

Title (en)  
MANUFACTURING METHOD OF THICKNESS-VARIED METAL PLATE, MANUFACTURING METHOD OF PRESSED PART, AND PROCESSING MACHINE

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON DICKENVARIERTEN METALLPLATTEN, VERFAHREN ZUR HERSTELLUNG EINES PRESSTEILS UND BEARBEITUNGSMASCHINE

Title (fr)  
PROCÉDÉ DE FABRICATION DE PLAQUE MÉTALLIQUE À ÉPAISSEUR VARIABLE, PROCÉDÉ DE FABRICATION DE PIÈCE MOULÉE PAR COMPRESSION ET MACHINE DE TRAITEMENT

Publication  
**EP 3335814 B1 20211208 (EN)**

Application  
**EP 17206480 A 20171211**

Priority  
JP 2016246051 A 20161219

Abstract (en)  
[origin: EP3335814A1] In a manufacturing method of a thickness-varied metal plate, first, a cut plate (B) is manufactured by cutting a metal plate having a constant plate thickness into a predetermined shape. Next, the thickness-varied metal plate (TB1) is manufactured by rolling the cut plate (B) using a processing machine (10) including a pair of work rolls. Here, a radius of one of the pair of work rolls is varied in a circumferential direction and an axial direction. Accordingly, the thickness-varied metal plate (TB1) manufactured by rolling the cut plate (B) using the processing machine (10) has a plate thickness varied in two different directions orthogonal to a plate thickness direction.

IPC 8 full level  
**B21H 1/22** (2006.01); **B21B 1/38** (2006.01); **B21B 13/14** (2006.01); **B21B 13/18** (2006.01); **B21H 8/02** (2006.01)

CPC (source: CN EP KR RU US)  
**B21B 1/38** (2013.01 - CN KR RU US); **B21B 15/0007** (2013.01 - US); **B21B 27/021** (2013.01 - KR); **B21B 37/26** (2013.01 - KR);  
**B21C 37/02** (2013.01 - CN); **B21D 5/00** (2013.01 - KR); **B21H 1/22** (2013.01 - EP US); **B21B 13/14** (2013.01 - EP US);  
**B21B 13/18** (2013.01 - EP US); **B21B 2001/386** (2013.01 - CN EP US); **B21B 2203/18** (2013.01 - KR); **B21B 2261/043** (2013.01 - CN);  
**B21H 8/02** (2013.01 - EP US)

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 3335814 A1 20180620; EP 3335814 B1 20211208;** CA 2988475 C 20190716; CN 108202087 A 20180626; CN 108202087 B 20210810;  
JP 2018099699 A 20180628; JP 6638639 B2 20200129; KR 102409136 B1 20220616; KR 102409172 B1 20220615;  
KR 20180071172 A 20180627; KR 20200020758 A 20200226; KR 20210118792 A 20211001; MX 2017016372 A 20181109;  
MY 188827 A 20220106; RU 2682194 C1 20190315; TW 201827136 A 20180801; TW I683707 B 20200201; US 2018169723 A1 20180621

DOCDB simple family (application)  
**EP 17206480 A 20171211;** CA 2988475 A 20171212; CN 201711327479 A 20171213; JP 2016246051 A 20161219;  
KR 20170172038 A 20171214; KR 20200019655 A 20200218; KR 20210125664 A 20210923; MX 2017016372 A 20171214;  
MY PI2017704725 A 20171208; RU 2017143789 A 20171214; TW 106143081 A 20171208; US 201715837003 A 20171211