

Title (en)

Fluid jet print head and stimulator therefor.

Title (de)

Flüssigkeitsstrahl Druckkopf und Erregungsvorrichtung dazu.

Title (fr)

Tête d'impression à projection de liquide et son dispositif de stimulation.

Publication

EP 0116786 A2 19840829 (EN)

Application

EP 83307925 A 19831222

Priority

US 45308282 A 19821227

Abstract (en)

A fluid jet print head includes an orifice plate (22) defining a plurality of orifices (24) from which fluid emerges, and a stimulator means (26) mounted in contact with the orifice plate for vibrating the orifice plate to produce a series of bending waves. The bending waves travel along the orifice plate and break up the fluid into drops of substantially uniform size and spacing. The stimulator means includes a stimulator member (28) of a length equal to an integer half wavelength of acoustic waves of a frequency f passing therethrough. The stimulator member contacts the orifice plate at one end of the member. A pair of piezoelectric crystals (32, 34) are mounted on opposite sides of the stimulator member and, when driven by an A.C. drive signal, cause acoustic waves of a frequency f to pass along the member. The member is supported at a nodal plane. The member may enter the print head manifold and contact the orifice plate internally, with a seal arrangement (46) being provided at a nodal plane along the member.

IPC 1-7

B41J 3/04

IPC 8 full level

B41J 2/02 (2006.01); **B41J 2/025** (2006.01)

CPC (source: EP)

B41J 2/025 (2013.01)

Cited by

EP0639458A3; DE4100730A1; EP0494378A3; US4646104A

Designated contracting state (EPC)

DE FR GB IT NL

DOCDB simple family (publication)

EP 0116786 A2 19840829; **EP 0116786 A3 19851227**; **EP 0116786 B1 19890405**; CA 1215577 A 19861223; DE 3379536 D1 19890511; JP S59150754 A 19840829

DOCDB simple family (application)

EP 83307925 A 19831222; CA 443254 A 19831214; DE 3379536 T 19831222; JP 25242983 A 19831227