

Title (en)

Method for ejecting an electrically conductive liquid and continuous ink jet printing device using this method

Title (de)

Verfahren zum Ausstossen einer elektrisch leitenden Flüssigkeit und kontinuierliche Tintenstrahldruckvorrichtung für ein solches Verfahren

Title (fr)

Procédé de projection d'un liquide électriquement conducteur et dispositif d'impression par jet d'encre continu utilisant ce procédé

Publication

EP 0949077 A1 19991013 (FR)

Application

EP 99400831 A 19990406

Priority

FR 9804561 A 19980410

Abstract (en)

The method involves spraying a continuous jet of liquid (14) at a given speed (V_j), cause the jet to split at two distinct predetermined break points (C,L) so as to form drops (22,24) of liquid at a given emission frequency, and apply to these drops quantities of a different electrical charges, according to their break points. The same electrical field is applied onto the drops, so as to deviate only those drops (24) formed at a first (L) of the break points. The jet acted upon so that the two break points are separated by a distance DELTA D strictly less than the wavelength lambda of the jet, defined by the relation $\lambda = V_j$ divided by F. The same quantity of charge is applied on all the drops formed in a zone centered on the second break point (C) of length sensibly equal to lambda divided by 4. An Independent claim is also included for an ink jet printer using the method described.

Abstract (fr)

Un ou plusieurs jets (14) d'un liquide électriquement conducteur, tel que de l'encre, sont émis à une vitesse V_j donnés et stimulés de façon à former des gouttes (22,24), à une fréquence F, en deux points de brisure (C,L) séparés par une distance ΔD strictement inférieure à la longueur d'onde λ du jet; définie par la relation $\lambda = V_j/F$. Au voisinage respectif de ces points de brisure (C,L), on crée (20) deux zones contiguës que l'on porte à des potentiels électriques constants et de signes opposés (V_1, V_2). On applique ainsi sur les gouttes (22,24) des quantités de charge électrique différentes et relativement invariables en cas de fluctuation des points de brisure. Un dispositif de déflexion (30) dévie ensuite les gouttes à recycler (24) des gouttes à imprimer (22), selon leur charge, qui découle de leur point de brisure. <IMAGE>

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IPC 8 full level

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Citation (applicant)

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