

Title (en)

Multi-high rolling mill equipped with work roll shift function

Title (de)

Mehrwalzen-Walzwerk, das mit einer Arbeitswalzenverlagerungsfunktion ausgerüstet ist

Title (fr)

Train de laminoir multiple élevé équipé d'une fonction de cylindres de travail

Publication

EP 2656934 B1 20160323 (EN)

Application

EP 13002094 A 20130422

Priority

JP 2012099721 A 20120425

Abstract (en)

[origin: EP2656934A1] A multi-high rolling mill equipped with a work roll shift function where thrust bearings are effectively installed so that the shifting function of small-diameter work rolls can be achieved with a simple mechanism is provided. A pair of upper and lower work rolls (2a, 2b) are provided with tapered portions (22a, 22b) in upper and lower positions in point symmetry; end faces of the respective work rolls are supported by two upper and lower thrust bearings (8a to 8d) on each of an operation side and a drive side; long holes (38a to 38d) are formed in inner-race side shafts (37a to 37d) of bearing boxes (10a to 10d) pivotally supporting the respective thrust bearings, respectively, such that the respective thrust bearings are movable individually together with the respective bearing boxes in roll axial directions; coupling bars (9a, 9b) each penetrating the corresponding long holes to restrict vertical displacements of the corresponding two upper and lower thrust bearings are provided between the respective bearing boxes; first roll shift devices (13a to 13d, 11a to 11d) connected to the respective bearing boxes to shift the respective work rolls in the roll axial directions are provided; and taper start positions SP of the tapered portions of the respective work rolls are shifted to vicinities of insides of strip widthwise ends or vicinities of outsides of strip widthwise ends.

IPC 8 full level

B21B 13/14 (2006.01)

CPC (source: EP)

B21B 13/142 (2013.01); **B21B 13/147** (2013.01); **B21B 31/18** (2013.01); **B21B 2267/18** (2013.01); **B21B 2269/14** (2013.01)

Cited by

CN109807173A; US12030098B2

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 2656934 A1 20131030; EP 2656934 B1 20160323; CN 103372574 A 20131030; CN 103372574 B 20150617; IN 1483MU2013 A 20150417; JP 2013226572 A 20131107; JP 5894849 B2 20160330

DOCDB simple family (application)

EP 13002094 A 20130422; CN 201310133761 A 20130417; IN 1483MU2013 A 20130423; JP 2012099721 A 20120425