

Title (en)
Rolling mill having work roll shifting function

Title (de)
Walzwerk mit einer Arbeitswalzenverlagerungsfunktion

Title (fr)
Laminoir doté d'une fonction de commutation de cylindre de travail

Publication
EP 2292341 A3 20120502 (EN)

Application
EP 10006802 A 20100701

Priority
JP 2009176038 A 20090729

Abstract (en)
[origin: EP2292341A2] A reversing rolling mill (11) includes a pair of upper and lower work rolls (22a, 22b) clamping a strip (1) and roll shifting devices (40, 50) for respectively shifting the work rolls (22a, 22b) in the axial direction thereof. The pair of upper and lower work rolls (22a, 22b) respectively have, at one ends of roll body portions (31a, 32a), tapering portions (31b, 32b) having roll diameters gradually decreasing toward roll tips, and disposed such that the tapering portions (31b, 32b) are located on opposite sides from each other in the axial direction thereof. The surfaces of the roll body portions (31a, 32a) of the work rolls (22a, 22b) are formed of a ceramic material or a cemented carbide.

IPC 8 full level
B21B 13/14 (2006.01); **B21B 27/02** (2006.01); **B21B 27/03** (2006.01)

CPC (source: EP)
B21B 13/142 (2013.01); **B21B 27/021** (2013.01); **B21B 27/032** (2013.01); **B21B 1/32** (2013.01); **B21B 31/18** (2013.01); **B21B 38/04** (2013.01); **B21B 2261/06** (2013.01); **B21B 2263/02** (2013.01); **B21B 2267/06** (2013.01); **B21B 2267/26** (2013.01); **B21B 2269/12** (2013.01)

Citation (search report)

- [Y] US 2004206147 A1 20041021 - NISHI HIDETOSHI [JP], et al
- [Y] WO 2008155320 A1 20081224 - SIEMENS AG [DE], et al
- [Y] US 2674140 A 19540406 - EGER OSCAR A
- [Y] DE 10208389 A1 20030626 - HITACHI LTD [JP]
- [A] JP H08215721 A 19960827 - NIPPON STEEL CORP

Cited by
AU2018302336B2; EP2656934A1; CN103372574A; RU2741942C1; WO2019018742A1; US11213870B2; US11426777B2; US11638941B2; WO2021097566A1

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 SE SI SK SM TR

Designated extension state (EPC)
BA ME RS

DOCDB simple family (publication)
EP 2292341 A2 20110309; **EP 2292341 A3 20120502**; **EP 2292341 B1 20151216**; CN 101987326 A 20110323; CN 101987326 B 20140423; EP 2772321 A1 20140903; EP 2772321 B1 20160406; JP 2011025299 A 20110210; JP 5683082 B2 20150311

DOCDB simple family (application)
EP 10006802 A 20100701; CN 201010237324 A 20100722; EP 14001890 A 20100701; JP 2009176038 A 20090729