

Title (en)

Method and device for the active compensation of periodic disturbances during hot or cold rolling

Title (de)

Verfahren und Vorrichtung zur aktiven Kompensation periodischer Störungen beim Warm- oder Kaltwalzen

Title (fr)

Procédé et dispositif pour la compensation active de perturbations périodiques pendant le laminage à chaud ou à froid

Publication

EP 0992295 A3 20021218 (EN)

Application

EP 99119817 A 19991007

Priority

AT 168298 A 19981008

Abstract (en)

[origin: EP0992295A2] In a method and a corresponding device for the active compensation of periodic disturbances of known frequency during hot or cold rolling, such as roll eccentricities, by means of a control system, with the aid of a linear dynamic controller (2) which comprises a model (Pu) that describes one part of the dynamic behaviour of the controlled system (1), an output variable (y) is determined from an input variable (u) on the basis of a reference variable (r), and a compensation signal (uLMS) is generated on the basis of said output variable and a measured output variable (y) of the controlled system (1) and is impressed on the input variable (u) fed to the controlled system (1). As a result, the tracking control is decoupled from the disturbance control, and the controller according to the invention can therefore be inserted into existing control loops for the thickness of the rolling material and/or for the position of the rolls and/or for the rolling force and/or for the roll bending. The compensation signal is generated without prior identification of the eccentricity, which thus permits a more rapid correction of the disturbances. <IMAGE>

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B21B 37/66

IPC 8 full level

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CPC (source: EP)

B21B 37/66 (2013.01)

Citation (search report)

- [DA] EP 0424709 A2 19910502 - SCHLOEMANN SIEMAG AG [DE]
- [A] US 4685063 A 19870804 - WEIHRICH GEORG [DE], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 016, no. 450 (M - 1312) 18 September 1992 (1992-09-18)

Cited by

AT502348B1; CN104923572A; CN114643287A; US8099196B2; DE102007022241A1; WO2007020126A1

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