

Title (en)
HOT PRESS MEMBER AND METHOD FOR PRODUCING SAME

Title (de)
HEISSPRESSELEMENT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
ÉLÉMENT DE PRESSE À CHAUD ET SON PROCÉDÉ DE PRODUCTION

Publication
EP 3366797 A4 20180829 (EN)

Application
EP 16857079 A 20161003

Priority

- JP 2015205751 A 20151019
- JP 2016004458 W 20161003

Abstract (en)
[origin: EP3366797A1] A hot pressed member having all of: high strength of 1500 MPa or more in tensile strength TS; high ductility of 6.0 % or more in uniform elongation uEl; and excellent heat treatment hardenability of increasing in yield stress YS by 150 MPa or more when subjected to heat treatment (baking finish) is provided. A hot pressed member comprises: a predetermined chemical composition (in particular, low C of 0.090 % or more and less than 0.30 % and high Mn of 3.5 % or more and less than 11.0 %); a microstructure including a martensite phase of 70.0 % or more in volume fraction and a retained austenite phase of 3.0 % or more and 30.0 % or less in volume fraction; and a dislocation density of $1.0 \times 10^{16} / \text{m}^2$ or more.

IPC 8 full level
C22C 38/00 (2006.01); **B21D 22/20** (2006.01); **C21D 1/18** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/00** (2006.01); **C21D 9/46** (2006.01); **C22C 18/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/18** (2006.01); **C22C 38/60** (2006.01); **C23C 2/02** (2006.01); **C23C 2/28** (2006.01); **C23C 2/40** (2006.01); **C23C 2/06** (2006.01); **C23C 2/12** (2006.01)

CPC (source: EP KR US)
B21D 22/20 (2013.01 - KR); **C21D 1/18** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 8/0205** (2013.01 - KR); **C21D 8/0226** (2013.01 - KR); **C21D 8/0236** (2013.01 - KR); **C21D 8/0263** (2013.01 - EP KR US); **C21D 8/0268** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 18/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/08** (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 38/18** (2013.01 - EP US); **C23C 2/0224** (2022.08 - EP KR US); **C23C 2/024** (2022.08 - EP KR US); **C23C 2/06** (2013.01 - EP KR US); **C23C 2/12** (2013.01 - EP US); **C23C 2/28** (2013.01 - EP KR US); **C23C 2/40** (2013.01 - EP US); **C23C 30/005** (2013.01 - KR); **B21D 22/208** (2013.01 - EP US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP KR US)

Citation (search report)

- [E] EP 3181715 A1 20170621 - JFE STEEL CORP [JP]
- [YA] CN 104846274 A 20150819 - CHONGQING HAGONG EASY MOLDED STEEL TECHNOLOGY CO LTD & EP 3260569 A1 20171227 - EASYFORMING STEEL TECH CO LTD [CN]
- [YA] WO 2015102051 A1 20150709 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & EP 3093359 A1 20161116 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] WO 2015001705 A1 20150108 - JFE STEEL CORP [JP] & EP 3017892 A1 20160511 - JFE STEEL CORP [JP]
- See references of WO 2017068756A1

Cited by
EP3492618A4; EP3438316A4; US10858718B2; US11293075B2

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3366797 A1 20180829; EP 3366797 A4 20180829; EP 3366797 B1 20191218; CN 108138289 A 20180608; JP 2017078188 A 20170427; JP 6222198 B2 20171101; KR 20180063303 A 20180611; MX 2018004772 A 20180530; US 2019093191 A1 20190328; WO 2017068756 A1 20170427

DOCDB simple family (application)
EP 16857079 A 20161003; CN 201680061022 A 20161003; JP 2015205751 A 20151019; JP 2016004458 W 20161003; KR 20187013032 A 20161003; MX 2018004772 A 20161003; US 201615768894 A 20161003