

Title (en)
METHOD FOR PRODUCING SHAPED SHEET METAL PARTS AT A LOW TEMPERATURE

Title (de)
VERFAHREN ZUR HERSTELLUNG VON UMGEFORMTEN BLECHTEILEN BEI TIEFTEMPERATUR

Title (fr)
PROCÉDÉ DE FABRICATION DE PIÈCES EN TÔLE FORMÉES À BASSE TEMPÉRATURE

Publication
EP 2855041 B1 20180131 (DE)

Application
EP 13726170 A 20130528

Priority
• DE 102012104734 A 20120531
• EP 2013060934 W 20130528

Abstract (en)
[origin: WO2013178615A1] The invention relates to a method for producing a shaped sheet metal part from a blank or a semi-finished product (1) made of a material consisting of steel having at least 60 wt.% Fe and a residual austenitic content of at least 5%, wherein the blank or the semi-finished product (1) is partially cooled to a temperature of less than -20 °C prior to the shaping and is shaped at a temperature below -20 °C in a shaping die (2). The problem of providing a method to produce components appropriately designed in terms of load, which enables a highly technical application of low-temperature shaping and is designed in a particularly simple manner, is solved in that a reduction of the material temperature of the blank or the semi-finished product (1) takes place in a cooling device (3) maintained at a temperature below -20 °C.

IPC 8 full level
B21D 22/02 (2006.01); **B21D 37/16** (2006.01)

CPC (source: CN EP KR US)
B21D 22/02 (2013.01 - CN EP US); **B21D 22/20** (2013.01 - KR); **B21D 37/16** (2013.01 - CN EP KR US); **B21J 1/00** (2013.01 - US); **B21J 1/06** (2013.01 - US); **B21K 7/12** (2013.01 - US); **Y10T 29/49622** (2015.01 - 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)
WO 2013178615 A1 20131205; BR 112014030042 A2 20190903; CN 104379272 A 20150225; CN 104379272 B 20170315; DE 102012104734 A1 20131205; EP 2855041 A1 20150408; EP 2855041 B1 20180131; ES 2666312 T3 20180503; IN 2371MUN2014 A 20150814; JP 2015519205 A 20150709; JP 6068627 B2 20170125; KR 20150016319 A 20150211; MX 2014014544 A 20150904; SI 2855041 T1 20180629; US 10532395 B2 20200114; US 2015082636 A1 20150326; ZA 201409111 B 20170927

DOCDB simple family (application)
EP 2013060934 W 20130528; BR 112014030042 A 20130528; CN 201380028507 A 20130528; DE 102012104734 A 20120531; EP 13726170 A 20130528; ES 13726170 T 20130528; IN 2371MUN2014 A 20141120; JP 2015514458 A 20130528; KR 20147034450 A 20130528; MX 2014014544 A 20130528; SI 201330995 T 20130528; US 201414554206 A 20141126; ZA 201409111 A 20141211