

Title (en)

A HOT ROLLING MILL FOR A STEEL PLATE OR SHEET AND HOT ROLLING METHODS USING SUCH MILL

Title (de)

WARMWALZANLAGE FÜR STAHLPLATTE OR -BLECH UND WARMWALZVERFAHREN UNTER VERWENDUNG EINER SOLCHEN ANLAGE

Title (fr)

INSTALLATION DE LAMINAGE À CHAUD D'UNE PLAQUE OU D'UNE TÔLE EN ACIER ET PROCÉDÉS DE LAMINAGE À CHAUD UTILISANT UNE TELLE INSTALLATION

Publication

EP 1935521 B1 20151223 (EN)

Application

EP 06783166 A 20060829

Priority

- JP 2006317394 W 20060829
- JP 2005249059 A 20050830

Abstract (en)

[origin: EP1935521A1] A hot rolling mill for a steel plate or sheet, which is superior in terms of equipment cost, equipment maintainability, and cooling performance and is capable of efficiently manufacturing a steel plate or sheet having good characteristics by appropriately controlling the temperature of a rolling material; and a method for hot rolling a steel plates or sheet are provided. Specifically, cooling equipment 20 for supplying cooling water onto a top surface and a bottom surface of a steel plate or sheet 10 that is being conveyed is provided at a position near an entrance side and an exit side of a hot rolling mill 12. The cooling equipment 20 includes an upper header 21 having upper nozzles 22 for jetting rod-like water flows 23 onto the top surface of the steel plate or sheet 10 at an angle of depression θ_U in the range of 30° to 60°, which is positioned such that remaining cooling water 24 supplied to the steel plate or sheet is retained by work rolls 12a. The cooling equipment 20 further includes a lower header 31 having lower nozzles 32 for jetting rod-like water flows 33 onto the bottom surface of the steel plate or sheet 10 at an angle of elevation in the range of 45° to 90°, which is positioned between the work rolls 12a and a table roller adjacent thereto.

IPC 8 full level

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CPC (source: EP KR)

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Citation (opposition)

Opponent : SMS group GmbH

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- SU 1426665 A1 19880930 - VNI PK I METALL MASH [SU]
- US 6089069 A 20000718 - SEIDEL JUERGEN [DE], et al
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- JP S55143906 U 19801015
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- JP S54125158 A 19790928 - SUMITOMO METAL IND
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