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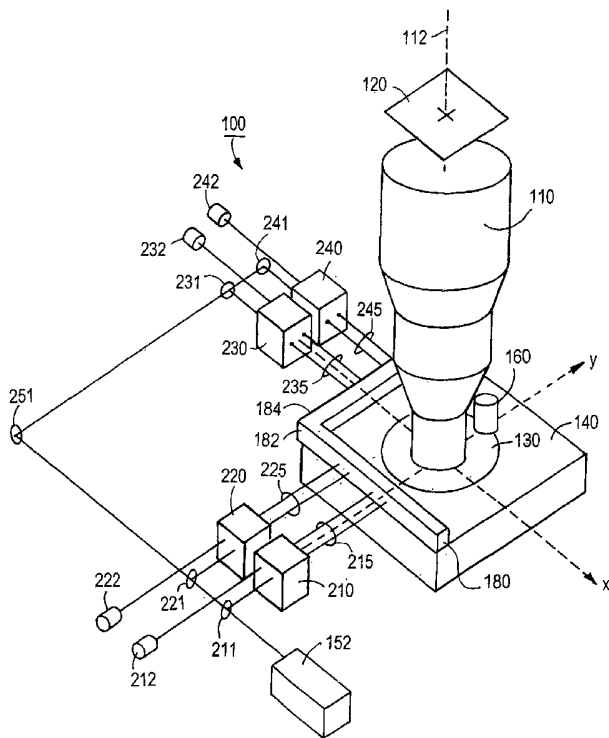
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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE,

[Continued on next page]

(54) Title: CHARACTERIZATION AND COMPENSATION OF ERRORS IN MULTI-AXIS INTERFEROMETRY SYSTEM



(57) Abstract: In general, in one aspect, the invention features a method that includes monitoring a position of a stage (140) along a first measurement axis and a second measurement axis of a multi-axis interferometry system and determining a position of the stage (140) with respect to another degree of freedom based on the monitored positions along the first and second axes and predetermined information about how the measurement axes deviate from being parallel to one another.

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AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,

LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G03F7/20 G01B9/02		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 G03F H01L G01B H01J		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category ^o	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 958 082 A (MAKINOUCI ET AL) 18 September 1990 (1990-09-18) abstract figures 3-5 column 1, line 6 - line 10 column 3, line 59 - line 68 column 4, line 17 - column 5, line 45 column 7, line 1 - line 12	1-32, 34-41
X	US 2003/094584 A1 (YUI YOSHIKIYO ET AL) 22 May 2003 (2003-05-22) abstract figures 2,12 paragraph '0001! paragraph '0048! paragraph '0063!	1,24,33, 42
A	----- -/-	29
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
^o Special categories of cited documents :		
<ul style="list-style-type: none"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family 		
Date of the actual completion of the international search 23 September 2005		Date of mailing of the international search report 11/10/2005
Name and mailing address of the ISA European Patent Office, P.B. 5618 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Andersen, O

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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X	<p>EP 0 848 299 A (NIKON CORPORATION) 17 June 1998 (1998-06-17)</p> <p>abstract figures 1,4 column 1, line 3 - line 18 column 7, line 29 - line 57</p>	<p>1, 19-22, 24, 25, 27-31, 34, 36, 37, 39, 40</p>
A	<p>US 6 040 096 A (KAKIZAKI ET AL) 21 March 2000 (2000-03-21)</p> <p>abstract figures 1,2 column 1, line 14 - line 22 column 7, line 55 - column 8, line 47</p>	<p>1, 24, 29</p>
A	<p>US 2001/035959 A1 (HILL HENRY ALLEN) 1 November 2001 (2001-11-01)</p> <p>cited in the application abstract figure 1 paragraph '0002! paragraph '0021! - paragraph '0022!</p>	<p>1, 24, 29</p>

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Information on patent family members

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