

Title (en)

DEVICE FOR MAKING BREAK LINES IN FLAT PRODUCTS

Title (de)

VORRICHTUNG ZUM BEARBEITEN VON ODER ERZEUGEN VON BRECHLINIEN BEI FLÄCHIGEN PRODUKTEN

Title (fr)

DISPOSITIF POUR FAIRE DES LIGNES DE RUPTURE SUR DES PRODUITS PLANS

Publication

EP 2603361 B1 20140910 (DE)

Application

EP 11724652 A 20110614

Priority

- DE 102010043895 A 20101115
- DE 102010039094 A 20100809
- EP 2011059816 W 20110614

Abstract (en)

[origin: WO2012019808A1] The invention relates to a device for processing flat products using a processing tool which processes the product between said tool and a counter-tool, characterized in that the processing tool is supported by an ultrasonic sonotrode and the processing tool carries out the processing movement together with the ultrasonic sonotrode, wherein the processing movement is a partial separation of the flat product.

IPC 8 full level

B26D 3/08 (2006.01); **B26D 7/08** (2006.01); **B26F 1/18** (2006.01); **B26F 1/40** (2006.01)

CPC (source: EP KR US)

B26D 3/08 (2013.01 - EP KR US); **B26D 7/08** (2013.01 - KR); **B26D 7/086** (2013.01 - EP US); **B26F 1/40** (2013.01 - EP KR US);
B26F 1/18 (2013.01 - EP US); **B31B 50/252** (2017.07 - EP US); **Y10T 83/8874** (2015.04 - EP US)

Citation (examination)

- DE 102004050686 A1 20060427 - MUEHLBAUER AG [DE]
- DE 202005000643 U1 20050602 - SONOTRONIC NAGEL GMBH [DE]

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)

WO 2012019808 A1 20120216; CA 2807622 A1 20120216; CA 2807622 C 20150728; CN 103108729 A 20130515; CN 103108729 B 20160817;
EP 2603361 A1 20130619; EP 2603361 B1 20140910; ES 2525384 T3 20141223; JP 2013534187 A 20130902; JP 5795801 B2 20151014;
KR 101486678 B1 20150126; KR 20130067294 A 20130621; US 2013133499 A1 20130530; US 9592619 B2 20170314

DOCDB simple family (application)

EP 2011059816 W 20110614; CA 2807622 A 20110614; CN 201180039061 A 20110614; EP 11724652 A 20110614; ES 11724652 T 20110614;
JP 2013523544 A 20110614; KR 20137005938 A 20110614; US 201113816113 A 20110614