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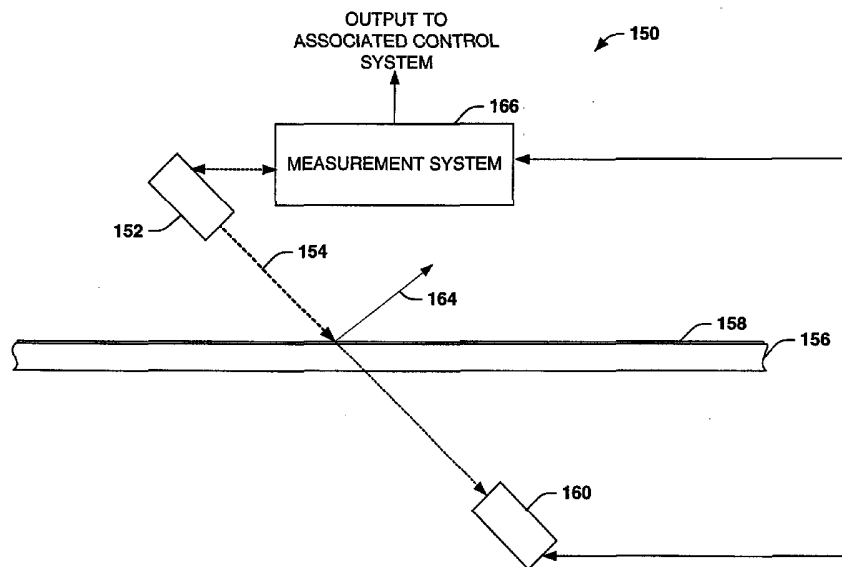
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(54) Title: IN-SITU THICKNESS MEASUREMENT FOR USE IN SEMICONDUCTOR PROCESSING



(57) Abstract: A system and method are disclosed for providing in-situ monitoring of thin film thickness (102, 122, 158), such as by employing a non-destructive optical measurement technique. The monitored film thickness (102, 122, 158) may be employed to help achieve a desired feature film thickness (102, 122, 158) and uniformity across a surface of a substrate (48, 104, 124, 156). By monitoring film thickness (102, 122, 158) during semiconductor processing, for example, one or more process control parameters may be adjusted to help achieve a desired film thickness (102, 122, 158) and/or uniformity thereof.

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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.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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IPC 7 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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 131 752 A (YU CHORNG-TAO ET AL) 21 July 1992 (1992-07-21) abstract; figure 1 column 1, line 1 -column 3, line 32 column 3, line 59 -column 4, line 13 ----	1-10
X	EP 0 655 620 A (TEXAS INSTRUMENTS INC) 31 May 1995 (1995-05-31) the whole document ----	1-10
X	WO 99 54926 A (APPLIED MATERIALS INC) 28 October 1999 (1999-10-28) figures 2, 3A, 3B ----	1, 6, 7
A	WO 98 32165 A (SEKIDENKO) 23 July 1998 (1998-07-23) the whole document ----- -/--	1-10

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Patent family members are listed in annex.

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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 5 313 044 A (MASSOUD HISHAM Z ET AL) 17 May 1994 (1994-05-17) -----	

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Information on patent family members

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