

Title (en)

METHOD FOR PRODUCING A STEEL SHEET WITH IMPROVED ADHESION OF METALLIC HOT-DIP COATINGS

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES STAHLBANDES MIT VERBESSERTER HAFTUNG METALLISCHER SCHMELZTAUCHÜBERZÜGE

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE TÔLE D'ACIER AVEC UNE ADHÉRENCE AMÉLIORÉE DE REVÊTEMENTS MÉTALLIQUES À CHAUD

Publication

EP 3947754 B1 20221207 (DE)

Application

EP 20715830 A 20200327

Priority

- DE 102019108457 A 20190401
- EP 2020058805 W 20200327

Abstract (en)

[origin: WO2020201133A1] The invention relates to a method for producing a cold-rolled or hot-rolled steel strip having a metal coating, the steel strip comprising iron as the main constituent and, in addition to carbon, an Mn content of 4.1 to 8.0 wt.% and optionally one or more of the alloy elements Al, Si, Cr, B, Ti, V, Nb and/or Mo, wherein the surface of the uncoated steel strip is cleaned, a layer of pure iron is applied to the cleaned surface, an oxygen-containing iron-based layer is applied to the layer of pure iron and contains more than mass percent oxygen, the steel strip with the oxygen-containing iron-based layer is then subjected to an annealing treatment, and, in order to attain a surface consisting substantially of metallic iron, is subjected to a reduction treatment in a reducing furnace atmosphere during the course of the annealing treatment, and then the steel strip thus treated and annealed is coated with the metallic coating by hot dipping. Uniform and reproducible adhesion conditions are hereby achieved for the metallic coating on the steel strip surface. The invention also relates to a steel strip having a metallic coating applied by means of hot dipping, and to the use of such a steel strip.

IPC 8 full level

C21D 1/68 (2006.01); **C21D 1/70** (2006.01); **C21D 1/74** (2006.01); **C21D 6/00** (2006.01); **C21D 7/06** (2006.01); **C22C 38/04** (2006.01); **C23C 2/02** (2006.01); **C23C 2/04** (2006.01); **C23C 2/06** (2006.01); **C23C 2/40** (2006.01); **C23C 28/00** (2006.01); **C23C 28/02** (2006.01); **C25D 3/22** (2006.01); **C25D 5/10** (2006.01); **C25D 5/50** (2006.01); **C25D 3/20** (2006.01); **C25D 7/06** (2006.01); **C25D 17/10** (2006.01)

CPC (source: EP KR US)

C21D 1/68 (2013.01 - EP KR); **C21D 1/70** (2013.01 - EP); **C21D 1/74** (2013.01 - EP KR); **C21D 6/00** (2013.01 - EP); **C21D 6/005** (2013.01 - EP KR); **C21D 8/0205** (2013.01 - US); **C21D 8/0226** (2013.01 - US); **C21D 8/0236** (2013.01 - US); **C21D 8/0273** (2013.01 - KR); **C22C 38/02** (2013.01 - US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - US); **C22C 38/34** (2013.01 - KR); **C22C 38/38** (2013.01 - KR); **C23C 2/02** (2013.01 - EP KR US); **C23C 2/0222** (2022.08 - EP KR US); **C23C 2/0224** (2022.08 - EP KR US); **C23C 2/024** (2022.08 - EP KR US); **C23C 2/026** (2022.08 - EP KR US); **C23C 2/04** (2013.01 - EP); **C23C 2/06** (2013.01 - EP US); **C23C 2/40** (2013.01 - EP US); **C23C 28/023** (2013.01 - EP); **C23C 28/025** (2013.01 - EP); **C23C 28/028** (2013.01 - EP); **C25D 5/50** (2013.01 - EP); **C25D 7/0614** (2013.01 - EP); **C25D 3/20** (2013.01 - EP); **C25D 17/10** (2013.01 - EP)

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

DOCDB simple family (publication)

DE 102019108457 A1 20201001; DE 102019108457 B4 20210204; EP 3947754 A1 20220209; EP 3947754 B1 20221207; KR 102602054 B1 20231113; KR 20210144804 A 20211130; US 2022220598 A1 20220714; WO 2020201133 A1 20201008

DOCDB simple family (application)

DE 102019108457 A 20190401; EP 2020058805 W 20200327; EP 20715830 A 20200327; KR 20217034423 A 20200327; US 202017600245 A 20200327