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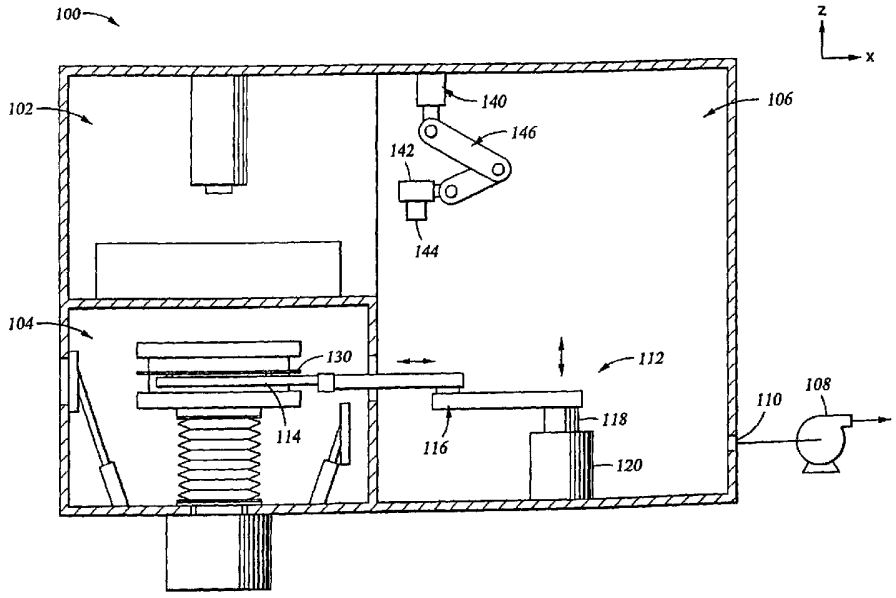
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LARGE SUBSTRATE TEST SYSTEM



(57) Abstract: A system and method for testing substrates is generally provided. In one embodiment, a test system for testing a substrate includes a load lock chamber, a transfer chamber and a test station. The load lock chamber and the test station are disposed on top of one another and coupled to the transfer chamber. The transfer chamber includes a robot adapted to transfer a substrate between the load lock chamber, which is at a first elevation, and the test station, which is at a second elevation. In another embodiment, a test station is provided having a turntable adapted to rotate the substrate. The turntable enables the range of motion required to test the substrate to be substantially reduced while facilitating full test and/or inspection of the substrate.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L21/00 G01R31/305

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 G01R H01L

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/60614 A (APPLIED MATERIALS INC) 25 November 1999 (1999-11-25) abstract; figures 2,6 page 5, line 24 - page 7, line 11 page 10, line 21 - page 11, line 11	1-14, 30-42
X	WO 02/33745 A (APPLIED MATERIALS INC) 25 April 2002 (2002-04-25) abstract; claim 1 figure 1 page 3, paragraph 13 - paragraph [0014]	1,30

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

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"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.

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Date of the actual completion of the international search	Date of mailing of the international search report
10 October 2003	16.01.2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Paisdor, B

INTERNATIONAL SEARCH REPORT

In al Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 278 494 A (OBIGANE TADASHI) 11 January 1994 (1994-01-11) column 2, line 55 - column 3, line 20; figures 1,2,9 column 4, line 43 - line 68; figure 7 column 2, line 55 - column 3, line 65; claims; figure 1	1-14, 30-42
A	EP 0 537 505 A (SIEMENS AG) 21 April 1993 (1993-04-21) cited in the application abstract; claim 1	1-14, 30-42

INTERNATIONAL SEARCH REPORT

tional application No.
PCT/US 03/15903

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-14, 30-42

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-14,30-42

   System for substrate testing comprising a load lock chamber, a transfer chamber, a test station stacked above the load lock chamber, the test station coupled to the transfer chamber and a robot disposed in the transfer chamber and a corresponding method for testing a substrate

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2. claims: 15-21

   System for substrate testing comprising a test station, a positioning table disposed in the test station, a plurality of test mechanisms disposed in the test station above the positioning table

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3. claims: 22-26

   System for substrate testing comprising a test station, a positioning table diposed in the test station that moves substrate both rotational and X/Y planar, and at least one test mechanism disposed in test station above positioning table

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4. claims: 27-29,43-52

   System for substrate testing comprising a load lock chamber, a transfer chamber, the transfer chamber coupled to the load lock chamber, a test station stacked above the load lock chamber and coupled to the transfer chamber, a positioning table in the test station, a plurality of electron beam generators above the positioning table and a robot disposed in the transfer chamber, as well as corresponding methods comprising the use of electron beams

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INTERNATIONAL SEARCH REPORT

Inte nal Application No
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