

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 A1 20080625 (EN)

Application

EP 06783166 A 20060829

Priority

- JP 2006317394 W 20060829
- JP 2005249059 A 20050830

Abstract (en)

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 α 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

B21B 45/02 (2006.01)

CPC (source: EP KR)

B21B 37/44 (2013.01 - KR); **B21B 45/02** (2013.01 - KR); **B21B 45/0218** (2013.01 - EP)

Cited by

EP2455167A4; EP2450117A4; EP2431106A4; US9833823B2; US8414716B2; US8920708B2

Designated contracting state (EPC)

AT BE DE FR GB

DOCDB simple family (publication)

EP 1935521 A1 20080625; EP 1935521 A4 20110511; EP 1935521 B1 20151223; CN 101253011 A 20080827; CN 101253011 B 20100616; JP 2007061838 A 20070315; JP 4586682 B2 20101124; KR 100973692 B1 20100803; KR 20080034966 A 20080422; WO 2007026905 A1 20070308

DOCDB simple family (application)

EP 06783166 A 20060829; CN 200680032030 A 20060829; JP 2005249059 A 20050830; JP 2006317394 W 20060829; KR 20087004609 A 20060829