

Title (en)

TOOL CHANGING SYSTEM AND METHOD

Title (de)

WERKZEUGWECHSELSYSTEM UND -VERFAHREN

Title (fr)

SYSTEME ET PROCEDE DE CHANGEMENT D'OUTIL

Publication

EP 3028782 A1 20160608 (DE)

Application

EP 15200576 A 20150204

Priority

- DE 102014001738 A 20140211
- DE 102014005331 A 20140411
- EP 15000319 A 20150204

Abstract (en)

[origin: CN104826870A] In order to shorten the setup times in the case of a tool changeover on rolls, the invention provides a tool changeover system and a method as well as a roll thereof. Through the technical scheme, the movement sequences are separated into transverse movements and vertical movements, and for this purpose suitable devices are set and suitable operation steps are provided.

Abstract (de)

Um die Rüstzeiten bei einem Werkzeugwechsel an Walzen zu minimieren, wird vorgeschlagen, die Bewegungsabläufe in Querbewegungen und Vertikalbewegungen zu trennen und hierfür geeignete Vorrichtungen und Verfahrensschritte vorzusehen.

IPC 8 full level

B21B 31/10 (2006.01); **B21H 1/20** (2006.01)

CPC (source: BR EP RU US)

B21B 27/02 (2013.01 - US); **B21B 27/03** (2013.01 - EP US); **B21B 31/02** (2013.01 - US); **B21B 31/08** (2013.01 - BR); **B21B 31/10** (2013.01 - BR); **B21B 31/103** (2013.01 - BR EP US); **B21B 31/106** (2013.01 - EP US); **B21B 31/12** (2013.01 - BR EP US); **B21B 27/02** (2013.01 - BR); **B21B 31/08** (2013.01 - RU); **B21H 1/20** (2013.01 - EP US)

Citation (applicant)

- EP 2368647 A1 20110928 - SMS MEER GMBH [DE]
- DE 102005056649 B3 20070531 - LANGENSTEIN & SCHEMANN GMBH [DE]
- EP 0163104 A2 19851204 - SCHLOEMANN SIEMAG AG [DE]
- US 5600988 A 19970211 - ABBEY III NELSON D [US], et al
- DE 10317312 A1 20041125 - LANGENSTEIN & SCHEMANN GMBH [DE]
- DE 19633668 C1 19971120 - VOITH SULZER FINISHING GMBH [DE]
- DE 102004063547 B3 20060706 - KUESTERS EDUARD MASCHF [DE]
- JP H0647412 A 19940222 - NISSHIN STEEL CO LTD
- DE 10317312 A1 20041125 - LANGENSTEIN & SCHEMANN GMBH [DE]
- DE 102005056659 A1 20060706 - HYUNDAI MOTOR CO LTD [KR]
- DE 969977 C 19580807 - EUMUCO AG FUER MASCHINENBAU
- DE 8806968 U1 19880728
- US 5735788 A 19980407 - YASUTAKE MUTSUMI [JP], et al

Citation (search report)

- [AD] EP 2368647 A1 20110928 - SMS MEER GMBH [DE]
- [A] WO 0053350 A1 200000914 - SIMAC SPA [IT], et al
- [A] US 6408667 B1 20020625 - DE JESUS JR JOSE M [US]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ 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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102014005331 B3 20150521; BR 102015002901 A2 20170214; BR 102015002901 B1 20220802; CN 104826870 A 20150812; CN 104826870 B 20170630; EP 2905088 A2 20150812; EP 2905088 A3 20151028; EP 2905088 B1 20161026; EP 3028782 A1 20160608; EP 3028782 B1 20170823; ES 2607500 T3 20170331; ES 2642178 T3 20171115; MX 2015001845 A 20150923; MX 355587 B 20180424; RU 2015104127 A 20160827; RU 2634823 C2 20171103; US 10821490 B2 20201103; US 2015224552 A1 20150813; US 2017100757 A1 20170413; US 9975159 B2 20180522

DOCDB simple family (application)

DE 102014005331 A 20140411; BR 102015002901 A 20150210; CN 201510073836 A 20150211; EP 15000319 A 20150204; EP 15200576 A 20150204; ES 15000319 T 20150204; ES 15200576 T 20150204; MX 2015001845 A 20150210; RU 2015104127 A 20150209; US 201514618166 A 20150210; US 201615386789 A 20161221