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

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Application

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Priority

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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 [µm] < (1/35) x application on both sides [g/m2] + (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 µm, 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 µm to at most 5 µm. The invention further relates to a method for producing the aforementioned component.

IPC 8 full level

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Citation (opposition)

Opponent : ThyssenKrupp Steel Europe AG

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