

Title (en)
HOT-DIP ZN-ALLOY-PLATED STEEL SHEET

Title (de)
FEUERVERZINKTES, MIT EINER ZN-LEGIERUNG PLATTIERTES STAHLBLECH

Title (fr)
TÔLE D'ACIER PLAQUÉE D'ALLIAGE DE ZN PAR IMMERSION À CHAUD

Publication
EP 3078765 A4 20170705 (EN)

Application
EP 14867197 A 20141113

Priority
• JP 2013250139 A 20131203
• JP 2014005701 W 20141113

Abstract (en)
[origin: EP3078765A1] This hot-dip Zn-alloy-plated steel sheet comprises: a steel sheet; a hot-dip Zn-alloy-plated layer arranged on a surface of the steel sheet; and a complex oxide coating film arranged on a surface of the hot-dip Zn-alloy-plated layer. The complex oxide coating film includes vanadium and a constituent component of the hot-dip Zn-alloy-plated layer, and the entire surface of the coating film satisfies the following formula (1): $S[\text{Hydroxide}]/(S[\text{Hydroxide}]+S[\text{Oxide}]) \times 100 \neq 40$. In formula (1): S[Oxide] is the area exhibited by a peak having a center at approximately 1022 eV ascribable to a Zn oxide in an intensity profile in XPS analysis of the surface of the complex oxide coating film; and S[Hydroxide] is the area exhibited by a peak having a center at approximately 1023 eV ascribable to a Zn hydroxide in an intensity profile in XPS analysis of the surface of the complex oxide coating film.

IPC 8 full level
C22C 2/06 (2006.01); **C22C 18/00** (2006.01); **C22C 18/04** (2006.01); **C23C 28/00** (2006.01)

CPC (source: EP KR RU US)
C22C 18/00 (2013.01 - EP KR RU US); **C22C 18/04** (2013.01 - EP KR RU US); **C23C 2/06** (2013.01 - EP KR RU US); **C23C 2/20** (2013.01 - US); **C23C 2/26** (2013.01 - EP KR RU US); **C23C 2/29** (2022.08 - KR); **C23C 2/40** (2013.01 - EP RU US); **C23C 28/00** (2013.01 - KR RU)

Citation (search report)
• [XII] US 2006182988 A1 20060817 - YAMAJI TAKAFUMI [JP], et al
• [II] EP 0852264 A1 19980708 - IND GALVANIZADORA S A [ES]
• [E] EP 2927344 A1 20151007 - NISSHIN STEEL CO LTD [JP]
• See also references of WO 2015083325A1

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)
EP 3078765 A1 20161012; EP 3078765 A4 20170705; AU 2014358646 A1 20160623; AU 2014358646 B2 20170406; AU 2014358646 C1 20181025; CA 2931988 A1 20150611; CA 2931988 C 20180327; CN 105793469 A 20160720; CN 105793469 B 20180824; JP 2015108166 A 20150611; JP 6022433 B2 20161109; KR 101770342 B1 20170822; KR 20160075654 A 20160629; MX 2016006897 A 20160817; MY 179608 A 20201111; RU 2647416 C2 20180315; TW 201527595 A 20150716; TW I639727 B 20181101; US 2016305003 A1 20161020; US 2019040512 A1 20190207; WO 2015083325 A1 20150611

DOCDB simple family (application)
EP 14867197 A 20141113; AU 2014358646 A 20141113; CA 2931988 A 20141113; CN 201480065804 A 20141113; JP 2013250139 A 20131203; JP 2014005701 W 20141113; KR 20167013546 A 20141113; MX 2016006897 A 20141113; MY PI2016701848 A 20141113; RU 2016121849 A 20141113; TW 103141698 A 20141202; US 201415037068 A 20141113; US 201816152455 A 20181005