

Title (en)

Ink-jet head and methods of manufacturing and driving the same

Title (de)

Tintenstrahlkopf und Verfahren zu seiner Herstellung und zu seiner Steuerung

Title (fr)

Tête à jet d'encre et procédés pour sa fabrication et son actionnement

Publication

EP 0897802 A2 19990224 (EN)

Application

EP 98120934 A 19941014

Priority

- EP 94929664 A 19941014
- JP 28037193 A 19931014
- JP 11131294 A 19940525

Abstract (en)

An ink-jet head is provided, comprising a base plate (110), a laminated piezoelectric actuator unit (112) composed of pairs of laminated piezoelectric actuators (111, 111) each having a piezoelectric strain coefficient d33, said laminated piezoelectric actuators (111, 111) having collective electrodes formed on both end surfaces thereof and being arranged in plural rows confronting each other on said base plate (110), a common electrode (113b) being formed by electrically connecting together the collective electrodes formed on confronting end surfaces, which are formed at a central portion of said base plate (110), of said laminated piezoelectric actuators (111, 111), and driving electrodes (113a) being composed of the collective electrodes formed on other end surfaces of said laminated piezoelectric actuators (111, 111), wherein said laminated piezoelectric actuator unit (112) comprises a laminated piezoelectric element block provided on an upper surface of said base plate (110), a first slit formed at a central portion of said laminated piezoelectric element block so as to divide it, and a plurality of second slits shallower than said first slit formed in said laminated piezoelectric element block in a direction substantially perpendicular to said first slit. <IMAGE>

IPC 1-7

B41J 2/14; **B41J 2/16**

IPC 8 full level

B41J 2/045 (2006.01); **B41J 2/14** (2006.01); **B41J 2/16** (2006.01)

CPC (source: EP)

B41J 2/14274 (2013.01); **B41J 2/1612** (2013.01); **B41J 2/1623** (2013.01); **B41J 2/1632** (2013.01); **B41J 2/1634** (2013.01); **B41J 2/1642** (2013.01); **B41J 2002/14387** (2013.01)

Citation (applicant)

- JP S5312138 A 19780203 - OBAYASHI GUMI KK
- JP S6159914 A 19860327 - FUJITSU LTD
- JP H0452213 A 19920220 - DAIDO STEEL CO LTD
- JP H0448622 A 19920218 - SANYO ELECTRIC CO

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

EP 0897803 A2 19990224; **EP 0897803 A3 19990310**; **EP 0897803 B1 20010725**; DE 69427837 D1 20010830; DE 69427837 T2 20020404; DE 69427926 D1 20010913; DE 69427926 T2 20011206; EP 0723866 A1 19960731; EP 0723866 A4 19970326; EP 0897802 A2 19990224; EP 0897802 A3 19990310; EP 0897802 B1 20010808; WO 9510416 A1 19950420

DOCDB simple family (application)

EP 98120935 A 19941014; DE 69427837 T 19941014; DE 69427926 T 19941014; EP 94929664 A 19941014; EP 98120934 A 19941014; JP 9401730 W 19941014