

Title (en)

Iron-zinc alloy plated steel sheet having two plating layers and excellent in electropaintability and press-formability.

Title (de)

Stahlblech, beschichtet mit einer Eisen-Zinklegierung, bestehend aus zwei Schichten mit hervorragenden Eigenschaften in bezug auf Elektrotauchlackierung und Pressbarkeit.

Title (fr)

Tôle d'acier revêtue d'un alliage fer-zinc comportant deux couches et possédant une excellente aptitude à la peinture électrolytique et au formage.

Publication

EP 0480355 A2 19920415 (EN)

Application

EP 91117059 A 19911007

Priority

JP 27017190 A 19901008

Abstract (en)

An iron-zinc alloy plated steel sheet having two plating layers and excellent in electropaintability and press-formability, which comprises; a steel sheet; an alloying-treated iron-zinc alloy dip-plating layer as a lower layer formed on at least one surface of the steel sheet; and an iron-zinc alloy electroplating layer as an upper layer, formed on the iron-zinc alloy dip-plating layer. The iron content in the iron-zinc alloy dip-plating layer is from 7 to 15 wt.%, and the plating weight of the iron-zinc alloy dip-plating layer is from 30 to 120 g/m² per surface of the steel sheet. The iron content in the iron-zinc alloy electroplating layer is at least 60 wt.%. The iron-zinc alloy electroplating layer has a plurality of dots of another iron-zinc alloy; the iron content in each of the plurality of dots of another iron-zinc alloy is under 60 wt.%; the total exposed area per unit area of the plurality of dots of another iron-zinc alloy is from 5 to 50% of the unit area of the iron-zinc alloy electroplating layer; the diameter of each of the plurality of dots of another iron-zinc alloy is from 1 to 100 μ m; and the total plating weight of the iron-zinc alloy electroplating layer and the plurality of dots of another iron-zinc alloy is from 1 to 10 g/m² per surface of the steel sheet.

IPC 1-7

C23C 28/02; **C25D 3/56**

IPC 8 full level

C25D 3/28 (2006.01); **C23C 2/06** (2006.01); **C23C 2/28** (2006.01); **C23C 28/02** (2006.01); **C25D 3/56** (2006.01); **C25D 5/26** (2006.01)

CPC (source: EP KR US)

C23C 2/28 (2013.01 - EP KR US); **C23C 28/023** (2013.01 - EP); **C25D 3/562** (2013.01 - EP); **C25D 5/10** (2013.01 - KR)

Cited by

GB2320033A; GB2320033B; US6403235B1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0480355 A2 19920415; **EP 0480355 A3 19920902**; **EP 0480355 B1 19950208**; CA 2052112 A1 19920409; CA 2052112 C 19970909; DE 69107270 D1 19950323; DE 69107270 T2 19950713; JP 2536271 B2 19960918; JP H04147992 A 19920521; KR 920008223 A 19920527

DOCDB simple family (application)

EP 91117059 A 19911007; CA 2052112 A 19910924; DE 69107270 T 19911007; JP 27017190 A 19901008; KR 910017292 A 19911002