

Title (en)

REVERSING ROLLING MILL WITH COOLING FACILITY AND CORRESPONDING METHOD OF COOLING A STEEL PLATE OR SHEET

Title (de)

UMKEHRBARE WALZROLLEN MIT ABKÜHLANLAGE UND ENTSPRECHENDES VERFAHREN ZUM KÜHLEN STAHLPLATTE ODER -
BLECHES

Title (fr)

LAMINOIR REVERSIBLE AVEC UNE INSTALLATION DE REFROIDISSEMENT ET PROCEDE DE REFROIDISSEMENT CORRESPONDANT
POUR UNE PLAQUE OU UNE TOLE EN ACIER

Publication

EP 1935522 A1 20080625 (EN)

Application

EP 06783167 A 20060829

Priority

- JP 2006317395 W 20060829
- JP 2005249055 A 20050830
- JP 2005249060 A 20050830
- JP 2005249061 A 20050830
- JP 2006001568 A 20060106

Abstract (en)

There are provided cooling equipment and a cooling method for a steel plate or sheet which can properly cool a steel plate or sheet with a compact size on a hot rolling line, for example, during controlled rolling of the steel plate or sheet. Specifically, steel-plate or sheet cooling equipment supplies cooling water onto upper and lower surfaces of a steel plate or sheet 10 while the steel plate or sheet 10 is passing during hot rolling, and includes nozzles 22a and 22b that obliquely supply the cooling water onto the upper surface of the steel plate or sheet 10 from above. The nozzles 22a and 22b are arranged so that jets of cooling water oppose each other in the transferring direction of the steel plate or sheet 10 on the steel plate or sheet 10. More specifically, pass-type cooling equipment 20 has a high water flow rate of 4 m³ /m² min or more.

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

US8591675B2; CN111744959A; EP3409390A4; EP3409389A4; US9222700B2; US11007556B2; US10350659B2; US11020780B2;
US8404062B2; TWI625173B; TWI628011B

Designated contracting state (EPC)

AT BE DE FR GB

DOCDB simple family (publication)

EP 1935522 A1 20080625; **EP 1935522 A4 20110511**; **EP 1935522 B1 20151118**; CN 101253009 A 20080827; CN 101253009 B 20101222;
KR 100973691 B1 20100803; KR 20080034965 A 20080422; WO 2007026906 A1 20070308

DOCDB simple family (application)

EP 06783167 A 20060829; CN 200680031800 A 20060829; JP 2006317395 W 20060829; KR 20087004608 A 20060829