

Title (en)

Device for tension control in a continuous rolling mill.

Title (de)

Vorrichtung zur Regelung der Zugkraft in einer mehrgerüstigen Walzstrasse.

Title (fr)

Dispositif de commande de la tension dans un laminoir continu.

Publication

EP 0008037 A1 19800220 (DE)

Application

EP 79102628 A 19790724

Priority

DE 2834102 A 19780803

Abstract (en)

1. Device for regulating the tension transmitted in the goods to be rolled in a rolling mill which contains m stages, comprising a speed regulator at each stage and comprising a regulating device (e.g. 1.24) which is superimposed upon the speed regulator in at least m-1 stages and which serves to adjust the rolling speeds of the stages which follow one another in the direction of rolling, and with a calculating circuit (e.g. 1.14) which is in each case assigned to the regulating devices and which serves to calculate the actual value of the regulating quantity (e.g. Mz_1) from the relevant drive moment, acceleration moment and deformation moment, characterized in that in order to stabilise the speed characteristics of the rolling mill, each of the stages (1 to m) is assigned a regulating device (1.24 to m.24) of this kind and these regulating devices are superimposed by a common correcting regulator (27) which is supplied with the output signal (Δn^*) of one of the regulating devices by way of input quantity, and from whose output signal (F_k^* or σ_{mak}^*), from the theoretical value of the tension force (F_A^* or σ_{mA}^*) on the drive side of the particular associated and of the possibly preceding stage and from other rolling parameters the theoretical value (Mz^*) for the regulating devices is formed in each case in a calculating means (1.28 to m.28).

Abstract (de)

Zur Erzielung eines konstanten Längszuges im Walzgut (12) ist an jedem Walzgerüst (1 bis 4) eine Regeleinrichtung (24) angeordnet und diesen Regeleinrichtungen (24) ein Korrekturregler (27) überlagert. Der Istwert für die Regeleinrichtungen (24), die einen dem Drehzahlregler des jeweiligen Walzmotors zugeführten Zusatzsollwert (Δn^*) liefern, wird mittels einer Rechenschaltung (14) aus dem Antriebs- dem Beschleunigungs- und dem Verformungsmoment am jeweiligen Gerüst (1, 2, 3, 4) berechnet. Der Sollwert für die Regeleinrichtungen (24) wird in einem Rechenglied (28) aus dem Sollwert der Zugkraft und dem Walzgutquerschnitt vor und hinter dem jeweiligen Gerüst, dem Walzendurchmesser und dem Ausgangssignal des Korrekturreglers (27) gebildet.

IPC 1-7

B21B 37/06; G05D 5/02

IPC 8 full level

B21B 37/52 (2006.01)

CPC (source: EP)

B21B 37/52 (2013.01)

Citation (search report)

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