

Title (en)

HOT DIP ZINC PLATED STEEL SHEET AND METHOD FOR PRODUCTION THEREOF

Title (de)

FEUERVERZINKTE STAHLPLATTE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TOLE D'ACIER PLAQUEE DE ZINC PAR IMMERSION A CHAUD ET PROCEDE DE PRODUCTION DE CETTE TOLE

Publication

EP 1666624 B1 20170607 (EN)

Application

EP 04772660 A 20040826

Priority

- JP 2004012704 W 20040826
- JP 2003307072 A 20030829
- JP 2003307073 A 20030829
- JP 2003324770 A 20030917
- JP 2003324771 A 20030917
- JP 2004008967 A 20040116

Abstract (en)

[origin: EP1666624A1] The invention provides a hot dip galvanized steel sheet which has: a hot dip galvanizing layer having a flat part on a surface thereof; and a film formed on the flat part. The film is composed of a compound containing Zn, Fe, and O, having an average film thickness A in a range from 10 to 100 nm determined by an element analysis of the film, and has { [Fe] / ([Zn] + [Fe]) } in the film in a range from 0.002 to 0.25, where [Zn] and [Fe] designate the content (% by atom) of Zn and Fe in the film, respectively. Since the hot dip galvanized steel sheet of the invention has excellent press-formability, bondability, and phosphatability, it is suitable for automobiles and electrical appliances.

IPC 8 full level

C23C 2/06 (2006.01); **C23C 2/26** (2006.01); **C23C 22/06** (2006.01); **C23C 22/53** (2006.01)

CPC (source: EP KR US)

C21D 9/46 (2013.01 - KR); **C22C 18/00** (2013.01 - KR); **C23C 2/06** (2013.01 - EP KR); **C23C 2/26** (2013.01 - EP US); **C23C 2/28** (2013.01 - KR); **C23C 2/40** (2013.01 - KR); **C23C 22/08** (2013.01 - EP KR); **C23C 22/53** (2013.01 - EP KR); **C23C 22/78** (2013.01 - EP KR); **C23C 22/83** (2013.01 - EP KR)

Citation (examination)

- JP 2003306781 A 20031031 - JFE STEEL KK
- JP 2000160358 A 20000613 - SUMITOMO METAL IND

Cited by

EP2366812A4; EP2554707A4; US11180823B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1666624 A1 20060607; **EP 1666624 A4 20090722**; **EP 1666624 B1 20170607**; CA 2535894 A1 20050310; CA 2535894 C 20091006; CN 1846011 A 20061011; CN 1846011 B 20110608; KR 20060033811 A 20060419; TW 200516172 A 20050516; TW I288188 B 20071011; WO 2005021823 A1 20050310

DOCDB simple family (application)

EP 04772660 A 20040826; CA 2535894 A 20040826; CN 200480024919 A 20040826; JP 2004012704 W 20040826; KR 20067002694 A 20060208; TW 93125778 A 20040827