

Title (en)

METHOD FOR OPTIMALLY PRODUCING METAL STEEL AND IRON ALLOYS IN HOT-ROLLED AND THICK PLATE FACTORIES USING A MICROSTRUCTURE SIMULATOR, MONITOR, AND/OR MODEL

Title (de)

VERFAHREN ZUR OPTIMIERTEN HERSTELLUNG VON METALLISCHEN STAHL- UND EISENLEGIERUNGEN IN WARMWALZ- UND GROBBLECHWERKEN MITTELS EINES GEFÜGESIMULATORS, -MONITORS UND/ODER -MODELLS

Title (fr)

PROCÉDÉ DE PRODUCTION OPTIMISÉE D'ALLIAGES MÉTALLIQUES À BASE D'ACIER ET DE FER DANS DES UNITÉS DE LAMINAGE À CHAUD ET DE FABRICATION DE TÔLES FORTES AU MOYEN D'UN SIMULATEUR, MONITEUR ET/OU MODÈLE DE STRUCTURE

Publication

EP 3096896 B1 20171220 (DE)

Application

EP 15701113 A 20150113

Priority

- DE 102014201086 A 20140122
- DE 102014224461 A 20141128
- EP 2015050460 W 20150113

Abstract (en)

[origin: WO2015110310A1] The invention relates to a method for controlling a metallurgical production system using a microstructure model, comprising a program which calculates at least one mechanical strength property of a produced product and which calculates the strength property on the basis of calculated metallurgical phase components of the microstructure of the produced product. The metallurgical system comprises a terminating cooling section, and operating parameters of the metallurgical system are incorporated when calculating the mechanical strength property with adaptable output values which have been at least partly used in advance. The aim of the invention is to provide a solution which allows an advantageous adjustment of operating parameters in order to achieve desired mechanical strength properties of the product consisting of a metal steel and/or iron alloy. This is achieved in that as the operating parameters incorporated when calculating the strength property, the respective mass proportion of at least one alloy element, which is present in the chemical composition of a metal steel and/or iron alloy being used, and at least one additional operating parameter, preferably a cooling rate which is adjusted as part of a cooling process carried out after a rolling process, are detected, and an increase of the observed strength property, said increase being achieved by changing at least said additional operating parameter, is at least partly compensated by reducing the mass proportion of one or more of the alloy elements of the metal steel and/or iron alloy being used.

IPC 8 full level

B21B 37/00 (2006.01)

CPC (source: EP KR RU US)

B21B 1/22 (2013.01 - US); **B21B 1/463** (2013.01 - KR); **B21B 37/00** (2013.01 - EP KR RU US); **B21B 37/74** (2013.01 - US); **C21D 9/46** (2013.01 - EP US); **C21D 9/52** (2013.01 - EP US); **C21D 11/005** (2013.01 - EP US); **B21B 2001/225** (2013.01 - US); **C21D 2211/005** (2013.01 - EP US)

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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)

DE 102014224461 A1 20150723; CN 106413931 A 20170215; CN 106413931 B 20191015; EP 3096896 A1 20161130; EP 3096896 B1 20171220; JP 2017511752 A 20170427; JP 6297159 B2 20180320; KR 20160105464 A 20160906; RU 2016133849 A 20180302; RU 2016133849 A3 20180302; RU 2703009 C2 20191015; US 2017002440 A1 20170105; WO 2015110310 A1 20150730

DOCDB simple family (application)

DE 102014224461 A 20141128; CN 201580005409 A 20150113; EP 15701113 A 20150113; EP 2015050460 W 20150113; JP 2016547925 A 20150113; KR 20167020718 A 20150113; RU 2016133849 A 20150113; US 201515113260 A 20150113