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[Continued on next page]

(54) Title: BEAM DELIVERY APPARATUS AND METHOD

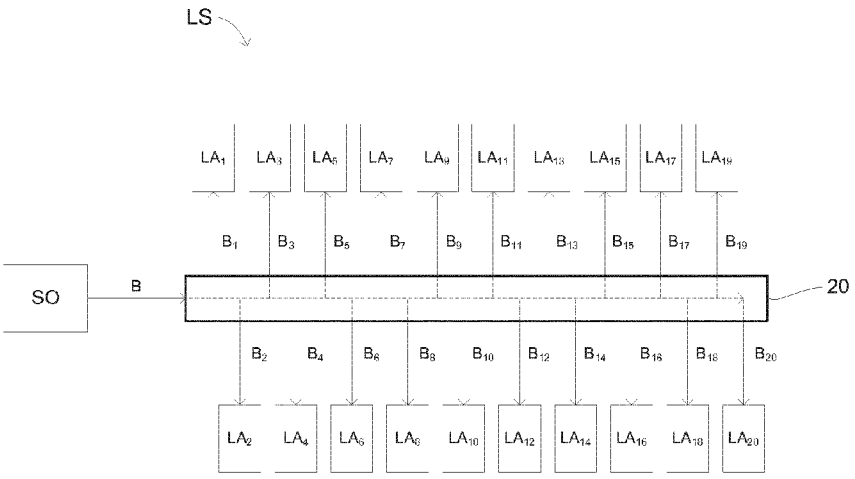

FIG. 1

(57) Abstract: A delivery system for use within a lithographic system. The beam delivery system comprises optical elements arranged to receive a radiation beam from a radiation source and to reflect portions of radiation along one or more directions to form a one or more branch radiation beams for provision to one or more tools.

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X Y	WO 01/82001 A1 (ADVANCED MICRO DEVICES INC [US]) 1 November 2001 (2001-11-01) page 6 - page 7; figure 2a	1-3,6, 30,39,40 22-24, 26,37
X Y	US 2005/122495 A1 (KAPLAN ROLAND [DE] ET AL) 9 June 2005 (2005-06-09) paragraph [0056]; figure 9	1,30,39 22-24,26
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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2014/070335

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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 No. III Observations where unity of invention is lacking (Continuation of item 3 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 fees, this Authority did not invite payment of additional fees.

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.:

1-19, 21-41, 43-62, 64-112, 114-136, 138-207, 209-228, 230-322

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.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☒ 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: 1-19, 21-25, 27-41

   Beam splitting apparatus having static mirrors for use in a lithography system for delivering a plurality of branch beams from a radiation beam to a plurality of tools

1.1. claims: 43-62, 64

   Beam splitting apparatus for use in a lithography system for suppressing the effects of variations of a main beam position

1.2. claims: 65-90

   Beam splitting apparatus comprising a movable periodic array of reflective elements

1.3. claims: 91-139

   Undulator comprising a steering unit

1.4. claims: 26, 140-159

   Thermal stress management for a reflective optical element

1.5. claims: 160-182

   Radiation delivery system with differential pumping system

1.6. claims: 183-207, 209

   Apparatus for adjusting a radiation intensity using attenuation means

1.7. claims: 210-232

   Adjustable optical system and beam direction sensor in combination with a free electron laser for compensating variations in beam direction

1.8. claims: 233-256, 263-272

   Radiation source with means for multiplexing outputs from free electron lasers

1.9. claims: 257-262, 273-277

   Plural beam focusing in a lithographic apparatus with plural focusing elements being combined such as to improve the illumination of a first mirror

1.10. claims: 278-291

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Mirror for adjusting an intensity profile of reflected radiation

1.11. claims: 292-322

Lithographic system comprising a beam delivery system with polarisation adjusting properties

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2. claims: 42, 63, 113, 137, 208, 229

Mask inspection method involving a free electron laser

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3. claim: 20

Beam splitting apparatus with improved reflectivity of a static reflective surface at grazing incidence

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INTERNATIONAL SEARCH REPORT

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International application No
PCT/EP2014/070335

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