

## Title (en)

Method and device for thermal treatment of metal sheet

## Title (de)

Verfahren sowie Vorrichtung zur thermischen Behandlung von Metallblech

## Title (fr)

Procédé et dispositif pour le traitement thermique d'une tôle métallique

## Publication

**EP 2014777 A1 20090114 (DE)**

## Application

**EP 07112278 A 20070711**

## Priority

EP 07112278 A 20070711

## Abstract (en)

The method for thermal treatment of metal body (1), comprises fixing the metal body in a position and subjecting a first and second contact plate (2, 3) with a first and second planar surface section (6, 7) of the metal body, pressing the contact plates on the metal body, regulating temperature in the part area of the contact plate with higher or lower temperature, connecting the contact plates with a flexible transition element to each other, heating the metal body and contacting with the contact plate and cooling the contact plate. The method for thermal treatment of metal body (1), comprises fixing the metal body in a position and subjecting a first and second contact plate (2, 3) with a first and second planar surface section (6, 7) of the metal body, pressing the contact plates on the metal body, regulating temperature in the part area of the contact plate with higher or lower temperature before and/or during contacting the metal body with the contact plates through a temperature control device, connecting the contact plates with a flexible transition element to each other, heating the metal body and contacting with the contact plate and cooling the contact plate. The contact plates are formed corresponding to the contour of the planar surface section and are runnably arranged in the contacting state with the metal body parallel to each other. The contact plate possesses a higher or lower temperature against the metal body during contacting the metal body. The metal body is a sheet metal or a sheet metal form part. The first planar surface section is present on the top of the sheet metal and the second planar surface section is present below the sheet metal. The sheet metal or sheet metal form part is partially equipped with a zinc layer. The contact plates are removed and the metal body is remolded. The first and the second planar surface sections lie in the vicinity of the area to be remodeled.

## Abstract (de)

Die Erfindung betrifft ein Verfahren zur thermischen Behandlung mittels Wärmeleitung mindestens eines Metallkörpers (1), z.B. ein Blech oder Blechformteil wobei der Metallkörper (1) in seiner Lage fixiert wird, mindestens eine erste Kontaktplatte (2) mit mindestens einem ersten Flächenabschnitt (6) des Metallkörpers (1) in Kontakt gebracht wird, mindestens eine zweite Kontaktplatte (3) mit mindestens einem zweiten Flächenabschnitt (7) des Metallkörpers (1) in Kontakt gebracht wird, die Kontaktplatten (2,3) flächig entsprechend der Kontur der Flächenabschnitte (6,7) des Metallkörpers (1) ausgebildet sind und im Zustand der Kontaktierung mit dem Metallkörper (1) parallel zueinander verlaufend angeordnet sind und mindestens eine Kontaktplatte (2,3) während der Kontaktierung des Metallkörpers (1) eine gegenüber dem Metallkörper (1) höhere oder niedrigere Temperatur besitzt. Mehrere Kontaktplatten können untereinander mittels flexiblen Übergangselementen verbunden sein.

## IPC 8 full level

**C21D 1/34** (2006.01); **B21D 37/16** (2006.01); **C21D 1/673** (2006.01); **C21D 9/46** (2006.01)

## CPC (source: EP)

**C21D 1/34** (2013.01); **C21D 1/673** (2013.01); **C21D 9/46** (2013.01); **C21D 11/00** (2013.01); **C21D 2221/00** (2013.01)

## Citation (applicant)

- DE 102005045340 A1 20060406 - CORUS ALUMINIUM WALZPROD GMBH [DE]
- WO 2007013279 A1 20070201 - KIKUCHI CO LTD [JP], et al
- DE 10341867 A1 20050331 - VOLKSWAGEN AG [DE]

## Citation (search report)

- [X] DE 102005045340 A1 20060406 - CORUS ALUMINIUM WALZPROD GMBH [DE]
- [X] DE 10333166 A1 20050210 - DAIMLER CHRYSLER AG [DE]
- [X] DE 2003305 A1 19700730 - TOYODA CHUO KENKYUSHO KK, et al
- [X] DD 144652 A1 19801029 - ALTENBURG KLAUS, et al
- [X] WO 2007013279 A1 20070201 - KIKUCHI CO LTD [JP], et al
- [X] US 7165435 B1 20070123 - SCHROTH JAMES G [US], et al

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DE102014105519A1; DE102014104922A1; WO2016012442A1; CN104245969A; CN106715725A; EP3360621A1; DE112010000702C5; CN107972312A; DE102014104922B4; DE102014105519B4; EP2840153A3; DE102013108972B4; EP2182081A1; EP2182082A1; DE102012110650C5; FR2988401A1; EP2730665A1; EP2977472A1; DE102012110649C5; DE102012111271A1; DE102013021264A1; US10266905B2; DE102013013732A1; DE102013010936A1; WO2013140072A1; US10612108B2; WO2015158568A2; WO2015155136A1; US9694408B2; US9903656B2; WO2011000006A2; DE102015101668A1; WO2010048950A1; WO2010048951A1; EP2730665B1; EP2730346B1; EP2182082B2; EP2730346B2; EP2907881B1; EP2907881B2; EP2497840B1; EP2497840B2

## Designated contracting state (EPC)

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## Designated extension state (EPC)

AL BA HR MK RS

## DOCDB simple family (publication)

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## DOCDB simple family (application)

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