

Title (en)  
CHEMICAL CONVERSION COATING-EQUIPPED STEEL PLATE, AND METHOD FOR PRODUCING CHEMICAL CONVERSION COATING-EQUIPPED STEEL PLATE

Title (de)  
MIT CHEMISCHER UMWANDLUNGSBESCHICHTUNG AUSGESTATTETE STAHLPLATTE UND VERFAHREN ZUR HERSTELLUNG EINER STAHLPLATTE MIT EINER CHEMISCHEN UMWANDLUNGSBESCHICHTUNG

Title (fr)  
PLAQUE D'ACIER POURVUE D'UN REVÊTEMENT DE CONVERSION CHIMIQUE ET PROCÉDÉ DE PRODUCTION D'UNE PLAQUE D'ACIER POURVUE D'UN REVÊTEMENT DE CONVERSION CHIMIQUE

Publication  
**EP 3434811 A4 20191127 (EN)**

Application  
**EP 16895337 A 20160322**

Priority  
JP 2016058905 W 20160322

Abstract (en)  
[origin: EP3434811A1] A chemical treatment steel sheet includes a steel sheet, an Fe-Sn alloy layer which is formed on at least one surface of the steel sheet, a Sn layer which is formed on the Fe-Sn alloy layer and contains Sn in which a total amount of Sn contained in the Fe-Sn alloy layer and the Sn layer is 0.10 to 30.0 g/m<sup>2</sup>, and a chemical treatment layer which is formed on the Sn layer and contains a Zr compound in which an amount of Zr contained therein is 1.0 to 150 mg/m<sup>2</sup>, a phosphate compound in an amount of P contained therein is 1.0 to 100 mg/m<sup>2</sup> and an Al compound in an amount of Al contained therein is 0.10 to 30.0 mg/m<sup>2</sup>.

IPC 8 full level  
**C25B 9/19** (2021.01); **C23C 2/08** (2006.01); **C23C 22/36** (2006.01); **C23C 28/00** (2006.01); **C25D 5/12** (2006.01); **C25D 5/26** (2006.01); **C25D 5/48** (2006.01); **C25D 7/06** (2006.01); **C25D 9/08** (2006.01); **C25D 9/10** (2006.01); **C25D 11/00** (2006.01); **C25D 11/36** (2006.01)

CPC (source: EP KR US)  
**C21D 9/46** (2013.01 - US); **C23C 2/08** (2013.01 - EP KR US); **C23C 2/28** (2013.01 - KR); **C23C 22/361** (2013.01 - EP KR US); **C23C 28/00** (2013.01 - EP); **C23C 28/021** (2013.01 - US); **C23C 28/321** (2013.01 - KR); **C23C 28/34** (2013.01 - KR); **C25B 9/19** (2021.01 - EP); **C25D 3/30** (2013.01 - KR US); **C25D 5/10** (2013.01 - EP KR US); **C25D 5/48** (2013.01 - EP KR US); **C25D 7/0614** (2013.01 - EP KR); **C25D 9/08** (2013.01 - EP KR); **C25D 9/10** (2013.01 - EP); **C25D 11/00** (2013.01 - EP); **C25D 11/36** (2013.01 - EP KR); **C23C 22/20** (2013.01 - EP)

Citation (search report)  

- [A] EP 2589685 A1 20130508 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] EP 2290129 A1 20110302 - JFE STEEL CORP [JP]
- [A] US 2013216714 A1 20130822 - SUZUKI TAKESHI [JP], et al
- See references of WO 2017163299A1

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 3434811 A1 20190130; EP 3434811 A4 20191127**; CN 108779561 A 20181109; JP 6583539 B2 20191002; JP WO2017163299 A1 20190131; KR 20180113583 A 20181016; US 2020123661 A1 20200423; WO 2017163299 A1 20170928

DOCDB simple family (application)  
**EP 16895337 A 20160322**; CN 201680083793 A 20160322; JP 2016058905 W 20160322; JP 2018506647 A 20160322; KR 20187026675 A 20160322; US 201616086152 A 20160322