

Title (en)

LOW-FRICTION BENDING SYSTEM IN A ROLL STAND COMPRISING SEVERAL ROLLS

Title (de)

REIBUNGSARMES BIEGESYSTEM IN EINEM MEHRWALZEN-WALZGERÜST

Title (fr)

SYSTEME DE FLEXION AVEC PEU DE FROTTEMENT DANS UNE CAGE DE LAMINOIR A PLUSIEURS CYLINDRES

Publication

EP 1556178 B1 20060517 (DE)

Application

EP 03807758 A 20030725

Priority

- DE 10243677 A 20020920
- EP 0308223 W 20030725

Abstract (en)

[origin: DE10243677A1] Device for bending rollers in a multiple roller rolling mill comprises a vertical positioning unit (10) assigned to bending blocks (5, 5a) of one roll stand (6), to a plunger cylinder (7) and to the bending blocks (5', 5a') of the opposite-lying roll stand (6').

IPC 8 full level

B21B 29/00 (2006.01); **B21B 31/10** (2006.01); **B21B 13/02** (2006.01); **B21B 31/20** (2006.01); **B21B 31/24** (2006.01)

CPC (source: EP KR US)

B21B 29/00 (2013.01 - EP KR US); **B21B 31/106** (2013.01 - EP KR US); **B21B 31/20** (2013.01 - KR); **B21B 31/24** (2013.01 - KR); **B21B 33/00** (2013.01 - KR); **B21B 31/20** (2013.01 - EP US); **B21B 31/24** (2013.01 - EP US); **B21B 2013/025** (2013.01 - EP KR US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

DE 10243677 A1 20040401; AT E326295 T1 20060615; AU 2003250179 A1 20040504; BR 0313605 A 20050621; BR 0313605 B1 20120904; CA 2498303 A1 20040422; CA 2498303 C 20100914; CN 100342988 C 20071017; CN 1681610 A 20051012; DE 50303390 D1 20060622; EP 1556178 A1 20050727; EP 1556178 B1 20060517; ES 2260692 T3 20061101; JP 2006500225 A 20060105; JP 4732752 B2 20110727; KR 100990866 B1 20101029; KR 20050057252 A 20050616; RU 2005111758 A 20050920; RU 2313410 C2 20071227; UA 82333 C2 20080410; US 2006021412 A1 20060202; US 2010018275 A1 20100128; WO 2004033120 A1 20040422; ZA 200501197 B 20050912

DOCDB simple family (application)

DE 10243677 A 20020920; AT 03807758 T 20030725; AU 2003250179 A 20030725; BR 0313605 A 20030725; CA 2498303 A 20030725; CN 03822276 A 20030725; DE 50303390 T 20030725; EP 0308223 W 20030725; EP 03807758 A 20030725; ES 03807758 T 20030725; JP 2004542275 A 20030725; KR 20057003920 A 20030725; RU 2005111758 A 20030725; UA 2005003731 A 20030725; US 52832405 A 20050318; US 58705009 A 20090930; ZA 200501197 A 20050210