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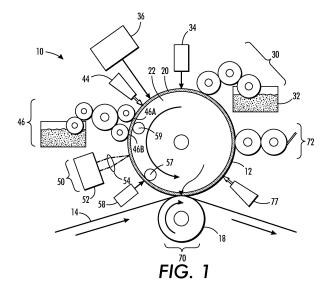
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(54) Dampening Fluid for Digital Lithographic Printing

(57) Different solvents for a dampening fluid are disclosed. The solvent is a volatile hydrofluoroether liquid or a volatile silicone liquid. Such liquids have a lower heat of vaporization, a lower surface tension, and better kin-

ematic viscosity compared to water, which is the conventional solvent used in dampening fluids. The dampening fluids, which are relatively nonpolar, can be used in a combination with polar inks to form a new type of digital lithographic printing system.



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EUROPEAN SEARCH REPORT

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EP 12 19 0034

		ERED TO BE RELEVANT	Delevent	OLAGOIFICATION OF THE
ategory	Citation of document with it of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
(4 December 2008 (20 * paragraph [0038] * paragraph [0078] * paragraph [0089] * claims 1, 6, 7, 1	* - paragraph [0094] * 0, 13, 14 *	1-4,11	INV. B41N3/08 B41M1/06
(,P	EP 2 447 065 A1 (PACENTER, INC. [US]) * paragraph [0001] * paragraph [0015] * paragraph [0047] * paragraph [0050] * paragraph [0062] * claims 1-15 * * figure 1 *	LO ALTO RESEARCH 2 May 2012 (2012-05-02) * * * * * * *	1-4, 11-13	
X,P	EP 2 450 190 A1 (PACENTER, INC. [US]) * paragraph [0001] * paragraph [0029] * paragraph [0035] * paragraph [0046] * paragraph [0049] * paragraph [0061] * claims 1-15 * * figure 1 *	9 May 2012 (2012-05-09) * - paragraph [0030] * * * *	1-4, 11-13	TECHNICAL FIELDS SEARCHED (IPC) B41M B41N G03F
	Place of search	Date of completion of the search		Examiner
	The Hague	18 April 2013	Bac	on, Alan
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone cularly relevant if combined with anot ment of the same category nological background written disclosure mediate document	T : theory or principle E : earlier patent doc after the filing dat her D : document cited fr L : document cited fo	underlying the in ument, but publise the application or other reasons	nvention shed on, or

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CLAIMS INCURRING FEES
The present European patent application comprised at the time of filing claims for which payment was due.
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
2-4, 12, 13(completely); 1, 11(partially)
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 5-10(completely); 1, 11(partially)

Volatile silicone solvent liquid.

2. claims: 2-4(completely); 1, 11(partially)

Volatile hydrofluoroether solvent liquid.

3. claims: 12, 13

Process for variable lithographic printing comprising the steps of (a) applying a dampening liquid to an imaging surface, (b) forming a latent image by evaporating the dampening liquid to form hydrophobic non-image areas and hydrophilic image areas, (c) developing the latent image areas by applying polar ink to the hydrophilic image areas, and (d) transferring the developed latent image to a substrate.

4. claims: 14, 15

Variable lithographic system comprising an ink, a dampening fluid and an imaging member, wherein the dampening fluid has a surface energy which is less than the surface energy of the ink and the surface energy of the imaging member surface.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 12 19 0034

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-04-2013

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