

Title (en)  
METHOD FOR THE PRODUCTION OF A PRESS-HARDENED COMPONENT

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES PRESSGEHÄRTETEN BAUTEILS

Title (fr)  
PROCEDE DE PRODUCTION D'UN COMPOSANT TREMPE SOUS PRESSION

Publication  
**EP 1646459 B2 20190102 (DE)**

Application  
**EP 04741163 A 20040720**

Priority  
• EP 2004008087 W 20040720  
• DE 10333166 A 20030722

Abstract (en)  
[origin: WO2005009642A1] The invention relates to a method for the production of press-hardened components, more particularly press-hardened components of the bodywork of an automobile, consisting of a semi-finished product (2) made of non-hardened, sheet steel which can be deformed when warm, in addition to a press-hardened component produced according to said method. The inventive method consists of several steps. The semi-finished product (2), which is pre-coated with a first coating (33), is used to form a component blank (10) in a cold-forming method, especially a drawing process. The edge-side of the component blank (10) is cut to form an edge contour (12') approximately corresponding to the component (1) which is to be produced. The cut component blank (17) is heated and is press-hardened in a warm forming tool (23), whereupon the press-hardened component blank (18) is provided with a second anti-corrosion coating (34) in a coating step.

IPC 8 full level  
**B21D 35/00** (2006.01); **C21D 1/673** (2006.01); **C21D 9/46** (2006.01); **C23C 2/26** (2006.01); **C23C 10/60** (2006.01)

CPC (source: EP US)  
**B21D 35/00** (2013.01 - EP US); **C21D 1/673** (2013.01 - EP US); **C23C 2/26** (2013.01 - EP US); **C23C 10/60** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **Y10T 29/49622** (2015.01 - EP US); **Y10T 29/49885** (2015.01 - EP US); **Y10T 29/49888** (2015.01 - EP US); **Y10T 428/8305** (2015.04 - EP US)

Citation (opposition)  
Opponent :  
• DE 4307563 A1 19930923 - BAYERISCHE MOTOREN WERKE AG [DE]  
• WO 2004033126 A1 20040422 - DAIMLER CHRYSLER AG [DE], et al  
• US 6564604 B2 20030520 - KEFFERSTEIN RONALD [FR], et al  
• DE 3828045 C1 19891207  
• US 2001042393 A1 20011122 - KEFFERSTEIN RONALD [FR], et al  
• ARBEITSBLÄTTER FEUERVERZINKEN  
• SCHIMPKE, P. ET AL: "WERKSTOFFKUNDE", TECHNOLOGIE DER MASCHINENBAUSTOFFE, 1968, STUTTGART, pages 152 - 155

Cited by  
DE102017201674B3; WO2018078484A1

Designated contracting state (EPC)  
DE FR GB IT SE

DOCDB simple family (publication)  
**WO 2005009642 A1 20050203**; DE 10333166 A1 20050210; DE 502004011133 D1 20100617; EP 1646459 A1 20060419; EP 1646459 B1 20100505; EP 1646459 B2 20190102; JP 2006529002 A 20061228; US 2007175040 A1 20070802; US 8127449 B2 20120306; ZA 200600594 B 20100127

DOCDB simple family (application)  
**EP 2004008087 W 20040720**; DE 10333166 A 20030722; DE 502004011133 T 20040720; EP 04741163 A 20040720; JP 2006520770 A 20040720; US 56503704 A 20040720; ZA 200600594 A 20060120