

Title (en)
TIN-PLATED STEEL PLATE AND METHOD FOR PRODUCTION THEREOF

Title (de)
VERZINNTE STAHLPLATTE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
PLAQUE D'ACIER ETAMEE ET SON PROCEDE DE PRODUCTION

Publication
EP 1518944 A1 20050330 (EN)

Application
EP 03733259 A 20030603

Priority
• JP 0306983 W 20030603
• JP 2002164123 A 20020605

Abstract (en)
A tin-plated steel sheet includes a steel sheet having a surface roughness Ra of 1.5 μm or less, an Fe-Sn alloy layer disposed on a surface of the steel sheet, and a tin-plating layer disposed on the Fe-Sn alloy layer, the tin-plating layer having a coverage of more than 99% and a coating weight of 5 to 20 g/m². A chemical conversion coating containing P and Si is provided on the upper surface of the tin-plating layer. In the chemical conversion coating, the coating weight of P is 0.5 to 10 mg/m² and the coating weight of Si is 3 to 30 mg/m². A steel sheet provided with a plating layer is immersed in a chemical conversion treatment solution containing phosphate ions and a silane coupling agent or the chemical conversion treatment solution is applied to the steel sheet provided with the plating layer. Subsequently, the steel sheet is dried by heating.

IPC 1-7
C23C 28/00

IPC 8 full level
C23C 2/08 (2006.01); **C23C 2/26** (2006.01); **C23C 22/07** (2006.01); **C23C 22/10** (2006.01); **C23C 22/78** (2006.01); **C23C 22/82** (2006.01); **C23C 28/00** (2006.01); **C23C 28/02** (2006.01); **C25D 5/48** (2006.01); **C25D 5/50** (2006.01)

CPC (source: EP)
C23C 2/08 (2013.01); **C23C 22/10** (2013.01); **C23C 28/00** (2013.01); **C23C 28/321** (2013.01); **C23C 28/345** (2013.01); **C25D 5/48** (2013.01); **C23C 2222/20** (2013.01)

Cited by
CN102828225A; CN109154098A; EP2312017A4; EP2290129A4; EP2489760A4; CN103476967A; EP2180085A4; CN109154097A; US11598009B2; WO2012116847A1; WO2007008369A1; US9441310B2

Designated contracting state (EPC)
DE FR GB NL

DOCDB simple family (publication)
EP 1518944 A1 20050330; EP 1518944 A4 20110126; EP 1518944 B1 20140514; WO 03104528 A1 20031218

DOCDB simple family (application)
EP 03733259 A 20030603; JP 0306983 W 20030603