

Title (en)

METHOD OF COOLING MAIN ROLL FOR RING ROLLING AND METHOD OF MANUFACTURING RING ROLLED BODY

Title (de)

VERFAHREN ZUM KÜHLEN EINER RINGWALZENDEN HAUPTWALZE UND VERFAHREN ZUR HERSTELLUNG EINES RINGGEWALZTEN KÖRPERS

Title (fr)

PROCÉDÉ DE REFROIDISSEMENT D'UN ROULEAU PRINCIPAL DE LAMINOIR CIRCULAIRE ET PROCÉDÉ DE FABRICATION D'UN CORPS LAMINÉ CIRCULAIRE

Publication

EP 3590615 B1 20210505 (EN)

Application

EP 18781229 A 20180328

Priority

- JP 2017074512 A 20170404
- JP 2018012814 W 20180328

Abstract (en)

[origin: EP3590615A1] In a method of cooling a main roll, strength of a shaft and a peripheral portion thereof of the main roll is sufficiently secured, maintenance of the main roll is facilitated, and the shaft and the peripheral portion thereof of the main roll are efficiently cooled. In a method of manufacturing a ring rolled body, a high-quality ring rolled body is produced. The present invention relates to a method of cooling a main roll 1 for ring rolling in a state in which one side, in the rotation axis direction, of the main roll 1 faces upward, and relates to a method of manufacturing a ring rolled body, including the cooling method. In the cooling method, the shaft 11 is cooled by injecting a liquid W into a receiving part 13, 17 which is recessed from an upper end surface 12c of a die 12 of the main roll 1 facing the one side in the rotation axis direction and surrounds the shaft 11 of the main roll 1. In the method of manufacturing a ring rolled body, a ring rolled body is manufactured by heating the die 12 by an induction heating mechanism 6 and cooling the shaft 11 by the cooling method, and further, reducing a ring material M between the main roll 1 and the mandrel 2.

IPC 8 full level

B21B 5/00 (2006.01); **B21B 27/02** (2006.01); **B21B 27/10** (2006.01); **B21H 1/06** (2006.01); **B21J 13/02** (2006.01)

CPC (source: EP US)

B21B 5/00 (2013.01 - EP); **B21B 27/02** (2013.01 - EP); **B21B 27/10** (2013.01 - EP US); **B21H 1/06** (2013.01 - EP US); **B21J 13/02** (2013.01 - EP)

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

DOCDB simple family (publication)

EP 3590615 A1 20200108; **EP 3590615 A4 20200325**; **EP 3590615 B1 20210505**; JP 2018176172 A 20181115; JP 6842664 B2 20210317; MX 2019011915 A 20200109; US 2020061686 A1 20200227; WO 2018186258 A1 20181011

DOCDB simple family (application)

EP 18781229 A 20180328; JP 2017074512 A 20170404; JP 2018012814 W 20180328; MX 2019011915 A 20180328; US 201816500294 A 20180328