

Title (en)

DEVICE AND METHOD FOR IMPULSE EJECTION OF MEDIUM

Title (de)

VORRICHTUNG UND VERFAHREN ZUM IMPULS-AUSSTOSS VON MEDIUM

Title (fr)

DISPOSITIF ET PROCÉDÉ D'ÉJECTION PULSÉE DE FLUIDE

Publication

EP 2285454 B1 20151021 (DE)

Application

EP 09757520 A 20090602

Priority

- EP 2009056743 W 20090602
- DE 102008026449 A 20080603

Abstract (en)

[origin: WO2009147139A2] The present invention relates to a device for impulse ejection of medium, comprising an ejection tube (1) for medium to be ejected therefrom through an ejection end of the ejection tube (1) by way of a propellant in pulsed fashion in an ejection direction (15), a membrane (6) in the area of the ejection end (1), said membrane being elastically deformable during ejection of medium for forming a penetration opening (20) for medium, and a nozzle element (9) in the ejection tube (1), said nozzle element being adapted to be movable along the ejection direction between a rest position (9') and an ejection position (9''), wherein the nozzle element (9) effects a deformation of the membrane (6) in the ejection position (9'') to form the penetration opening (20) and effects little or no deformation of the membrane (6) in the rest position (9'), and wherein the nozzle element (9) can be brought from the rest position (9') to the ejection position (9'') when medium is ejected. The present invention further relates to a corresponding method and a membrane (6) for a device for impulse ejection of medium, and a method for increasing the range of an impulse ejection of medium.

IPC 8 full level

B05B 1/32 (2006.01); **A62C 31/02** (2006.01)

CPC (source: EP US)

A62C 31/02 (2013.01 - EP US); **B05B 1/323** (2013.01 - EP US)

Citation (examination)

US 2003189067 A1 20031009 - STULL GENE [US], et al

Designated contracting state (EPC)

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 SE SI SK TR

DOCDB simple family (publication)

DE 102008026449 A1 20091210; CN 102076385 A 20110525; EA 019407 B1 20140331; EA 201071347 A1 20110630;
EP 2285454 A2 20110223; EP 2285454 B1 20151021; ES 2557284 T3 20160125; HU E025883 T2 20160530; PL 2285454 T3 20160930;
PT 2285454 E 20160208; US 2011240759 A1 20111006; US 9283576 B2 20160315; WO 2009147139 A2 20091210;
WO 2009147139 A3 20100429

DOCDB simple family (application)

DE 102008026449 A 20080603; CN 200980125330 A 20090602; EA 201071347 A 20090602; EP 09757520 A 20090602;
EP 2009056743 W 20090602; ES 09757520 T 20090602; HU E09757520 A 20090602; PL 09757520 T 20090602; PT 09757520 T 20090602;
US 99598409 A 20090602