACIER À HAUTE RÉSISTANCE ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 2612945 B1 20140416 (EN)**

Application  
**EP 11838055 A 20111102**

Priority  
• JP 2010248032 A 20101105  
• JP 2011075286 W 20111102

Abstract (en)  
[origin: EP2612945A1] A high-strength steel plate has a chemical composition containing, % by mass: C: 0.05% or more and less than 0.10%; Si: 0.20% or more and 0.50% or less; Mn: 0.20% or more and less than 1.20%; Cr: 0.20% or more and 1.20% or less; Mo: 0.20% or more and 0.60% or less; Nb: 0.010% or more and 0.050% or less; Ti: 0.005% or more and 0.030% or less; Al: 0.01% or more and 0.10% or less; B: 0.0003% or more and 0.0030% or less; V: 0% or more and 0.10% or less; Cu: 0% or more and 0.50% or less; and Ca: 0% or more and 0.0030% or less; and limited to: Ni: 0.1% or less; P: 0.012% or less; S: 0.005% or less; and N: 0.0080% or less; and a balance consisting of Fe and inevitable impurities, wherein Pcm is equal to or less than 0.22%, "A" is equal to or less than 2.0, the sum of a structural fraction of a lower bainite and a structural fraction of a martensite is equal to or more than 90%, the structural fraction of the lower bainite is equal to or more than 70%, an aspect ratio of a prior austenite grain is equal to or more than 2, a yield strength is equal to or more than 885 MPa, and a tensile strength is equal to or more than 950 MPa and equal to or less than 1130 MPa.

IPC 8 full level  
**C21D 8/02** (2006.01); **C22C 38/22** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01)

CPC (source: EP KR)  
**C21D 8/02** (2013.01 - KR); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP); **C22C 38/22** (2013.01 - EP); **C22C 38/26** (2013.01 - EP); **C22C 38/28** (2013.01 - EP); **C22C 38/32** (2013.01 - EP); **C22C 38/42** (2013.01 - EP); **C22C 38/44** (2013.01 - EP); **C22C 38/46** (2013.01 - EP); **C22C 38/48** (2013.01 - EP); **C22C 38/50** (2013.01 - EP); **C22C 38/54** (2013.01 - EP KR)

Cited by  
EP3901316A4; EP3492610A4; US9994942B2; US10344351B2

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