Title (en)

INK PRESSURE REGULATOR WITH IMPROVED LIQUID RETENTION IN REGULATOR CHANNEL

Title (de)

TINTENDRUCKREGLER MIT VERBESSERTER TINTENRÜCKHALTUNG IM REGLERKANAL

Title (fr)

RÉGULATEUR DE PRESSION D'ENCRE AVEC RÉTENTION DE LIQUIDE AMÉLIORÉE DANS UN CANAL RÉGULATEUR

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2009049347A1] There is provided an ink pressure regulator for regulating a hydrostatic pressure of ink supplied to an inkjet printhead. The regulator comprises: an ink chamber having an ink outlet for fluid communication with the printhead via an ink line; an air inlet; a regulator channel having a first end communicating with the air inlet and a second end communicating with a headspace of the chamber, the second end defining a bubble outlet; and a wetting system for maintaining at least some liquid in the regulator channel, thereby ensuring that air entering the headspace first passes through the liquid. The wetting system comprises a first wetting chamber connected to the first end, a second wetting chamber connected to the second end, and a liquid-retaining structure positioned in the second wetting chamber. The regulator channel, the first wetting chamber, the second wetting chamber and the liquid-retaining structure are all in fluid communication with each other. The regulator channel is dimensioned to control a Laplace pressure of air bubbles drawn from the bubble outlet as result of supplying ink to the printhead, thereby regulating a hydrostatic pressure of the ink.

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