Title (en)

A method of heat treatment of a steel product

Title (de)

Verfahren zur Wärmebehandlung eines Stahlprodukts

Title (fr)

Procédé de traitement thermique d'un produit en acier

Publication

EP 0473561 B1 19960207 (FR)

Application

EP 91870119 A 19910806

Priority

BE 9000787 A 19900814

Abstract (en)

[origin: EP0473561A1] Method of heat treatment of a steel product leaving the rolling mill in which, during a first stage, the product is subjected to cooling with water to a surface temperature which is equal to or lower than the temperature of the onset of the martensite transformation (Ms point) of the steel, with a rate of cooling which is at least equal to the critical rate for quenching the steel; during a second stage the product is first of all subjected, by virtue of the heat released by the unquenched part of the product, to a reheating of the quenched surface layer to a surface temperature, known as the self-annealing temperature, of between 550 DEG C and 650 DEG C, and then to a secondary cooling to a surface temperature of less than 450 DEG C; the final cooling of the product to a temperature of less than 120 DEG C is then performed, for example with the aid of highly agitated water. During the stage which follows the self-annealing, the product may first of all advantageously be allowed to stay in air up to a temperature of approximately 550 DEG C, and then be cooled at high speed to a temperature substantially below 400 DEG C, and be reheated to a temperature of between 400 DEG C and 420 DEG C before being allowed to cool in air. <IMAGE>

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C21D 1/02; C21D 8/00

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