

Title (en)

Method and device for heating a pre-coated steel circuit board

Title (de)

Verfahren sowie Vorrichtung zur Erwärmung einer vorbeschichteten Platine aus Stahl

Title (fr)

Procédé et dispositif de chauffage d'une platine préenduite en acier

Publication

**EP 2570503 A3 20141210 (DE)**

Application

**EP 12181212 A 20120821**

Priority

DE 102011053634 A 20110915

Abstract (en)

[origin: EP2570503A2] Heating pre-coated plate (5) made of steel for producing thermoformed component, preferably a thermoformed bodywork or structural component, comprises (a) heating plate, which is provided with a coating, in an oven (1), where at least partially an intermetallic alloy layer is formed on the plate, and (b) controlling the atmosphere within the oven by supplying pretreated air, where the air is pretreated by drying before supplying. An independent claim is also included for a device for heating pre-coated plate, comprising the oven and at least one supply line (8), which is connected with a heatable inner space of the oven. The supply line is arranged between a drying assembly (7) and the inner space of the oven such that pretreated air passing through the supply line is supplied to the inner space via the drying assembly, where the drying assembly is connected with an air compressor, and the air passing through the drying assembly, which is compressed by the air compressor, is guided into the inner space of the oven via the supply line.

IPC 8 full level

**C21D 1/76** (2006.01); **C21D 9/46** (2006.01); **C21D 9/48** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/14** (2006.01); **C22C 38/22** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/38** (2006.01); **C23C 8/10** (2006.01)

CPC (source: EP US)

**C21D 1/76** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C22C 38/38** (2013.01 - EP US); **C23C 8/10** (2013.01 - EP US); **C21D 2241/00** (2013.01 - EP US)

Citation (search report)

- [X] US 2007163685 A1 20070719 - KUSUMI KAZUHISA [JP], et al
- [X] DE 2636639 A1 19780216 - ASS ELECT IND
- [A] DE 102007038215 A1 20090219 - NANO X GMBH [DE]

Cited by

EP2796570A1; WO2014173494A1; WO2022218831A1

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

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**EP 2570503 A2 20130320**; **EP 2570503 A3 20141210**; **EP 2570503 B1 20170621**; DE 102011053634 B3 20130321; US 2013068350 A1 20130321; US 9194034 B2 20151124

DOCDB simple family (application)

**EP 12181212 A 20120821**; DE 102011053634 A 20110915; US 201213621644 A 20120917