

Title (en)
Ink jet recording head and method for manufacture the same

Title (de)
Tintenstrahlaufzeichnungskopf und Verfahren zur Herstellung

Title (fr)
Tête d'impression à jet d'encre et son procédé de fabrication

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Application
EP 00106532 A 20000327

Priority
JP 8406299 A 19990326

Abstract (en)
An ink jet recording head (55) may improve the packing efficiency of the ink into the pressure generating chamber (19), and improve the ejection efficiency of the ink through the ink ejection nozzle (41) to realize a high quality gradation expression in printing operations. The recording head (55) comprises: a pressure generating chamber (19) communicating with an ink reservoir (40); a vibrating plate (23) which faces the pressure generating chamber (19) and is provided with an island-like convex portion (18); and, a piezoelectric element (20) arranged so as to be brought into contact with the island-like convex portion (18) of the vibrating plate (23) to vibrate the plate (23), and thereby forcing ink droplets to be ejected from the nozzle (41). The vibrating plate (23) comprises: a first metallic layer or stainless steel member (11) brought into contact with the piezoelectric element (20), a second metallic layer or thin nickel film (15) exposed to the pressure generating chamber (19), and a polymer film (13) of a high polymeric organic compound interposed between the first metallic layer (11) and the second metallic layer (15). The island-like convex portion (18) of the vibrating plate (23) is formed by etching a surface of the first metallic layer (11). <IMAGE>

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