

Title (en)

METHOD AND DEVICE FOR CONTINUOUSLY HARDENING AND TEMPERING A STRIP OF STEEL AND USE OF THE METHOD

Title (de)

VERFAHREN UND VORRICHTUNG ZUM DURCHLAUFVERGÜTEN VON BANDSTAHL SOWIE VERWENDUNG DES VERFAHRENS

Title (fr)

PROCEDE ET DISPOSITIF DE TREMPAGE ET REVENU CONTINU D'UN FEUILLARD D'ACIER ET UTILISATION DE PROCEDE

Publication

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Application

**EP 03747809 A 20030819**

Priority

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- DE 10238972 A 20020820

Abstract (en)

[origin: WO2004018715A2] The invention relates to a method for the continuous annealing of strip steel (1), whereby the strip steel (1) is heated in a first section (11) of a first heating station (6) with a heating gradient of at least 500 K/s, then heated in a second section (12) of the first heating station (6) with a lower heating gradient to a temperature above the A3 temperature and then cooled in a cooling station (13) with a very high cooling gradient back to ambient temperature. The short-term retention of the strip steel (1) above the A3 temperature allows a complete conversion of the structure with simultaneous solution of the total carbon content, however without complete homogenisation of the carbon to give austenite. For further tempering, the strip steel (1) is heated in a first section (11) of a second heating station (7) with a high heating gradient, then further heated to the annealing temperature in a second section (12) of the second heating station (7) and held for a short period and then recooled to ambient temperature in a cooling station (13) with a very high cooling gradient. The rapid and short-term heating to the annealing temperature prevents the decomposition of the martensite needles which have been formed and thus forms a fine-grain structure in the strip steel (1) with a martensite precipitated with the finest possible needles. A strip steel (1) particularly for the production of edge elements (16) for skis snowboards sliding boards or similar is also disclosed.

IPC 8 full level

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