

Title (en)

HOT-DIPPED ZINC-ALUMINUM-MAGNESIUM COATED STEEL SHEET AND MANUFACTURING METHOD THEREFOR

Title (de)

FEUERVERZINKTES ZINK-ALUMINIUM-MAGNESIUM-BESCHICHTETES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TÔLE D'ACIER REVÊTUE DE ZINC-ALUMINIUM-MAGNÉSIUM TREMPÉE À CHAUD ET SON PROCÉDÉ DE FABRICATION

Publication

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Application

EP 20940134 A 20201015

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Abstract (en)

[origin: EP4163411A1] Disclosed by content of the present disclosure is a hot-dipped zinc-aluminum-magnesium coated steel sheet having cut corrosion resistance, comprising a steel sheet and a coating; the mass precents of chemical components of the coating are: aluminum, 2%-12%, magnesium, 1%-4%, and the remainder being zinc and unavoidable impurities; also, the mass percent of the aluminum is 2-3 times the mass percent of the magnesium; and the thickness of the coating is not less than 5% the thickness of the steel sheet. Further disclosed by content of the present disclosure is a preparation method for the coated steel sheet: utilizing the chemical components of the coating and obtaining a coating liquid; preheating the coating liquid and obtaining a preheated coating liquid, the temperature of the preheated coating liquid not being lower than the melting point of the coating liquid and not being higher than 500°C; obtaining a steel sheet, dipping the steel sheet into the preheated coating liquid, and obtaining a steel sheet having a coating; and lastly cooling the steel sheet having the coating. The provided preparation method allows for a cut location on a steel sheet to be amply covered by a solution, and a dense hydroxide double layered compound is formed, causing the hot dipped zinc-aluminum-magnesium coated steel sheet to have uniquely superior cut corrosion resistance.

IPC 8 full level

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CPC (source: CN EP KR)

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Citation (search report)

- [XA] EP 3239346 A1 20171101 - POSCO [KR]
- [XAI] CN 1398304 A 20030219 - NISSHIN STEEL CO LTD [JP]
- [X] CN 105671469 A 20160615 - SHOUGANG CORP
- [XAI] CN 110983224 A 20200410 - SHOUGANG GROUP CO LTD
- See also references of WO 2021248765A1

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DOCDB simple family (publication)

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