

Title (en)
Method and device for tempering a steel sheet body

Title (de)
Verfahren und Vorrichtung zur Temperierung eines Stahlblechkörpers

Title (fr)
Procédé et dispositif destinés à l'équilibrage de la température d'un corps en tôle d'acier

Publication
EP 2182082 A1 20100505 (DE)

Application
EP 08105692 A 20081029

Priority
EP 08105692 A 20081029

Abstract (en)
The method of tempering a steel platebody (1) between the austenization and hot-working comprises fixing the steel platebody, which is at austenization temperature, at a position, contacting a first contact plate (2) with a first surface portion (6) of the steel platebody, contacting a second contact plate (3) with a second surface portion (7) of the steel platebody, and forming the contact plates flatly or completely corresponding to the contour of the surface portions and arranging the contact plates parallel to each other in the state of contacting with the steel platebody. The method of tempering a steel platebody (1) between the austenization and hot-working comprises fixing the steel platebody, which is at austenization temperature, at a position, contacting a first contact plate (2) with a first surface portion (6) of the steel platebody, contacting a second contact plate (3) with a second surface portion (7) of the steel platebody, and forming the contact plates flatly or completely corresponding to the contour of the surface portions and arranging the contact plates parallel to each other in the state of contacting with the steel platebody in a running manner. The contact plates have a low temperature of 400-600[deg] C during the contacting step. The contact plates are pressed on the steel platebody. The method comprises regulating and/or controlling the temperature in a partial area of one contact plate with low temperature by a temperature regulating and/or controlling device before and/or during the contacting of the steel platebody with the contact plates. The method further comprises a step of removing the contact plates. The steel platebody is directly deformed in a subsequent step and the first and second surface portions lie in the or in the vicinity of the deformed area. One of the contact plates is cooled. The steel platebody comprises aluminum-silicon-protective layer or zinc protective layer. An independent claim is included for a device for tempering a steel platebody between the austenization and the hot-working.

Abstract (de)
Die Erfindung betrifft ein Verfahren sowie eine Vorrichtung zur Temperierung mindestens eines Stahlblechkörpers zwischen der Austenitisierung und dem Warmumformen, wobei der sich auf Austenitisierungstemperatur befindende Stahlblechkörper (1) in seiner Lage fixiert wird, mindestens eine erste Kontaktplatte (2) mit mindestens einem ersten Flächenabschnitt (6) des Stahlblechkörpers (1) in Kontakt gebracht wird, mindestens eine zweite Kontaktplatte (3) mit mindestens einem zweiten Flächenabschnitt (7) des Stahlblechkörpers (1) in Kontakt gebracht wird, die Kontaktplatten (2, 3) flächig im wesentlichen oder vollständig entsprechend der Kontur der Flächenabschnitte (6,7) des Stahlblechkörpers (1) ausgebildet sind und im Zustand der Kontaktierung mit dem Stahlblechkörper (1) im wesentlichen parallel zueinander verlaufend angeordnet sind und mindestens eine Kontaktplatte (2, 3) während der Kontaktierung des Stahlblechkörpers (1) eine gegenüber dem Stahlblechkörper (1) niedrigere Temperatur besitzt.

IPC 8 full level
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CPC (source: EP)
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Citation (applicant)
DE 102007009937 A1 20080904 - SCHULER SMG GMBH & CO KG [DE]

Citation (search report)
• [X] DE 102007009937 A1 20080904 - SCHULER SMG GMBH & CO KG [DE]
• [E] EP 2014777 A1 20090114 - NEUE MATERIALIEN BAYREUTH GMBH [DE]

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DE102012102193A1; DE102014105519A1; DE102014104922A1; CN103805762A; CN104245969A; EP2455741A3; DE102014105519B4; EP2730346A1; CN103805761A; DE102012102193B4; CN104946861A; DE102014104922B4; DE102013101489B3; EP2767599A1; CN103993137A; FR2988401A1; EP2730665A1; EP2977472A1; CN106755861A; WO2013140072A1; EP2639536A2; WO2015158568A2; US9694408B2; US9903656B2; WO2015155136A1; EP2905346B1; EP2182082B2; EP3141619B1; EP2547798A1

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