

Title (en)  
COMPONENT MADE OF PRESS-FORM-HARDENED, ALUMINUM-BASED COATED STEEL SHEET, AND METHOD FOR PRODUCING SUCH A COMPONENT

Title (de)  
BAUTEIL AUS PRESSFORMGEHÄRTETEM, AUF BASIS VON ALUMINIUM BESCHICHTETEM STAHLBLECH UND VERFAHREN ZUR HERSTELLUNG EINES SOLCHEN BAUTEILS

Title (fr)  
PIÈCE CONSTITUÉE DE TÔLE D'ACIER REVÊTUE À BASE D'ALUMINIUM DURCIE PAR MOULAGE PAR COMPRESSION ET PROCÉDÉ DE FABRICATION D'UNE TELLE PIÈCE

Publication  
**EP 3250727 A1 20171206 (DE)**

Application  
**EP 17721056 A 20170413**

Priority  
• DE 102016107152 A 20160418  
• EP 2017058918 W 20170413

Abstract (en)  
[origin: WO2017182382A1] The invention relates to a component made of press-form-hardened, aluminium-based coated steel sheet, the coating having a covering which contains aluminum and silicon applied in the hot-dip process, characterized in that the press-form-hardened component in the transition region between steel sheet and covering has an inter-diffusion zone I, wherein, depending on the layer application of the covering before heating and press hardening, the thickness of the inter-diffusion zone I obeys the following formula:  $I [\mu\text{m}] < (1/35) \times \text{application on both sides [g/m}^2] + (19/7)$ , on the inter-diffusion zone I there is formed a zone having various intermetallic phases having an average total thickness between 8 and 50  $\mu\text{m}$ , on which zone there is in turn arranged a covering layer containing aluminum oxide and/or hydroxide having an average thickness of at least 0.05  $\mu\text{m}$  to at most 5  $\mu\text{m}$ . The invention further relates to a method for producing the aforementioned component.

IPC 8 full level  
**C23C 2/12** (2006.01); **C23C 2/26** (2006.01); **C23C 2/28** (2006.01); **C23C 2/40** (2006.01); **C23C 8/02** (2006.01); **C23C 8/10** (2006.01); **C23C 8/80** (2006.01); **C23C 28/00** (2006.01)

CPC (source: EP KR US)  
**C23C 2/12** (2013.01 - EP KR US); **C23C 2/14** (2013.01 - KR); **C23C 2/26** (2013.01 - EP US); **C23C 2/261** (2022.08 - EP KR US); **C23C 2/28** (2013.01 - EP US); **C23C 2/29** (2022.08 - EP KR US); **C23C 2/40** (2013.01 - EP KR US); **C23C 8/02** (2013.01 - EP); **C23C 8/10** (2013.01 - EP KR US); **C23C 8/80** (2013.01 - EP KR US); **C23C 28/321** (2013.01 - KR US); **C23C 28/324** (2013.01 - EP KR); **C23C 28/345** (2013.01 - EP KR US); **Y10T 428/12757** (2015.01 - US)

Citation (search report)  
See references of WO 2017182382A1

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Designated extension state (EPC)  
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DOCDB simple family (publication)  
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