

Title (en)

Embossing a flat metal blank (method and apparatus)

Title (de)

Prägen eines flachen Blechstücks (Verfahren und Vorrichtung)

Title (fr)

Embossage d'ébauche de métal plat (procédé et appareil)

Publication

EP 2687383 A1 20140122 (EN)

Application

EP 12184555 A 20120914

Priority

- EP 12176954 A 20120718
- EP 12184555 A 20120914

Abstract (en)

Tool and method for embossing an artifact into a wall of a three-piece can, wherein a flat sheet or blank (s) of metal is transported along a transport bed (10) by several spaced apart groups of rollers (20,22,24), each having a top and a bottom roller. A rotating embossing roller pair (30) is provided between two of the groups of transport rollers, and driven by a servo drive (38). It embosses the artifact (11,11') into the flat, transported sheet or blank. The transport rollers, the embossing rollers and the sheet or blank have the same speed at the surface of the blank during embossing the artifact into the blank or sheet, and a length position of the artifact in the sheet or blank is determined, adjusted or corrected by a speed and position control (40) of the servo drive, driving the embossing roller pair (30) and shaping a cylindrical base shape of the can wall (15).

IPC 8 full level

B44B 5/00 (2006.01); **B21D 22/00** (2006.01); **B21D 51/00** (2006.01); **B21H 1/00** (2006.01); **B21H 8/00** (2006.01)

CPC (source: EP RU US)

B21D 51/2607 (2013.01 - US); **B21D 51/2684** (2013.01 - EP US); **B44B 5/00** (2013.01 - EP RU US); **B44B 5/0004** (2013.01 - EP US); **B44B 5/0009** (2013.01 - EP US); **B44B 5/0095** (2013.01 - EP US); **B65D 7/42** (2013.01 - US); **B21H 8/005** (2013.01 - EP US)

Citation (search report)

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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 2687383 A1 20140122; **EP 2687383 B1 20151118**; BR 112015000925 A2 20191015; CN 104540687 A 20150422; CN 104540687 B 20170808; DE 112013003570 B4 20230803; DE 112013003570 T5 20150416; DE 112013003570 T8 20150603; DK 2687383 T3 20160215; ES 2561884 T3 20160301; JP 2015526293 A 20150910; JP 6223447 B2 20171101; RU 2015100409 A 20160910; RU 2611882 C2 20170301; RU 2611882 C9 20170810; US 2015174638 A1 20150625; WO 2014013471 A1 20140123

DOCDB simple family (application)

EP 12184555 A 20120914; BR 112015000925 A 20130718; CN 201380037707 A 20130718; DE 112013003570 T 20130718; DK 12184555 T 20120914; ES 12184555 T 20120914; IB 2013055929 W 20130718; JP 2015522235 A 20130718; RU 2015100409 A 20130718; US 201314414915 A 20130718