

Title (en)

STEEL SHEET FOR HOT PRESSING USE, PRESS-MOLDED ARTICLE, AND METHOD FOR PRODUCING PRESS-MOLDED ARTICLE

Title (de)

STAHLBLECH ZUR VERWENDUNG IN EINER HEISSPRESSUNG, PRESSGEFORMTER ARTIKEL UND VERFAHREN ZUR HERSTELLUNG DES PRESSGEFORMTEN ARTIKELS

Title (fr)

FEUILLE D'ACIER POUR UNE UTILISATION DE PRESSAGE À CHAUD, ARTICLE MOULÉ PAR PRESSAGE ET PROCÉDÉ DE FABRICATION D'UN ARTICLE MOULÉ PAR PRESSAGE

Publication

**EP 2824204 A4 20151104 (EN)**

Application

**EP 13757070 A 20130301**

Priority

- JP 2012053845 A 20120309
- JP 2013055678 W 20130301

Abstract (en)

[origin: EP2824204A1] A steel sheet for hot pressing use according to the present invention has a specified chemical component composition, wherein some of Ti-containing precipitates contained in the steel sheet, each of which having an equivalent circle diameter of 30 nm or less, have an average equivalent circle diameter of 6 nm or less, the precipitated Ti amount and the total Ti amount in the steel fulfill the relationship represented by formula (1) shown below, and the sum total of the fraction of bainite and the fraction of martensite in the metal microstructure is 80 area% or more. Precipitated Ti amount mass % - 3.4 N  $\neq$  0.5 × total Ti amount mass % - 3.4 N (In the formula (1), [N] represents the content (mass%) of N in the steel.)

IPC 8 full level

**B21D 22/20** (2006.01); **C21D 9/00** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01);  
**C22C 38/06** (2006.01); **C22C 38/14** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP US)

**B21D 22/208** (2013.01 - EP US); **B21D 37/16** (2013.01 - EP US); **C21D 1/673** (2013.01 - EP US); **C21D 8/0221** (2013.01 - US);  
**C21D 8/0247** (2013.01 - US); **C21D 9/00** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US);  
**C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US);  
**C22C 38/06** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/20** (2013.01 - US); **C22C 38/22** (2013.01 - US);  
**C22C 38/24** (2013.01 - US); **C22C 38/26** (2013.01 - US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US);  
**C22C 38/38** (2013.01 - US); **C22C 38/50** (2013.01 - US); **C22C 38/54** (2013.01 - US); **C22C 38/60** (2013.01 - EP US);  
**C21D 2211/001** (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);  
**C21D 2221/00** (2013.01 - EP US)

Citation (search report)

- [A] US 2009238715 A1 20090924 - CHO YEOL-RAE [KR], et al
- [A] US 2009098408 A1 20090416 - SUN WEIPING [US]
- [A] EP 1616970 A1 20060118 - JFE STEEL CORP [JP]
- See references of WO 2013133165A1

Cited by

EP2826879A4; EP3421631A4; EP3521458A4; US10774405B2; US10266911B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 2824204 A1 20150114; EP 2824204 A4 20151104;** CN 104160051 A 20141119; CN 104160051 B 20160824; JP 2013185243 A 20130919;  
JP 5756774 B2 20150729; KR 101609968 B1 20160406; KR 20140127857 A 20141104; US 2015090377 A1 20150402;  
WO 2013133165 A1 20130912

DOCDB simple family (application)

**EP 13757070 A 20130301;** CN 201380012503 A 20130301; JP 2012053845 A 20120309; JP 2013055678 W 20130301;  
KR 20147024783 A 20130301; US 201314382437 A 20130301