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(84) Designated Contracting States: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR	(72) Inventor: Gygi, Mathias 3185 Schmitten (CH)
(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC: 10179681.1 / 2 433 798	(74) Representative: Noll, Ronald c/o STICS Group Sàrl Chemin Curé-Desclouds 2 PO Box 185 1226 Thônex (CH)
(71) Applicant: KBA-NotaSys SA 1000 Lausanne 22 (CH)	

(54)

Sheet-fed printing press and process for orienting magnetic flakes contained in an ink or varnish vehicle applied on a sheet-like substrate

- (57)

There is described a sheet-fed printing press and method for orienting magnetic flakes contained in an ink or varnish vehicle applied on sheets. The printing press comprises a printing group (2) designed to apply an ink or varnish vehicle containing magnetic flakes on successive sheets and system designed to orient the magnetic flakes contained in the ink or varnish vehicle applied on the sheets. The system comprises a processing unit (10*) with at least one magnetic-field-inducing device for orienting the magnetic flakes contained in the ink or varnish vehicle applied on the sheets, which processing unit (10*) is located along a path of the sheets in such a way that the each sheet is brought into contact with or in close proximity to the processing unit (10*) and the at least one magnetic-field-inducing device. The processing unit (10*) comprises a cylinder body (10), the

at least one magnetic-field-inducing device being disposed on an outer circumference of the cylinder body (10). The printing press further comprises a first chain conveyor system (31) designed to transport and transfer the sheets to the processing unit (10*) and a second chain conveyor system (32) designed to take away the sheets from the processing unit (10*). The system further comprises at least one drying or curing unit (60) disposed in the vicinity of the cylinder body (10) for drying or curing the ink or varnish vehicle to fix the orientation of the magnetic flakes contained therein while the sheet is still in contact with or in close proximity to the cylinder body (10) and the at least one magnetic-field-inducing device before the sheet is taken away from the at least one magnetic-field-inducing device.

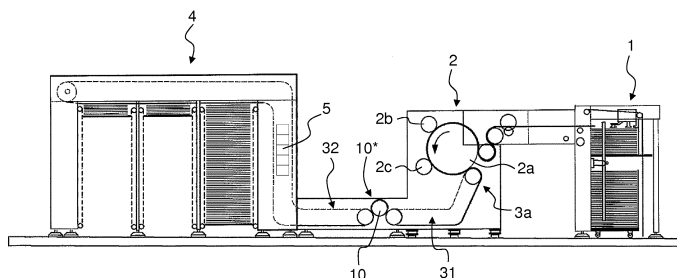


Fig. 5



EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y,D A	WO 2008/102303 A2 (KBA GIORI SA [CH]; GYGI MATTHIAS [CH]; EITEL JOHANN EMIL [DE]; HERMANN) 28 August 2008 (2008-08-28) * figures 1,3,4 * * page 1, line 12 - page 2, line 10 * -----	1-6, 9-12,14 7,8,13	INV. B41F11/02 B41F15/08 B41F15/12 B41F19/00 B41F23/04 B41M3/14 B41M7/00 B05D3/00 B05D3/06 B41F21/08
Y,D A	WO 2004/007095 A2 (FLEX PRODUCTS INC [US]) 22 January 2004 (2004-01-22) * figure 12B * * claims 32,33 * * paragraphs [0068], [0069], [0078], [0096], [0097] * -----	1-6, 9-12,14 7,8,13	
A	GB 1 261 329 A (ULRICH FRANCIS STEPHEN [US]) 26 January 1972 (1972-01-26) * figure 2 * * page 3, lines 50-54 * * page 3, lines 71-74 * -----	1-14	
A	FR 1 336 766 A (GIORI GUALTIERO) 6 September 1963 (1963-09-06) * figure 3 * -----	1-14	TECHNICAL FIELDS SEARCHED (IPC)
A	EP 0 873 866 A1 (DE LA RUE GIORI SA [CH]) 28 October 1998 (1998-10-28) * figure 1 * * column 3, lines 23-30 * -----	1-14	B41F B05D
A	FR 2 492 732 A1 (ROLAND MAN DRUCKMASCH [DE]) 30 April 1982 (1982-04-30) * figure 2 * -----	1-14	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 5 March 2015	Examiner Hajji, Mohamed-Karim
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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

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The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-03-2015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2008102303 A2	28-08-2008	AT 516145 T	15-07-2011
		AU 2008218546 A1	28-08-2008
		BR PI0807748 A2	17-06-2014
		CA 2677034 A1	28-08-2008
		CN 101631680 A	20-01-2010
		EP 1961559 A1	27-08-2008
		EP 2114678 A2	11-11-2009
		EP 2221177 A1	25-08-2010
		ES 2367857 T3	10-11-2011
		ES 2392146 T3	05-12-2012
		JP 5127842 B2	23-01-2013
		JP 2010519080 A	03-06-2010
		KR 20090128415 A	15-12-2009
		RU 2009132193 A	27-03-2011
		US 2010170408 A1	08-07-2010
		US 2013298791 A1	14-11-2013
		WO 2008102303 A2	28-08-2008
		ZA 200905794 A	27-10-2010

WO 2004007095 A2	22-01-2004	AT 493208 T	15-01-2011
		CN 1668392 A	14-09-2005
		EP 1545799 A2	29-06-2005
		EP 2165774 A1	24-03-2010
		EP 2263806 A1	22-12-2010
		EP 2263807 A1	22-12-2010
		EP 2308608 A1	13-04-2011
		JP 4421555 B2	24-02-2010
		JP 2005532941 A	04-11-2005
		KR 20050021376 A	07-03-2005
		KR 20100036395 A	07-04-2010
		KR 20100036396 A	07-04-2010
		TW 1281419 B	21-05-2007
		US 2004051297 A1	18-03-2004
		US 2010021658 A1	28-01-2010
		WO 2004007095 A2	22-01-2004

GB 1261329 A	26-01-1972	GB 1261329 A	26-01-1972
		US 3506467 A	14-04-1970

FR 1336766 A	06-09-1963	NONE	

EP 0873866 A1	28-10-1998	AT 203457 T	15-08-2001
		AU 726923 B2	23-11-2000
		AU 5945998 A	15-10-1998
		CA 2232695 A1	14-10-1998
		CN 1197004 A	28-10-1998

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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

EP 14 19 3754

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.

05-03-2015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
		DE 69801184 D1	30-08-2001	
		DE 69801184 T2	14-03-2002	
		EP 0873866 A1	28-10-1998	
		JP 4741699 B2	03-08-2011	
		JP H10291297 A	04-11-1998	
		JP 2009286138 A	10-12-2009	
		RU 2193487 C2	27-11-2002	
		US 5899145 A	04-05-1999	

FR 2492732	A1	30-04-1982	BR 8106795 A	06-07-1982
			DE 3040388 A1	07-10-1982
			ES 8206280 A1	16-11-1982
			FR 2492732 A1	30-04-1982
			IT 1171585 B	10-06-1987
			JP S6353945 B2	26-10-1988
			JP S57100070 A	22-06-1982
			US 4365553 A	28-12-1982
