

Title (en)  
HYDROPHILIC STRUCTURE

Title (de)  
HYDROPHILE STRUKTUR

Title (fr)  
STRUCTURE HYDROPHILE

Publication  
**EP 1027988 B1 20070411 (EN)**

Application  
**EP 99906481 A 19990225**

Priority  
• JP 9900870 W 19990225  
• JP 24235598 A 19980827

Abstract (en)  
[origin: EP1027988A1] A structure in which the hydrophilic properties are retained for long period of time, an ink-jet printing head having this structure, a method of their production, an ink-jet printer, and other structural members. A hydrophilic structure (100) has recesses (17) and protrusions (18) formed on the surface of the substrate. The protrusions (18) have the same height. A hydrophilic film (20) is formed on the surfaces of the recesses (17) and the protrusions (18). The hydrophilic structure (100) is provided to the ink-ejection surface of the ink-jet printing head except the ink-ejection holes, and the ink-jet printing head is mounted on the ink-jet printer. <IMAGE>

IPC 8 full level  
**B41J 2/045** (2006.01); **B41J 2/05** (2006.01); **B41J 2/14** (2006.01); **B41J 2/16** (2006.01)

CPC (source: EP)  
**B41J 2/14** (2013.01); **B41J 2/14016** (2013.01); **B41J 2/14201** (2013.01); **B41J 2/1433** (2013.01); **B41J 2/16** (2013.01); **B41J 2/1601** (2013.01); **B41J 2/1606** (2013.01); **B41J 2/1607** (2013.01); **B41J 2/1623** (2013.01); **B41J 2/1628** (2013.01); **B41J 2/1629** (2013.01); **B41J 2/1631** (2013.01); **B41J 2/1637** (2013.01); **B41J 2/1645** (2013.01); **B41J 2/1646** (2013.01)

Cited by  
US2011204367A1; US8193526B2; US9744050B1; US9603257B2; US10159579B1; USRE46432E; USRE47348E; USRE48376E; US9700357B2; US10143502B2; US10993747B2; US9827020B2; US10568669B2; US10912590B2; US11779377B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**EP 1027988 A1 20000816**; **EP 1027988 A4 20020703**; **EP 1027988 B1 20070411**; AT E359177 T1 20070515; AU 2640199 A 20000321; DE 69935777 D1 20070524; DE 69935777 T2 20071227; WO 0012313 A1 20000309

DOCDB simple family (application)  
**EP 99906481 A 19990225**; AT 99906481 T 19990225; AU 2640199 A 19990225; DE 69935777 T 19990225; JP 9900870 W 19990225