

Title (en)

MANUFACTURING METHOD AND MANUFACTURING DEVICE FOR PRESS-MOLDED ARTICLE

Title (de)

HERSTELLUNGSVERFAHREN UND HERSTELLUNGSVORRICHTUNG FÜR PRESSGEFORMTEN ARTIKEL

Title (fr)

PROCÉDÉ DE FABRICATION ET DISPOSITIF DE FABRICATION D'UN ARTICLE MOULÉ PAR COMPRESSION

Publication

EP 3219403 A4 20181031 (EN)

Application

EP 15859100 A 20151111

Priority

- JP 2014229567 A 20141112
- JP 2014234144 A 20141119
- JP 2015005632 W 20151111

Abstract (en)

[origin: EP3219403A1] A press formed product includes a top panel part, vertical wall parts, and ridge line parts between the vertical wall parts and the top panel part, and includes a shape-changing part in a part of the ridge line parts. A producing method of the press formed product includes a preparation step of preparing a metal sheet as a starting material, and a press working step of performing press working on the starting material by using a punch, and a pad and a die that are paired with the punch. The press working step includes a first step of forming, by the punch and the pad, the entire region of the top panel part, the entire region of each of the ridge line parts including the shape-changing part, and a region up to a predetermined height from the border between the vertical wall part and the ridge line part of a region of each of the vertical wall parts, and a second step of forming, subsequent to the first step, by the punch and the die, the remaining regions with the starting material sandwiched between the punch and the pad.

IPC 8 full level

B21D 22/26 (2006.01); **B21D 5/01** (2006.01); **B21D 24/00** (2006.01)

CPC (source: EP KR RU US)

B21D 5/01 (2013.01 - KR RU US); **B21D 19/00** (2013.01 - EP); **B21D 22/06** (2013.01 - EP US); **B21D 22/20** (2013.01 - EP); **B21D 22/26** (2013.01 - KR RU US); **B21D 24/00** (2013.01 - RU US); **B21D 24/04** (2013.01 - KR); **B21D 47/00** (2013.01 - US)

Citation (search report)

- [X] EP 2796221 A1 20141029 - NIPPON STEEL & SUMITOMO METAL CORP [JP], et al
- [X] EP 2711104 A1 20140326 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [X] US 2011016945 A1 20110127 - NAKAO KEIICHIRO [JP], et al
- [X] WO 2013191256 A1 20131227 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [I] JP 2002263744 A 20020917 - TOYOTA MOTOR CORP, et al
- [E] EP 3202504 A1 20170809 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [E] EP 3037187 A1 20160629 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- See also references of WO 2016075937A1

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)

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