

Title (en)

Method for propelling droplets of a conductive liquid.

Title (de)

Verfahren zum Antrieb von Tröpfchen einer leitfähigen Flüssigkeit.

Title (fr)

Méthode pour propulser des gouttelettes d'un liquide conducteur.

Publication

EP 0363325 A1 19900411 (FR)

Application

EP 89810741 A 19890928

Priority

CH 370588 A 19881005

Abstract (en)

A pulse of current of several hundreds of volts is established between two electrodes (1, 6) immersed in a resistive liquid (5). By the concentration of the current at the level of the end of the electrode (1), which it must be added is bonded onto an insulating support (2), a volume of liquid in contact with the end of this electrode (1) is vaporised, causing an abrupt drop in current. Because of the voltage of this pulse, which is of several hundreds of volts, a greater current re-establishes itself immediately across the volume of vaporised liquid, as a result of a sort of ionization of this vapour, causing superheating and energy sufficient to expel a droplet of liquid through an opening (4) provided in a membrane (3). In order to limit the energy of the superheating phase and control the size of the droplets, the current of the energising pulse is limited.

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IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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- [AD] US 4126867 A 19781121 - STEVENSON R [US]
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EP0753410A3; US5801730A

Designated contracting state (EPC)

BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0363325 A1 19900411; CH 677755 A5 19910628; JP H02150358 A 19900608; US 5001496 A 19910319

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