

Title (en)

CONTINUOUS PRESS HARDENING PROCESS AND APPARATUS THEREFOR

Title (de)

KONTINUIERLICHES PRESSHÄRTUNGSVERFAHREN UND VORRICHTUNG DAFÜR

Title (fr)

PROCÉDÉ ET APPAREIL DE DURCISSEMENT PAR PRESSAGE CONTINU

Publication

EP 2287343 A2 20110223 (EN)

Application

EP 09810135 A 20090727

Priority

- KR 2009004162 W 20090727
- KR 20080084681 A 20080828

Abstract (en)

The present invention relates to a continuous press hardening process, and an apparatus therefor. The present invention comprises: a slab casting step for continuously casting molten steel refined in an electric furnace and blast furnace to make slabs, followed by re-heating and hot-rolling the slabs to prepare a hot-rolled steel sheet; a blanking step after the slab casting step for transferring the hot-rolled steel sheet to a blank through a sealed oven and then blanking the hot-rolled steel sheet; and a press hardening step after the blanking step for transferring the hot-rolled steel sheet to a press mold and then press-molding it. Since the present invention can immediately inject the high-temperature steel sheet generated in hot-rolling in the press hardening step, an additional re-heating step is not required. Thus, the present invention has an effect of reducing costs through simplification of a process.

IPC 8 full level

C21D 1/18 (2006.01); **B21B 15/00** (2006.01); **C21D 1/673** (2006.01); **C21D 8/02** (2006.01); **C21D 8/04** (2006.01); **C21D 9/46** (2006.01); **C21D 9/48** (2006.01); **C22C 38/04** (2006.01); **F27B 9/20** (2006.01)

CPC (source: EP KR US)

B21B 1/46 (2013.01 - KR); **B21D 28/00** (2013.01 - KR); **C21D 1/18** (2013.01 - KR); **C21D 1/673** (2013.01 - EP US); **C21D 9/48** (2013.01 - EP US); **F27B 9/20** (2013.01 - EP US); **C21D 11/00** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US)

Cited by

CN110382125A; WO2018091381A1

Designated contracting state (EPC)

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 SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2287343 A2 20110223; **EP 2287343 A4 20111116**; **EP 2287343 B1 20121226**; JP 2011523593 A 20110818; JP 5311429 B2 20131009; KR 101149176 B1 20120525; KR 20100026974 A 20100310; US 2011073220 A1 20110331; WO 2010024530 A2 20100304; WO 2010024530 A3 20100527

DOCDB simple family (application)

EP 09810135 A 20090727; JP 2011511524 A 20090727; KR 2009004162 W 20090727; KR 20090068462 A 20090727; US 95586210 A 20101129