

Title (en)

A DEVICE AND METHOD FOR INK-JET PRINTING ON SURFACES EXHIBITING RELIEFS OR RECESSES

Title (de)

VORRICHTUNG UND METHODE ZUM TINTENSTRAHLDRUCKEN AUF OBERFLÄCHEN MIT RELIEFS ODER EINTIEFUNGEN

Title (fr)

DISPOSITIF ET MÉTHODE POUR IMPRIMER AU JET D'ENCRE SUR DES SUPERFICIES QUI ONT DES RELIEFS OU DES ÉCHANCRURES

Publication

**EP 2424733 B1 20210407 (EN)**

Application

**EP 11709803 A 20110201**

Priority

- IB 2011000155 W 20110201
- IT RE20100006 A 20100202

Abstract (en)

[origin: WO2011095865A2] An ink-jet device (20) exhibits at least a group of printing heads (21, 22, 23) which are independent of one another, where each head (21, 22, 23) comprises a plurality of ejector nozzles (25) of ink, aligned to form a line of action (26), a direction of the ink jets (27) issued from the nozzles (25) being perpendicular to the line of action (26), the lines of action (26) of the heads being arranged, in a plan view, parallel to one another. The surface (10) to be printed is moved in relation to the printing device (20), in a transversal direction with respect to the direction of the lines of action (26), internally of a field of action of the device (20). Each head (21, 22, 23) is assigned a respective strip of action (F21, F22, F23) on the surface (10), such that together the heads of the group interest a whole transversal dimension of the surface (10) to be printed on, and each head (21, 22, 23) is arranged with such an inclination that the respective line of action (26) is orientated practically parallel to a mean line of inclination of a transversal profile of the portion (10) of surface subjected to the strip of action (F21, F22, F23) of the head. The method enables printing on surfaces by means of an ink-jet printing device, in particular for ceramic tiles or other modular elements exhibiting reliefs or recesses having heights or depths which are of a relatively large entity, providing results which up to now have not been obtained.

IPC 8 full level

**B28B 11/04** (2006.01); **B41J 3/407** (2006.01); **B41J 25/316** (2006.01); **B41M 5/00** (2006.01)

CPC (source: EP US)

**B41J 3/4073** (2013.01 - EP US); **B41J 25/316** (2013.01 - EP US); **B28B 11/048** (2013.01 - EP); **B41M 5/0088** (2013.01 - EP)

Cited by

WO2021240421A1

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 2011095865 A2 20110811**; **WO 2011095865 A3 20111110**; BR PI1105240 A2 20170829; BR PI1105240 B1 20210803; CN 102481792 A 20120530; CN 102481792 B 20150617; CN 102481792 B8 20191018; EP 2424733 A2 20120307; EP 2424733 B1 20210407; ES 2881532 T3 20211129; HK 1170199 A1 20130222; IT 1398100 B1 20130207; IT RE20100006 A1 20110803; SM 201000074 A 20110909; SM 201000074 B 20120907

DOCDB simple family (application)

**IB 2011000155 W 20110201**; BR PI1105240 A 20110201; CN 201180002257 A 20110201; EP 11709803 A 20110201; ES 11709803 T 20110201; HK 12111106 A 20121105; IT RE20100006 A 20100202; SM 201000074 A 20100609