Title (en)

METHOD FOR PRODUCING A HOT DIP GALVANIZED AND OR GALVANNEALED STEEL SHEET BY QUENCHING AND PARTITIONING

Title (de)

VERFAHREN ZUM HERSTELLEN EINES FEUERVERZINKTEN UND WÄRMEBEHANDELTEN STAHLBLECHES DURCH ABSCHRECKEN UND PARTITIONIEREN

Title (fr)

PROCÉDÉ DE FABRICATION D'UNE TÔLE D'ACIER GALVANISÉE ET OU GALVANNEE PAR IMMERSION À CHAUD, PAR TRANCHÉ ET PARTITIONNEMENT

Publication

EP 2997168 B1 20210303 (EN)

Application

EP 14734592 A 20140516

Priority

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- US 2014038364 W 20140516

Abstract (en)

[origin: US2014338797A1] Steel with high strength and good formability is produced with compositions and methods for forming austenitic and martensitic microstructure in the steel. Carbon, manganese, molybdenum, nickel copper and chromium may promote the formation of room temperature stable (or meta-stable) austenite by mechanisms such as lowering transformation temperatures for non-martensitic constituents, and/or increasing the hardenability of steel. Thermal cycles utilizing a rapid cooling below a martensite start temperature followed by reheating may promote formation of room temperature stable austenite by permitting diffusion of carbon into austenite from martensite.

IPC 8 full level

C21D 8/02 (2006.01); **C21D 1/18** (2006.01); **C21D 1/78** (2006.01); **C21D 6/00** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/12** (2006.01); **C22C 38/18** (2006.01); **C22C 38/22** (2006.01); **C22C 38/26** (2006.01); **C22C 38/32** (2006.01); **C22C 38/34** (2006.01); **C22C 38/38** (2006.01); **C23C 2/02** (2006.01); **C23C 2/06** (2006.01); **C23C 2/40** (2006.01)

CPC (source: EP KR MX US)

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Citation (examination)

SPEER J G ET AL: "Partitioning of carbon from supersaturated plates of ferrite, with application to steel processing and fundamentals of the bainite transformation", CURRENT OPINION IN SOLID STATE AND MATERIALS SCI, ELSEVIER SCIENCE LTD, OXFORD, GB, vol. 8, no. 3-4, 1 June 2004 (2004-06-01), pages 219 - 237, XP004742048, ISSN: 1359-0286, DOI: 10.1016/J.COSSMS.2004.09.003

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