

Title (en)
SUBSTRATE ROLLERS

Title (de)
SUBSTRATROLLEN

Title (fr)
ROULEAUX DE SUBSTRAT

Publication
EP 2748090 A4 20150429 (EN)

Application
EP 12826249 A 20120823

Priority
• US 201161527087 P 20110824
• US 2012052159 W 20120823

Abstract (en)
[origin: WO2013028925A1] A magnetically enhanced roller for handling of magnetically attractable substrates comprises a rotatably fixed shaft and a sleeve circumscribing the rotatably fixed shaft. The sleeve configured to rotate around the shaft. The roller further includes an array of magnets adjacent to the shaft. Individual magnets of the array of magnets are oriented to provide magnetic field lines along a direction orthogonal to the rotatably fixed bearing shaft.

IPC 8 full level
B65H 18/14 (2006.01); **B65G 39/08** (2006.01); **B65H 23/26** (2006.01); **B65H 27/00** (2006.01)

CPC (source: EP US)
B65H 16/00 (2013.01 - US); **B65H 18/00** (2013.01 - US); **B65H 18/145** (2013.01 - EP US); **B65H 20/00** (2013.01 - US);
B65H 23/26 (2013.01 - EP US); **B65H 27/00** (2013.01 - EP US); **B65H 2301/3112** (2013.01 - EP US); **B65H 2301/31122** (2013.01 - EP US);
B65H 2301/5131 (2013.01 - EP US); **B65H 2404/191** (2013.01 - EP US); **B65H 2515/70** (2013.01 - EP US); **B65H 2701/1714** (2013.01 - EP US);
B65H 2801/87 (2013.01 - EP US)

Citation (search report)
• [XA] US 4982691 A 19910108 - ASANUMA MASATO [JP], et al
• See references of WO 2013028925A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2013028925 A1 20130228; CN 103889867 A 20140625; CN 103889867 B 20160316; EP 2748090 A1 20140702; EP 2748090 A4 20150429;
IN 2081CHN2014 A 20150529; JP 2014528881 A 20141030; KR 20140068081 A 20140605; MX 2014002172 A 20150122;
SG 2014013213 A 20140730; US 2015041514 A1 20150212

DOCDB simple family (application)
US 2012052159 W 20120823; CN 201280051079 A 20120823; EP 12826249 A 20120823; IN 2081CHN2014 A 20140319;
JP 2014527314 A 20120823; KR 20147007362 A 20120823; MX 2014002172 A 20120823; SG 2014013213 A 20120823;
US 201214238177 A 20120823