

Title (en)

HOT PRESS MOLDED ARTICLE, METHOD FOR PRODUCING SAME, AND THIN STEEL SHEET FOR HOT PRESS MOLDING

Title (de)

HEISSGEPRESSTER FORMARTIKEL, HERSTELLUNGSVERFAHREN DAFÜR UND DÜNNES STAHLBLECH ZUM HEISSPRESSEN

Title (fr)

ARTICLE MOULÉ PAR PRESSAGE À CHAUD, PROCÉDÉ POUR PRODUIRE CELUI-CI, ET TÔLE D'ACIER MINCE POUR MOULAGE À LA PRESSE À CHAUD

Publication

EP 2719788 A4 20151021 (EN)

Application

EP 12797579 A 20120608

Priority

- JP 2011130635 A 20110610
- JP 2011208032 A 20110922
- JP 2012064851 W 20120608

Abstract (en)

[origin: US2014065007A1] There is provided a hot press-formed product, including a thin steel sheet formed by a hot press-forming method, and having a metallic structure that contains martensite at 80% to 97% by area and retained austenite at 3% to 20% by area, the remainder structure of which is at 5% by area or lower, whereby balance between strength and elongation can be controlled in a proper range and high ductility can be achieved.

IPC 8 full level

C22C 38/00 (2006.01); **B21D 22/20** (2006.01); **C21D 1/18** (2006.01); **C21D 9/00** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP KR US)

B21D 22/022 (2013.01 - EP US); **B21D 22/208** (2013.01 - KR); **B21D 22/22** (2013.01 - EP US); **B21D 37/16** (2013.01 - EP US); **C21D 1/18** (2013.01 - KR); **C21D 1/673** (2013.01 - EP US); **C21D 9/00** (2013.01 - KR); **C22C 38/001** (2013.01 - EP KR 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 - US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP 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 38/50** (2013.01 - US); **C22C 38/54** (2013.01 - US); **C22C 38/58** (2013.01 - US); **C22C 38/60** (2013.01 - KR); **C21D 2211/008** (2013.01 - EP US)

Citation (search report)

- [XY] JP 2010150612 A 20100708 - NIPPON STEEL CORP
- [X] US 2006137780 A1 20060629 - BEGUINOT JEAN [FR], et al
- [XP] EP 2460901 A1 20120606 - JFE STEEL CORP [JP]
- [XY] HEPING LIU ET AL: "Enhanced mechanical properties of a hot stamped advanced high-strength steel treated by quenching and partitioning process", SCRIPTA MATERIALIA, ELSEVIER, AMSTERDAM, NL, vol. 64, no. 8, 25 December 2010 (2010-12-25), pages 749 - 752, XP028360180, ISSN: 1359-6462, [retrieved on 20101231], DOI: 10.1016/J.SCRIPTAMAT.2010.12.037
- See references of WO 2012169640A1

Cited by

EP2623226A4; EP2728027A4; EP2824195A4; EP3395992A4; US10619223B2; US11530469B2; US11203796B2; US11613789B2; WO2018067554A1; US11612926B2; US11951522B2; EP2728027B1

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)

US 2014065007 A1 20140306; CN 103620075 A 20140305; CN 103620075 B 20160217; EP 2719788 A1 20140416; EP 2719788 A4 20151021; EP 2719788 B1 20161102; ES 2603590 T3 20170228; JP 2013079441 A 20130502; JP 5873393 B2 20160301; KR 20140027451 A 20140306; WO 2012169640 A1 20121213

DOCDB simple family (application)

US 201214114715 A 20120608; CN 201280027602 A 20120608; EP 12797579 A 20120608; ES 12797579 T 20120608; JP 2012064851 W 20120608; JP 2012131419 A 20120608; KR 20147000405 A 20120608