

Title (en)

EQUALISATION OF BELT PROPERTIES BY MEANS OF WIDTH-DEPENDENT PRELIMINARY BELT COOLING

Title (de)

ANGLEICHUNG VON BANDEIGENSCHAFTEN DURCH BREITENABHÄNGIGE VORBANDKÜHLUNG

Title (fr)

ADAPTATION DES PROPRIÉTÉS D'UNE BANDE PAR REFROIDISSEMENT PRÉALABLE DE LA BANDE DANS LE SENS DE SA LARGEUR

Publication

EP 2841215 B1 20160518 (DE)

Application

EP 13718316 A 20130417

Priority

- EP 12165879 A 20120427
- EP 2013057973 W 20130417
- EP 13718316 A 20130417

Abstract (en)

[origin: WO2013160166A1] A metal strip (1) is roughed in a roughing mill (2), then cooled in a cooling device (3) and finally finish-rolled in a finishing train (8) with multiple rolling stands (9). At the latest when the metal strip (1) runs into the cooling device (3), initial values of a first property of the metal strip (1) are recorded in a spatially resolved form in the direction of the width of the strip and are fed to a rolling model (20). By means of the rolling model (20), expected values of a second property of the metal strip (1) are determined for a location that lies at or behind the first rolling stand (9) of the finishing train (8), in a spatially resolved form in the direction of the width of the strip. The expected values depend on the respective initial values and on the respective activation values (S) of the cooling device (3). The activation values (S) of the cooling device (3) are determined by means of the rolling model (20) in a spatially resolved form in the direction of the width of the strip in such a way that the expected values are made to approximate desired values of the second property in a spatially resolved form in the direction of the width of the strip. The cooling device (3) is activated in a way corresponding to the determined activation values (S).

IPC 8 full level

B21B 37/74 (2006.01); **C21D 11/00** (2006.01)

CPC (source: EP)

B21B 37/74 (2013.01); **C21D 8/0263** (2013.01); **C21D 8/0463** (2013.01); **C21D 11/005** (2013.01); **B21B 1/24** (2013.01); **B21B 37/76** (2013.01); **B21B 38/006** (2013.01); **B21B 38/06** (2013.01); **B21B 38/08** (2013.01); **B21B 45/0218** (2013.01); **B21B 2261/20** (2013.01)

Citation (opposition)

Opponent : SMS group GmbH

- EP 2280323 A1 20110202 - SIEMENS AG [DE]
- DE 102007053523 A1 20081204 - SMS DEMAG AG [DE]
- WO 03045599 A1 20030605 - SIEMENS AG [DE], et al
- JP 2008238241 A 20081009 - KOBE STEEL LTD
- JP 2012040593 A 20120301 - JFE STEEL CORP
- DE 19963186 A1 20010712 - SIEMENS AG [DE]

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 2013160166 A1 20131031; CN 104254408 A 20141231; CN 104254408 B 20161109; EP 2841215 A1 20150304; EP 2841215 B1 20160518

DOCDB simple family (application)

EP 2013057973 W 20130417; CN 201380021835 A 20130417; EP 13718316 A 20130417