

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

Title (de)
VERZINNT STEHLPLATTE UND HERSTELLUNGSVERFAHREN DAFÜR

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

Publication
EP 1518944 A4 20110126 (EN)

Application
EP 03733259 A 20030603

Priority
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Abstract (en)
[origin: EP1518944A1] 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.

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Citation (search report)
• [XP] EP 1243668 A1 20020925 - KAWASAKI STEEL CO [JP]
• [XPA] EP 1270764 A1 20030102 - KAWASAKI STEEL CO [JP]
• See references of WO 03104528A1

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

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