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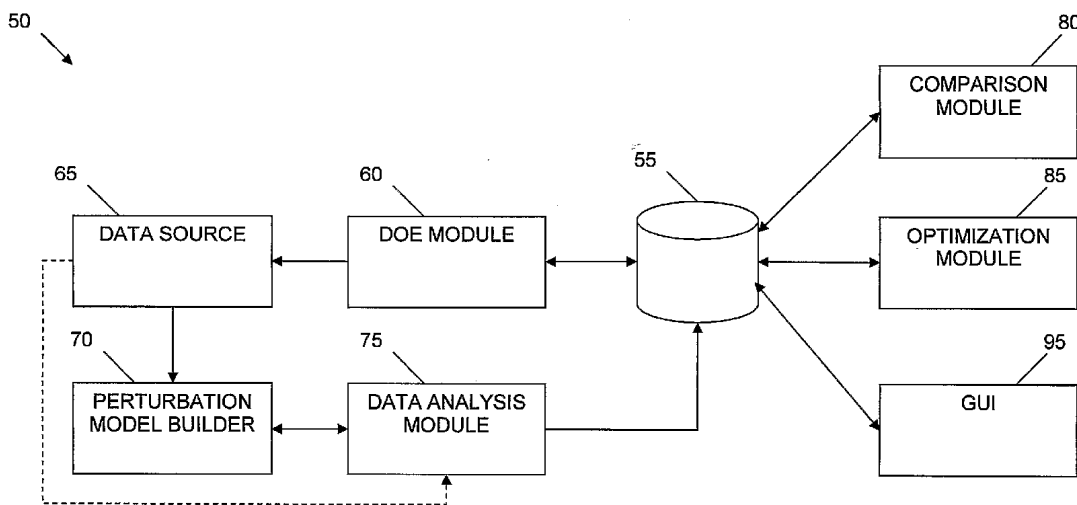
- (71) Applicant (for all designated States except US): ON-WAFER TECHNOLOGIES, INC. [US/US]; 6591.A Sierra Lane, Dublin, CA 94568 (US).
- (72) Inventors: MACDONALD, Paul, D.; 293 Sekera Court, Tracy, CA 95376 (US). KRUGER, Michiel; 2024 University Avenue Ste 20, Berkeley, CA 94704-5311 (US). WELCH, Michael; 2232 Leccino Court, Livermore, CA 94551 (US). FREED, Mason, L.; 3036 Shetland Drive, Pleasant Hill, CA 94523 (US). SPANOS, Costas, J.; 3292 Springhill Road, Lafayette, CA 94549 (US).
- (74) Agent: WILLIAMS, Larry; 3645 Montgomery Drive, Santa Rosa, CA 95405 (US).

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(54) Title: MAINTENANCE, DIAGNOSIS AND OPTIMIZATION OF PROCESSES



(57) Abstract: A method and system (50) for monitoring processes, optimizing processes, and diagnosing problems in the performance of a process tool for processing a workpiece. One embodiment of the present invention includes a software program that can be implemented in a computer for optimizing the performance of a process tool for processing a workpiece. System 50 includes a design experiments module (60), a perturbation model builder (70) and a data analysis module (75).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

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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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,535,774 B1 (BODE et al.) 18 March 2003 (18.03.2003), whole document	19-24, 26-31, 45-53
Y		1-18, 25, 32-44
Y	US 2004/0122636 A1 (ADAM) 24 June 2004 (24.06.2004), [0018]-[0024].	1-18, 25, 32-44
A	US 2003/0014145 A1 (REISS et al.) 16 January 2003 (16.01.2003), whole document	1-53
A	US 2004/0093107 A1 (GOOD et al.) 13 May 2004 (13.05.2004), whole document	1-53

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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Zoila Cabrera Telephone No. 571-272-3738 <div style="text-align: right;"> Jacqueline A. Whitfield Special Project Asst. </div>
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