

Title (en)
Manufacturing process for a micropump

Title (de)
Herstellungsverfahren einer Mikropumpe

Title (fr)
Procédé de fabrication d'une micropompe

Publication
EP 0641934 B1 19961227 (FR)

Application
EP 94107419 A 19940513

Priority
FR 9306281 A 19930524

Abstract (en)
[origin: US5462839A] This process consists of machining a silicon piece (4) by means of selective oxidation operations and photolithography to form therein at least one cavity (7, 12) adapted to contain or convey a fluid, and of oxidizing the wall of the cavity to make this hydrophilic. The device is completed by fixing closing plates (1, 5) to its body thus formed. Prior to the machining operations the surfaces of the piece (4) adapted to be in contact with the closing plates (1, 5) are covered with a screening layer that resists these machining operations. Then, after these have been completed, the surfaces of the piece intended to be exposed to the fluid are oxidized to form therein an oxide layer favoring the wettability of these surfaces. The screening layer is then removed and the closing plates are fixed to the piece. The invention has applications, notably in micropumps.

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F04B 43/04

IPC 8 full level
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CPC (source: EP US)
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Cited by
US6405934B1; EP1792662A1; US9604242B2; EP1149602A2; EP1129741A2

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