

Title (en)  
METHOD AND DEVICE FOR PRODUCING A PARTIALLY CURED MOULDED PART

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG EINES PARTIELL GEHÄRTETEN FORMTEILS

Title (fr)  
PROCÉDÉ ET DISPOSITIF DE FABRICATION D'UN ÉLÉMENT DE FORMAGE PARTIELLEMENT DURCI

Publication  
**EP 3072980 B1 20180214 (DE)**

Application  
**EP 15161040 A 20150326**

Priority  
EP 15161040 A 20150326

Abstract (en)  
[origin: US2016281185A1] A process of producing a partially hardened metallic formed part comprises: heating a semi-finished product of hardenable hot-formable steel sheet to a hardening temperature; hot-forming the heated semi-finished product in a combined hot-forming cutting device into a three-dimensional formed part; cutting the formed part in the combined hot-forming cutting device; pressure-hardening the formed part in the hot-forming cutting device into a hardened formed part such that a first partial region is hardened by rapid cooling and that a second partial region of the formed part is heat-treated so as to comprise a greater ductility and a lower strength than the first partial region, wherein the operation of cutting the formed part takes place at least in one of the first and second partial region,. A combined hot-forming cutting device can be used to produce a metallic formed part.

IPC 8 full level  
**C21D 1/673** (2006.01); **B21D 22/02** (2006.01); **B21D 24/16** (2006.01); **B21D 35/00** (2006.01); **B21D 53/88** (2006.01); **C21D 1/06** (2006.01); **C21D 8/00** (2006.01); **C21D 8/02** (2006.01); **C21D 8/04** (2006.01); **C21D 9/00** (2006.01); **C21D 9/48** (2006.01)

CPC (source: CN EP KR US)  
**B21D 22/022** (2013.01 - EP US); **B21D 22/208** (2013.01 - CN KR); **B21D 22/26** (2013.01 - KR); **B21D 24/16** (2013.01 - CN EP KR US); **B21D 35/00** (2013.01 - CN); **B21D 35/001** (2013.01 - EP US); **B21D 37/16** (2013.01 - KR); **B21D 53/88** (2013.01 - CN EP US); **C21D 1/06** (2013.01 - EP US); **C21D 1/18** (2013.01 - US); **C21D 1/673** (2013.01 - EP US); **C21D 8/005** (2013.01 - EP US); **C21D 8/0294** (2013.01 - EP US); **C21D 8/0405** (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C21D 9/48** (2013.01 - EP US); **C21D 2221/00** (2013.01 - US)

Cited by  
DE102017128742A1; DE102017005843A1; DE102018219930A1; EP4321271A1; WO2019137910A1; WO2017137377A1

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 3072980 A1 20160928**; **EP 3072980 B1 20180214**; CN 106001231 A 20161012; CN 106001231 B 20200619; ES 2662404 T3 20180406; HU E039096 T2 20181228; JP 2016182642 A 20161020; JP 6820152 B2 20210127; KR 20160115762 A 20161006; PL 3072980 T3 20180731; US 10584395 B2 20200310; US 11555224 B2 20230117; US 2016281185 A1 20160929; US 2020149125 A1 20200514

DOCDB simple family (application)  
**EP 15161040 A 20150326**; CN 201610172634 A 20160324; ES 15161040 T 20150326; HU E15161040 A 20150326; JP 2016061812 A 20160325; KR 20160034436 A 20160323; PL 15161040 T 20150326; US 201615076919 A 20160322; US 202016740587 A 20200113