

Title (en)  
Production of a partially press-hardened metal sheet component

Title (de)  
Herstellung eines partiell pressgehärteten Blechbauteils

Title (fr)  
Fabrication d'un composant en tôle partiellement durci à la presse

Publication  
**EP 2264193 B1 20160727 (DE)**

Application  
**EP 10160442 A 20100420**

Priority  
DE 102009023195 A 20090529

Abstract (en)  
[origin: EP2264193A1] The method comprises transforming raw sheet metal material to a sheet metal mold part, pre-hardening the raw sheet metal material and heating the sheet metal mold part partially in a furnace in such a way that the area to be hardened is covered and is subjected to the press hardening. The non-covered area of the sheet metal mold part is heated in the furnace at above 900[deg] C. The mold formation of the sheet metal mold part corresponds to the vehicle body component. The raw sheet metal material is a coated steel plate. The method comprises transforming raw sheet metal material to a sheet metal mold part, pre-hardening the raw sheet metal material and heating the sheet metal mold part partially in a furnace in such a way that the area to be hardened is covered and is subjected to the press hardening. The non-covered area of the sheet metal mold part is heated in the furnace at above 900[deg] C. The mold formation of the sheet metal mold part corresponds to the vehicle body component. The raw sheet metal material is a coated steel plate. The degree of a thermal shielding of the relevant area is adjusted through the choice of the cover, a covering material, character of the covering material and/or arrangement on the sheet metal mold part. The covering is carried out by two shell molds that are arranged in relevant area on both sides at the sheet metal mold part. The shell mold is formed from a heat-resistant fiber material, a ceramic material, a metallic material or material composite. The shell mold is laid out not directly on the sheet metal mold part. Independent claims are included for: (1) a covering device; and (2) a vehicle body component.

IPC 8 full level  
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CPC (source: EP)  
**C21D 1/673** (2013.01); **C21D 2221/00** (2013.01)

Citation (examination)  
• DE 20014361 U1 20001012 - BENTELER WERKE AG [DE]  
• DE 10305725 B3 20040408 - BENTELER AUTOMOBILTECHNIK GMBH [DE]  
• DE 102006018406 A1 20070913 - BRAUN ELISABETH [DE]  
• EP 2322672 A1 20110518 - AISIN TAKAOKA LTD [JP], et al

Cited by  
WO2013189597A1; WO2020114703A1; EP3173504A1; WO2017081072A1; US11878333B2; US11781198B2

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