Title (en)

METHOD FOR PRODUCING A FLAT STEEL PRODUCT WHICH IS PROVIDED WITH A METALLIC PROTECTIVE LAYER BY MEANS OF HOT DIP COATING

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES DURCH SCHMELZTAUCHBESCHICHTEN MIT EINER METALLISCHEN SCHUTZSCHICHT VERSEHENEN STAHLFLACHPRODUKTS

Title (fr)

PROCÉDÉ DE FABRICATION D'UN PRODUIT PLAT EN ACIER MUNI PAR IMMERSION À CHAUD D'UNE COUCHE DE PROTECTION MÉTALLIQUE

Publication

EP 2732062 A2 20140521 (DE)

Application

EP 12735114 A 20120705

Priority

- DE 102011051731 A 20110711
- EP 2012063069 W 20120705

Abstract (en)

[origin: CA2839183A1] For a hot-dip coated, flat steel product, optimal wetting and adhesion of the hot dip coating are achieved by preoxidation in a DFF preheating furnace and humidification of the annealing atmosphere in a holding zone. First, the flat steel product, which is present at a temperature of 550 - 850 °C, is exposed to an oxidising atmosphere, which is introduced by injecting an oxygen-containing gas stream into the flame of a burner, for 1 - 15 s in a preoxidation section of the DFF furnace in order to form a covering FeO layer on the surface thereof, whereas a reduced or neutral atmosphere with respect to the steel surface prevails outside the preoxidation section in the DFF furnace. The flat steel product, which has been heated to a holding temperature of 600 - 1100 °C, is then annealed in a recrystallising manner under an FeO-reducing atmosphere, the dew point of which is held at -40 °C to +25 °C by the addition of moisture, cooled to a bath entry temperature of 420 - 780 °C under an atmosphere having =100 % N2 and a dew point of -80 °C bis -25 °C, and passed through a melt bath.

IPC 8 full level

C22C 38/02 (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/18** (2006.01); **C22C 38/22** (2006.01); **C22C 38/38** (2006.01); **C23C 2/02** (2006.01)

CPC (source: EP KR US)

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Cited by

EP3159420A4; EP3511430A1; DE102019200338A1; EP3686534A1; BE1026986A1

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DOCDB simple family (publication)

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