

Title (en)  
Method for manufacturing press hardened components

Title (de)  
Verfahren zur Herstellung von pressgehärteten Bauteilen

Title (fr)  
Procédé de fabrication de composants durcis par une presse

Publication  
**EP 2241641 A3 20120502 (DE)**

Application  
**EP 10002910 A 20100319**

Priority  
DE 102009017326 A 20090416

Abstract (en)  
[origin: EP2241641A2] The method for the production of car body component of a motor vehicle from a plate made of untempered, heat formable steel plate, comprises forming and hardening the plate in a press tool to sheet-metal profile. The plate is provided, whose geometry corresponds to the development of the finished component and subsequently the plate is remodeled and press-hardened in a hot working tool to component, which is provided with a surface coating. The component is cooled during press-hardening at 200[deg] C. The surface coating is applied through a diffusion process. The method for the production of car body component of a motor vehicle from a plate made of untempered, heat formable steel plate, comprises forming and hardening the plate in a press tool to sheet-metal profile. The plate is provided, whose geometry corresponds to the development of the finished component and subsequently the plate is remodeled and press-hardened in a hot working tool to component, which is provided with a surface coating. The component is cooled during press-hardening at 200[deg] C. The surface coating is applied through a diffusion process with a heat treatment of the component in which the component is applied in contact with a metal powder. The diffusion process is carried out at 350-410[deg] C and the heat treatment is carried out over a period of 0.25-3.0 h. The coated component is cooled after the heat treatment at 200[deg] C. The cooling of the component is carried out under inert-gas atmosphere. The plate is perforated before or after the forming process. The press-hardening is carried out so that the areas emerge with different stabilities on the component.

IPC 8 full level  
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CPC (source: EP US)  
**B21D 22/022** (2013.01 - EP US); **B21D 35/00** (2013.01 - EP US); **B21D 53/88** (2013.01 - EP US); **C21D 1/18** (2013.01 - EP US); **C21D 1/673** (2013.01 - EP US); **C21D 1/74** (2013.01 - EP US); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0257** (2013.01 - EP US); **C21D 8/0405** (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C21D 9/48** (2013.01 - EP US); **C23C 10/28** (2013.01 - EP US)

Citation (search report)  
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• [YD] WO 2005018848 A1 20050303 - DAIMLER CHRYSLER AG [DE], et al  
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Designated extension state (EPC)  
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DOCDB simple family (publication)  
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