

Title (en)

METAL THICKNESS CONTROL MODEL BASED INFERENTIAL SENSOR

Title (de)

AUF METALLDICKENSTEUERUNGSMODELL BASIERENDER INFERENZSENSOR

Title (fr)

CAPTEUR INFÉRENTIEL BASÉ SUR UN MODÈLE DE CONTRÔLE DE L'ÉPAISSEUR DE MÉTAUX

Publication

EP 3332883 B1 20200506 (EN)

Application

EP 17204486 A 20171129

Priority

US 201615373622 A 20161209

Abstract (en)

[origin: EP3332883A1] A rolled sheet metal mill (910) controller (900) for controlling thickness of sheet metal (922) produced by rolls of the mill (910), the controller (900) comprising one or more processors and code stored on media readable by the one or more processors to control the thickness of the produced sheet metal (922), the controller (900) including an input (940) coupled to receive multiple measured mill parameters including produced sheet metal thickness h that is time delayed from the production of the sheet metal (922), multiple models (935) of the sheet metal mill (910), wherein the sheet metal thickness is modeled as an input varying delay, and at least one internal disturbance model based on one or more of the multiple measured parameters coupled to the input (940), a Kalman filter KF based on the multiple models (935), and an output (955) coupled to control a gap between the rolls that produce the rolled sheet metal (922).

IPC 8 full level

B21B 37/16 (2006.01)

CPC (source: CN EP US)

B21B 37/165 (2013.01 - CN EP US); **B21B 37/58** (2013.01 - US); **B21B 37/66** (2013.01 - EP US); **B21B 38/04** (2013.01 - EP US); **B21B 38/08** (2013.01 - EP US); **B21B 2261/04** (2013.01 - EP US); **B21B 2265/12** (2013.01 - EP US); **B21B 2275/04** (2013.01 - EP US); **B21B 2275/06** (2013.01 - EP US)

Cited by

EP3936248A1; WO2022008133A1; EP3974073A1; EP3936248B1; EP3974073B1

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 3332883 A1 20180613; **EP 3332883 B1 20200506**; CN 108213085 A 20180629; CN 108213085 B 20200707; US 2018161839 A1 20180614

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EP 17204486 A 20171129; CN 201711289879 A 20171208; US 201615373622 A 20161209