

Title (en)  
HOT-ROLLED STEEL PLATE MEMBER

Title (de)  
WARMGEWALZTES STAHLBLECHELEMENT

Title (fr)  
ÉLÉMENT DE PLAQUE D'ACIER LAMINÉE À CHAUD

Publication  
**EP 3144405 A4 20180103 (EN)**

Application  
**EP 15793575 A 20150515**

Priority  
• JP 2014101443 A 20140515  
• JP 2014101444 A 20140515  
• JP 2015064101 W 20150515

Abstract (en)  
[origin: EP3144405A1] A hot-formed steel sheet member having a chemical composition, consisting of, in terms of mass %, from 0.08 to 0.16% of C, 0.19% or less of Si, from 0.40 to 1.50% of Mn, 0.02% or less of P, 0.01% or less of S, from 0.01 to 1.0% of sol. Al, 0.01% or less of N, from 0.25 to 3.00% of Cr, from 0.01 to 0.05% of Ti, from 0.001 to 0.01% of B, from 0 to 0.50% of Nb, from 0 to 2.0% of Ni, from 0 to 1.0% of Cu, from 0 to 1.0% of Mo, from 0 to 1.0% of V, from 0 to 0.005% of Ca, and a remainder consisting of Fe and impurities, wherein a total volume fraction of martensite, tempered martensite, and bainite is 50% or more, and a volume fraction of ferrite is 3% or less, an average grain size of prior <sup>3</sup> grains is 10 μm or less, and a number density of residual carbides which are present is 4 × 10<sup>3</sup> per mm<sup>2</sup> or less.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 1/18** (2006.01); **C21D 8/02** (2006.01); **C21D 9/00** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (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 38/50** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR US)  
**B22D 11/001** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP US); **C21D 8/0236** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP KR US); **C22C 38/32** (2013.01 - EP KR US); **C22C 38/38** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP KR US); **C23C 2/06** (2013.01 - US); **C23C 2/12** (2013.01 - US); **C25D 3/22** (2013.01 - US); **C21D 1/18** (2013.01 - EP US); **C21D 9/00** (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US)

Citation (search report)  
• [I] JP 2007314817 A 20071206 - SUMITOMO METAL IND  
• [XI] US 2014037980 A1 20140206 - KAWASAKI KAORU [JP]  
• See references of WO 2015174530A1

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