

Title (en)

METHOD FOR MANUFACTURING GALVANIZED STEEL SHEET

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES VERZINKTEM STAHLBLECHS

Title (fr)

PROCÉDÉ PERMETTANT LA FABRICATION DE TÔLE D'ACIER GALVANISÉE

Publication

EP 3219826 A4 20171122 (EN)

Application

EP 15858294 A 20151109

Priority

- JP 2014229484 A 20141112
- JP 2015005583 W 20151109

Abstract (en)

[origin: EP3219826A1] Provided is a method for manufacturing a steel sheet coated with a zinc-based coating layer with which it is possible to remove an oxide on the surface of a zinc-based coating layer through contact with an alkaline aqueous solution and with which it is possible to prevent a problem related to surface appearance due to precipitates generated in an alkaline aqueous solution. The method for manufacturing a steel sheet coated with a zinc-based coating layer of the first invention to solve the problems described above is a method for manufacturing a steel sheet coated with a zinc-based coating layer having a reaction layer on the surface of the steel sheet, the method including: the method including bringing the steel sheet coated with a zinc-based coating layer into contact for 1.0 second or more with an alkaline aqueous solution containing one or more chelating agents selected from among sodium gluconate, sodium glucoheptonate, sodium citrate, tartaric acid, arabonic acid, galactonic acid, sorbit, mannite, glycerin, EDTA, and sodium tripolyphosphate in a total amount of 0.050 mass% or more and having a pH of 10.0 or more as a pre-treatment before a formation of the reaction layer, and forming the reaction layer being an oxide layer containing a crystal-structured substance expressed by $Zn_4(SO_4)_{1-x}(CO_3)_x(OH)_6 \cdot nH_2O$.

IPC 8 full level

C23C 22/78 (2006.01); **C23C 28/00** (2006.01); **C23G 1/20** (2006.01)

CPC (source: EP KR US)

C23C 22/53 (2013.01 - EP US); **C23C 22/60** (2013.01 - US); **C23C 22/78** (2013.01 - EP KR US); **C23C 22/83** (2013.01 - EP US); **C23C 28/3225** (2013.01 - KR); **C23C 28/34** (2013.01 - KR); **C23G 1/20** (2013.01 - EP KR US)

Citation (search report)

- [X] JP S63213682 A 19880906 - NISSHIN STEEL CO LTD
- [X] GB 1042108 A 19660907 - PYRENE CO LTD
- See references of WO 2016075920A1

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

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EP 3219826 A1 20170920; **EP 3219826 A4 20171122**; CN 107109660 A 20170829; JP WO2016075920 A1 20170427; KR 102007103 B1 20190802; KR 20170067834 A 20170616; MX 2017006133 A 20170727; US 2017314138 A1 20171102; WO 2016075920 A1 20160519

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EP 15858294 A 20151109; CN 201580061436 A 20151109; JP 2015005583 W 20151109; JP 2016512140 A 20151109; KR 20177012379 A 20151109; MX 2017006133 A 20151109; US 201515526140 A 20151109