Title (en)

High-strength cold-rolled steel sheet excellent in coating film adhesion

Title (de)

Hochfestes, Kaltgewalztes Stahlblech mit Ausgezeichneter Adhesion von Beschichtung

Title (fr)

Tôle d'acier à résistance élevée laminée à froid, ayant une excellente adhesivité d'une couche de revêtement

Publication

EP 1548142 A1 20050629 (EN)

Application

EP 04028368 A 20041130

Priority

JP 2003429151 A 20031225

Abstract (en)

A cold-rolled steel sheet of DP (Dual Phase) type with a specific composition meets the requirements: (I) In the surface of the steel sheet, there exist Si-Mn complex oxides no larger than 5 mu m in diameter of the equivalent circle as many as 10 or more per 100 mu m<2> and the coverage of oxides composed mainly of Si on the surface of steel sheet is no more than 10% of surface area, and/or (II) The cross section near the surface of the steel sheet does not show cracks with a width no larger than 3 mu m and a depth no smaller than 5 mu m in arbitrary ten fields of observation under an SEM with a magnification of 2000. A high-strength cold-rolled steel sheet excellent in coating film adhesion and having a tensile strength no lower than 550 MPa is provided.

IPC 1-7

C22C 38/02; C22C 38/04; C23C 2/06; C21D 9/48

IPC 8 full level

C22C 38/00 (2006.01); **C21D 9/48** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C23C 2/02** (2006.01); **C23C 2/06** (2006.01); **C23C 30/00** (2006.01); C21D 8/02 (2006.01)

CPC (source: EP US)

C22C 38/02 (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C23C 30/00** (2013.01 - EP US); C21D 8/0226 (2013.01 - EP US); C21D 8/0236 (2013.01 - EP US); C21D 8/0278 (2013.01 - EP US); C21D 2211/005 (2013.01 - EP US); C21D 2211/008 (2013.01 - EP US)

Citation (search report)

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