

Title (en)
COOLING CONTROL

Title (de)
STEUERUNG EINER KÜHLUNG

Title (fr)
COMMANDE DE REFROIDISSEMENT

Publication
EP 2817425 B1 20160518 (DE)

Application
EP 13714569 A 20130320

Priority
• EP 12161804 A 20120328
• EP 2013055753 W 20130320
• EP 13714569 A 20130320

Abstract (en)
[origin: EP2644719A1] Controlling a cooling of a material (4) using a coolant, comprises controlling a supply (13) of the coolant to the material by at least one actuator (6) which can be set to at least two different positions, where an actuator curve set is assigned to the actuator, which specifies a relationship between a coolant stream, a pressure of the coolant, and a position of the actuator; adjusting a coolant stream; determining a corresponding position of the target coolant stream and adjusting the actuator in the determined position. Controlling a cooling of a material (4) using a coolant, comprises controlling a supply (13) of the coolant to the material by at least one actuator (6) which can be set to at least two different positions, where an actuator curve set is assigned to the actuator, which specifies a relationship between a coolant stream, a pressure of the coolant, and a position of the actuator; adjusting a coolant stream, where the pressure of the coolant upstream of at least one actuator, when seen in the flow direction of the coolant, is determined from pressure value of the actuator curves to the determined; determining a corresponding position of the target coolant stream and adjusting the actuator in the determined position. Independent claims are also included for: (1) a computer program product for controlling the cooling process of the material using the coolant, where the computer program product, when executed by a computer unit, performs the steps comprising determining the pressure of the coolant upstream of at least one actuator, and a coolant stream corresponding position of the actuator curve, and generating a signal which triggers adjustment of the actuator and sets actuator in the determined position; (2) a control device (7) for controlling a cooling system of a material, comprising a storage unit which is designed for the storage of actuator curves, a processor unit which is adapted to determine position of the actuator, and a signal unit, which is adapted to transmit a signal to adjust at least one actuator in the determined position to a control unit; and (3) a cooling section (2) of a metal processing line, preferably a rolling line, comprising a control device for controlling the cooling of a material in the cooling section.

IPC 8 full level
C21D 1/667 (2006.01)

CPC (source: EP)
B21B 37/76 (2013.01); **C21D 9/5735** (2013.01); **C21D 11/005** (2013.01); **C21D 1/667** (2013.01)

Cited by
US11135631B2; US11745237B2

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 2644719 A1 20131002; CN 104334754 A 20150204; CN 104334754 B 20160907; EP 2817425 A1 20141231; EP 2817425 B1 20160518; WO 2013143925 A1 20131003

DOCDB simple family (application)
EP 12161804 A 20120328; CN 201380027245 A 20130320; EP 13714569 A 20130320; EP 2013055753 W 20130320