

Title (en)

Method for reinforcing a wall of a three dimensional fitting

Title (de)

Verfahren zum Verstärken eines Wandbereichs von einem dreidimensionalen Beschlag

Title (fr)

Procédé de renforcement d'un paroi d'une garniture tridimensionnelle

Publication

EP 1900452 B1 20120530 (DE)

Application

EP 06090167 A 20060913

Priority

EP 06090167 A 20060913

Abstract (en)

[origin: EP1900452A1] The method involves cutting a plate from a flat strip with an evenly curved outer contour. The plate is formed and fine blanked into a pot-shaped body (3) using a forming and fine blanking tool. A circular edge (8) for a toothing is formed at the body. A wall thickness of a wall region (10) between the edge and the pot-shaped body is reinforced by a selective material shifting using a two-staged cold-extrusion process in respectively opposite flow directions, so that the material shifting compensates the material flow to the wall region.

IPC 8 full level

B21K 1/30 (2006.01)

CPC (source: EP KR US)

B21C 23/14 (2013.01 - KR); **B21D 11/02** (2013.01 - KR); **B21D 28/02** (2013.01 - KR); **B21D 31/00** (2013.01 - KR); **B21K 1/30** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1900452 A1 20080319; **EP 1900452 B1 20120530**; CA 2569192 A1 20080313; CA 2569192 C 20140520; JP 2008068318 A 20080327; JP 5670010 B2 20150218; KR 101446699 B1 20141006; KR 20080024443 A 20080318; MX 2007010981 A 20090203; US 2008072650 A1 20080327; US 7581424 B2 20090901

DOCDB simple family (application)

EP 06090167 A 20060913; CA 2569192 A 20061129; JP 2007171326 A 20070629; KR 20070089250 A 20070904; MX 2007010981 A 20070907; US 59040106 A 20061031