

Title (en)

GALVANIZED STEEL PLATE HAVING EXCELLENT CAPABILITY OF PRESS WORKING, CHEMICAL CONVERSION AND THE LIKE, AND PRODUCTION OF SAID PLATE

Publication

EP 0456834 A4 19920708 (EN)

Application

EP 91900051 A 19901211

Priority

- JP 4820790 A 19900228
- JP 4820890 A 19900228
- JP 4820990 A 19900228
- JP 8869390 A 19900403
- JP 8869590 A 19900403
- JP 8869690 A 19900403
- JP 20285090 A 19900731
- JP 20406790 A 19900801
- JP 20406890 A 19900801
- JP 21540690 A 19900814
- JP 30558190 A 19901110
- JP 30558290 A 19901110
- JP 30558390 A 19901110
- JP 32045089 A 19891212
- JP 32878189 A 19891219
- JP 32878289 A 19891219
- JP 32878389 A 19891219
- JP 32878489 A 19891219
- JP 9001615 W 19901211

Abstract (en)

[origin: EP0456834A1] 28.2.90(3), 3.4.90(3), 31.7.90, 1.8.90(2), 14.8.90, 10.11.90(2)-JP-328781-4, 048207-9, 088693/5/6, 202850, 204067/8, 215406, 305581/2) 9 A galvanized steel plate has a coating layer contg. an inorganic oxide (1-500 mg/cm² in terms of the wt. of inorganic element) formed on a Zn plated surface. The inorganic oxide can be an oxide of Mn, Mo, Co, Ni, Ca and P. It is pref. an oxide of Mn opt. contg. phosphonic acid and/or boronic acid, with oxides of W and/or V (1000 mg/m²=the total amt.) also opt. present. It may also be an oxide of P opt. contg. boronic acid (1-500 mg/m² in terms of the wt. of B), with or without other inorganic oxides. The coating layer (or layers) is (are) formed as follows: (i) a Zn oxide layer is formed on the surface of Zn-plated steel by contacting it with an acidic oxidising reagent sol., by anodic electrolysis in a Zn ion soln. in the presence of an oxidising agent, or by blowing a gas-water mixt. over it at 300-600 deg.C. (ii) on the Zn oxide layer the oxide layer of Mn, Mo, Co, Ni, Ca, V, W, Ti or Al is formed by bringing into contact with an acidic sol. (pH below 5) of an oxoacid of P or B contg. the metal ions or by anodic electrolysis in this sol.

IPC 1-7

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IPC 8 full level

C23C 22/08 (2006.01); **C23C 22/53** (2006.01)

CPC (source: EP KR)

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Citation (search report)

- [X] EP 0034040 A1 19810819 - BNF METALS TECH CENTRE [GB]
- [X] US 2417133 A 19470311 - SCHWEIKHER ERNEST W
- [X] CHEMICAL ABSTRACTS, vol. 106, no. 8, February 1987, page 510, abstract no. 57778w, Columbus, Ohio, US; & JP-A-61 133 399 (NIPPON STEEL CORP.) 20-06-1986
- See references of WO 9109152A1

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