

Title (en)

Al-Si-Cr-PLATED STEEL SHEET EXCELLENT IN CORROSION RESISTANCE AND PRODUCTION THEREOF

Title (de)

A1-Si-Cr-BESCHICHTETE STAHLPLATTE UND DEREN HERSTELLUNG

Title (fr)

TOLE D'ACIER PLAQUEE Al-Si-Cr, AYANT UNE EXCELLENTE RESISTANCE A LA CORROSION, ET PRODUCTION DE CETTE TOLE

Publication

**EP 0584364 B1 19961016 (EN)**

Application

**EP 93903330 A 19930209**

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- JP 3476093 A 19930129
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- JP 5901792 A 19920212
- JP 7356092 A 19920225
- JP 9300163 W 19930209

Abstract (en)

[origin: WO9316210A1] A plated steel sheet having improved corrosion and heat resistances is produced by supplying chromium to an Al-Si plating layer formed on the surface of a steel sheet by hot dipping. The chromium source to be used comprises a chromium coating layer formed on the surface of a nonplated sheet by electroplating, vacuum deposition, etc. The wettability of the chromium coating layer with a plating metal can be improved by activating the surface of the layer by plasma etching, ion beam etching, etc., before dipping a chromium-coated steel sheet in a hot dipping bath. The plating layer L formed on the steel substrate S has a layered structure composed of the first layer L1? based on chromium, the second layer L2? based on Cr-Al-Si system and the third layer L3? based on Al-Si-Cr system, when plating is conducted under the conditions of a thick chromium coating layer and a relatively suppressed diffusion of chromium. Since the plating layer L contains chromium, the resultant plated steel sheet is far more excellent in corrosion and heat resistances than the conventional Al-Si-plated steel sheets.

IPC 1-7

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