

Title (en)
Method for producing a stamped part

Title (de)
Verfahren zur Herstellung eines Formteils

Title (fr)
Procédé de fabrication d'une pièce emboutie

Publication
EP 2248926 A1 20101110 (DE)

Application
EP 09450081 A 20090417

Priority
EP 09450081 A 20090417

Abstract (en)
The method for producing a shaped part (1) from an aluminum sheet (2) comprising aluminum alloy of the 5000 series, comprises introducing the aluminum sheet in a forming tool, cold-forming the aluminum sheet, heating the cold-formed aluminum sheet once in some regions, and then subjecting the heated aluminum sheet to a further formation step yet before reaching a temperature which has the aluminum sheet during its cold-forming. The aluminum sheet is formed into a partial form of the shaped part by cold forming and into the final form of the shaped part by the further formation. The method for producing a shaped part (1) from an aluminum sheet (2) comprising aluminum alloy of the 5000 series, comprises introducing the aluminum sheet in a forming tool, cold-forming the aluminum sheet, heating the cold-formed aluminum sheet once in some regions, and then subjecting the heated aluminum sheet to a further formation step yet before reaching a temperature which has the aluminum sheet during its cold-forming. The aluminum sheet is formed into a partial form of the shaped part by cold forming and into the final form of the shaped part by the further formation. The cold-formed aluminum sheet is heated at 150-350[deg] C below a recrystallization temperature of the aluminum sheet. Before cold-forming, the aluminum sheet is provided with a temperature -resistant lubricant, which is removed from the aluminum sheet in a step after the further formation step. The aluminum sheet is introduced into the forming tool during the further formation step, and is partially formed by deep-drawing. For heating the cold-formed aluminum sheet, the aluminum sheet is partially introduced into a counter mold of a heating tool following the form of the aluminum sheet. The cold-formed aluminum sheet is partially cut before and/or after the further formation step.

Abstract (de)
Es wird ein Verfahren zur Herstellung eines Formteils (1) aus einem eine Aluminiumlegierung aufweisenden Aluminiumblech (2) gezeigt, insbesondere aus einer Aluminiumlegierung der 5000 Reihe, bei dem wenigstens das Aluminiumblech (2) in ein Umformwerkzeug (3) eingebracht und durch dieses kaltumgeformt wird und in einem weiteren Schritt bzw. in weiteren Schritten das kaltumgeformte Aluminiumblech (2) wenigstens einmal zumindest bereichsweise erwärmt sowie wenigstens einmal weiter umgeformt wird. Um vorteilhafte Verfahrensbedingungen zu schaffen, wird vorgeschlagen, dass das erwärmte Aluminiumblech (2) noch vor einem Erreichen einer Temperatur, die das Aluminiumblech (2) bei seiner Kaltumformung aufweist, der weiteren Umformung unterworfen wird.

IPC 8 full level
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CPC (source: EP US)
B21D 22/20 (2013.01 - EP US); **B21D 22/208** (2013.01 - EP US); **B21D 35/005** (2013.01 - EP); **C22F 1/047** (2013.01 - EP US)

Citation (applicant)
DE 102008032911 A1 20090319 - DAIMLER AG [DE]

Citation (search report)
• [X] EP 0726106 A1 19960814 - DAIMLER BENZ AEROSPACE AG [DE]
• [AD] DE 102008032911 A1 20090319 - DAIMLER AG [DE]
• [A] US 4324596 A 19820413 - WUEBKER ROBERT A
• [A] EP 1059363 A1 20001213 - VAW VER ALUMINIUM WERKE AG [DE]

Cited by
DE102017000483A1; DE102017000483B4

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