

Title (en)  
PRESS FORMING METHOD AND PRESS FORMING DEVICE

Title (de)  
PRESSFORMVERFAHREN UND PRESSFORMVORRICHTUNG

Title (fr)  
PROCÉDÉ DE FORMAGE ET DISPOSITIF DE FORMAGE

Publication  
**EP 2754509 B1 20171122 (EN)**

Application  
**EP 12830768 A 20120821**

Priority  
• JP 2011197459 A 20110909  
• JP 2012071048 W 20120821

Abstract (en)  
[origin: EP2754509A1] Provided is a means for efficiently imparting high tensile stiffness to a press stamping product by high forming stability, wherein that means can narrow a sacrificial constricted part, can greatly improve material yields, and can effectively resolve strain due to actual cross-sectional length differences in punch shapes in press forming accompanied by restriction of a sheet-shaped workpiece. When pressing between a punch (11) and a die (21) accompanied by expansion from a peripheral side while constraining the peripheral part of the sheet shaped workpiece (P1) by a plurality of blank holders (3) formed from a pair of sandwiching members (3a, 3b), in a process up to pressing after contact of a sheet shaped workpiece (P1) with a forming surface (10) of the punch (11), each blank holder (3) is displaced in the pressing direction and the sheet shaped workpiece (P1) is superimposed on the forming surface (10) of the punch (11), and then displaced in the outside direction and the sheet shaped workpiece (P1) is expanded. After completion of pressing, each blank holder (3) is displaced along the opposite of the pressing direction, and the press stamping product (P1) is disengaged from the punch (11). Furthermore, after both sandwiching members (3a, 3b) are made to detach and the press stamping product (P) removed, both sandwiching members (3a, 3b) are displaced toward the inside direction, and a sheet shaped workpiece (P1) is returned to an initial position prior to being constrained.

IPC 8 full level  
**B21D 22/22** (2006.01); **B21D 24/04** (2006.01); **B21D 24/10** (2006.01)

CPC (source: EP)  
**B21D 22/22** (2013.01); **B21D 24/04** (2013.01)

Cited by  
EP4268990A1; EP3315224A1; FR3057791A1; EP4035790A4; KR20180098583A; US2019009322A1; US11389852B2

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 2754509 A1 20140716; EP 2754509 A4 20150429; EP 2754509 B1 20171122**; CN 104023868 A 20140903; CN 104023868 B 20160525; JP 2013056367 A 20130328; JP 5319748 B2 20131016; KR 101915829 B1 20181106; KR 20140059223 A 20140515; WO 2013035520 A1 20130314

DOCDB simple family (application)  
**EP 12830768 A 20120821**; CN 201280044306 A 20120821; JP 2011197459 A 20110909; JP 2012071048 W 20120821; KR 20147006000 A 20120821