

Title (en)

METHOD AND DEVICE FOR THE HEAT TREATMENT OF A METAL COMPONENT

Title (de)

VERFAHREN UND VORRICHTUNG ZUR WÄRMEBEHANDLUNG EINES METALLISCHEN BAUTEILS

Title (fr)

PROCÉDÉ ET DISPOSITIF DE TRAITEMENT THERMIQUE D'UNE PIÈCE MÉTALLIQUE

Publication

EP 3408419 A1 20181205 (DE)

Application

EP 17703053 A 20170125

Priority

- DE 102016201024 A 20160125
- DE 102016201025 A 20160125
- DE 102016201936 A 20160209
- DE 102016202766 A 20160223
- DE 102016118252 A 20160927
- EP 2017051507 W 20170125

Abstract (en)

[origin: WO2017129599A1] The invention relates to a method and a device for the heat treatment of a metal component, and a use of a furnace for heating a metal component. The invention can be used in the partial hardening of optionally pre-coated components made of a high-strength manganese-boron steel. A method according to the invention for the heat treatment of a metal component (1) comprises at least the following steps: a) heating the component (1) in a first furnace (2); b) moving the component (1) into a tempering station (3); c) cooling at least one first sub-region (4) of the component (1) in the tempering station (3), wherein a temperature difference is set between the at least one first sub-region (4) and at least one second sub-region (5) of the component (1); d) moving the component (1) from the tempering station (3) into a second furnace (6); e) heating at least the at least one first sub-region (4) of the component (1) in the second furnace (6) by at least 200 K.

IPC 8 full level

C21D 9/00 (2006.01); **C21D 1/19** (2006.01); **C21D 1/667** (2006.01); **C21D 1/673** (2006.01)

CPC (source: EP KR US)

C21D 1/19 (2013.01 - EP KR US); **C21D 1/667** (2013.01 - KR); **C21D 1/673** (2013.01 - EP KR US); **C21D 6/005** (2013.01 - US); **C21D 8/005** (2013.01 - EP); **C21D 8/0205** (2013.01 - KR US); **C21D 9/0062** (2013.01 - EP KR US); **C21D 9/0068** (2013.01 - EP KR US); **C21D 1/667** (2013.01 - EP US); **C21D 2221/00** (2013.01 - EP KR US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2017129599 A1 20170803; BR 112018014951 A2 20181226; BR 112018014951 B1 20221004; CN 109312416 A 20190205; EP 3408419 A1 20181205; JP 2019508582 A 20190328; JP 7112329 B2 20220803; KR 102576917 B1 20230908; KR 20180119579 A 20181102; MX 2018008996 A 20190110; US 11078553 B2 20210803; US 2019032162 A1 20190131

DOCDB simple family (application)

EP 2017051507 W 20170125; BR 112018014951 A 20170125; CN 201780007940 A 20170125; EP 17703053 A 20170125; JP 2018538751 A 20170125; KR 20187024553 A 20170125; MX 2018008996 A 20170125; US 201716072418 A 20170125