

METHOD FOR OPERATING NOZZLES IN AN INK JET PRINthead

Abstract

The invention relates to a method for operating nozzles in an ink jet printhead comprising a plurality of nozzles configured to eject drops of ink towards a surface to be printed. Each nozzle has a nozzle chamber configured to receive ink via a conduit. The nozzle chamber is defined by a floor portion, an upwardly extending peripheral sidewall and a roof portion having a nozzle rim defining an opening and a depending peripheral sidewall. The sidewalls are arranged to at least partially overlap in a telescopic manner. Each nozzle is associated with a bend actuator arranged to move the roof portion upwardly and downwardly relative to the floor portion. The method comprises the steps of:

supplying an electric current to the actuator to effect its bending and cause the roof portion to move downwardly from an initial position so as to decrease the volume of the nozzle chamber and cause ink to bulge upwardly through the nozzle rim and form a droplet; and

discontinuing the electric current, thereby initiating movement of the roof portion back towards the initial position, as the actuator straightens, and creating an upward droplet momentum such that, after the actuator stops in its initial position, the droplet forms an ink drop that continues to move towards the print surface.

Fig. 4.