

Title (en)

METHOD FOR SETTING DIFFERENT COOLING COURSES FOR ROLLED MATERIAL OVER ITS WIDTH IN A COOLING LINE OF A HOT-STRIP MILL OR HEAVY-PLATE MILL

Title (de)

VERFAHREN ZUR EINSTELLUNG VERSCHIEDENER KÜHLVERLÄUFE VON WALZGUT ÜBER DESSEN BREITE IN EINER KÜHLSTRECKE EINER WARBAND- ODER GROBBLECH-STRASSE

Title (fr)

PROCÉDÉ POUR LE RÉGLAGE DE DIFFÉRENTS PROGRAMMES DE REFROIDISSEMENT D'UN PRODUIT LAMINÉ SUR SA LARGEUR DANS UNE LIGNE DE REFROIDISSEMENT D'UN LAMINOIR DE BANDE À CHAUD OU DE TÔLES FORTES

Publication

EP 3927478 B1 20230405 (DE)

Application

EP 20706685 A 20200219

Priority

- DE 102019104419 A 20190221
- EP 2020054366 W 20200219

Abstract (en)

[origin: WO2020169669A1] 1. A method for setting different cooling rates over the strip width of a cooling stretch in a hot-strip mill or heavy-plate mill. 2.1. A method for setting different cooling rates of metal strips or metal plates (rolling material) over the strip width of a cooling stretch in a hot-strip mill or heavy-plate mill. 2.2 According to the method, for the calculation of the cooling rate, the initial enthalpy distribution over the material width of the rolling material before the cooling is determined, and, proceeding therefrom, a target enthalpy distribution is determined in the width direction and length direction of the rolling material while taking into account a calculation of the flatness and the mechanical properties by means of a microstructure model, and subsequently the coolant amount and the coolant curve of the cooling stretch are set. 3. See figure 1.

IPC 8 full level

B21B 37/76 (2006.01)

CPC (source: EP US)

B21B 1/24 (2013.01 - US); **B21B 37/76** (2013.01 - EP US); **B21B 45/0218** (2013.01 - US); **C21D 8/0263** (2013.01 - EP US); **C21D 2221/00** (2013.01 - EP US)

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)

WO 2020169669 A1 20200827; CN 113453814 A 20210928; CN 113453814 B 20230901; DE 102019104419 A1 20200827; EP 3927478 A1 20211229; EP 3927478 B1 20230405; ES 2948332 T3 20230908; FI 3927478 T3 20230529; JP 2022520074 A 20220328; JP 7239720 B2 20230314; US 11779977 B2 20231010; US 2022126343 A1 20220428

DOCDB simple family (application)

EP 2020054366 W 20200219; CN 202080015208 A 20200219; DE 102019104419 A 20190221; EP 20706685 A 20200219; ES 20706685 T 20200219; FI 20706685 T 20200219; JP 2021546743 A 20200219; US 202017310730 A 20200219