

Title (en)

THICK STEEL PLATE MANUFACTURING METHOD AND MANUFACTURING DEVICE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG DICKER STAHLPLATTEN

Title (fr)

DISPOSITIF ET PROCÉDÉ DE FABRICATION D'UNE TÔLE D'ACIER ÉPAISSE

Publication

EP 2979769 A4 20160302 (EN)

Application

EP 14773154 A 20140320

Priority

- JP 2013065341 A 20130327
- JP 2014001613 W 20140320

Abstract (en)

[origin: EP2979769A1] An object of the present invention is to provide a method and a facility for manufacturing a steel plate by which a high-quality steel plate having less variation in quality can be ensured. A method for manufacturing a steel plate, including a hot-rolling step, a shape correction step and an accelerated cooling step in this order, the method further includes a temperature adjustment step of performing air cooling such that a surface temperature of the steel plate is lowered below the Ar 3 transformation point or performing water cooling by supplying cooling water to upper and lower surfaces of the steel plate at a water amount density of 0.3 to 2.2 m³/m²·min between the shape correction step and the accelerated cooling step, to transform the surface of the steel plate and, a descaling step of jetting high pressure water having an energy density of 0.05 J/mm² or more to the surfaces of the steel plate after the temperature adjustment step and before the accelerated cooling step.

IPC 8 full level

B21B 45/08 (2006.01); **B21B 45/02** (2006.01)

CPC (source: EP)

B21B 45/0203 (2013.01); **B21B 45/08** (2013.01); **B21B 37/74** (2013.01); **B21B 45/0218** (2013.01); **B21B 2001/225** (2013.01); **B21B 2015/0071** (2013.01); **B21B 2045/0212** (2013.01); **B21B 2261/20** (2013.01)

Citation (search report)

- [A] WO 2010115698 A1 20101014 - SIEMENS VAI METALS TECH GMBH [AT], et al
- [A] WO 2010008090 A1 20100121 - JFE STEEL CORP [JP], et al
- See references of WO 2014156085A1

Cited by

WO2021245355A1; FR3112297A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2979769 A1 20160203; **EP 2979769 A4 20160302**; **EP 2979769 B1 20180815**; CN 105073293 A 20151118; CN 105073293 B 20170315; JP 2014188543 A 20141006; JP 5720714 B2 20150520; KR 101691020 B1 20161229; KR 20150122186 A 20151030; TW 201446353 A 20141216; TW I569898 B 20170211; WO 2014156085 A1 20141002

DOCDB simple family (application)

EP 14773154 A 20140320; CN 201480018326 A 20140320; JP 2013065341 A 20130327; JP 2014001613 W 20140320; KR 20157025725 A 20140320; TW 103111428 A 20140327