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*[Continued on next page]*

(54) Title: METHOD FOR OPERATING A MICROLITHOGRAPHIC PROJECTION EXPOSURE APPARATUS

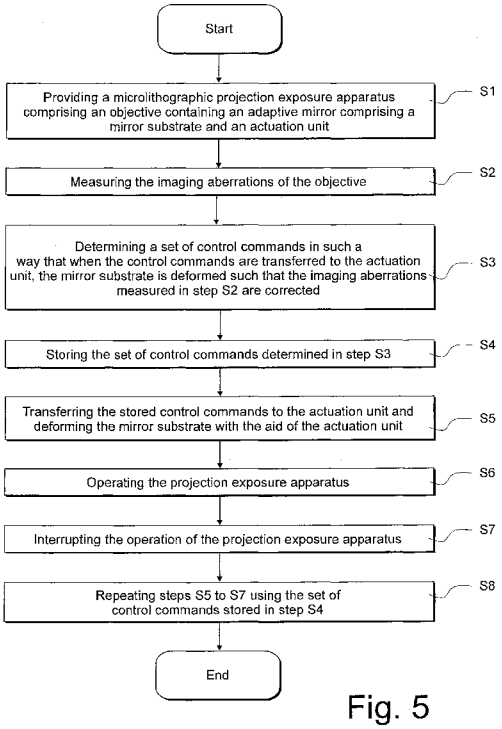



Fig. 5

(57) Abstract: A microlithographic projection exposure apparatus (10) configured in particular for EUV light includes a projection objective (26) having an adaptive mirror (M2) comprising, for its part, a mirror substrate (44) and an actuation unit (42) for deforming the mirror substrate (44). Using imaging aberrations measured previously, a set of control commands for the actuation unit (42) is determined, and when said set of control commands is transferred to the actuation unit (42), the mirror substrate (44) is deformed such that the imaging aberrations measured previously are corrected. Said set of control commands is stored in a nonvolatile data memory (66) and transferred to the actuation unit (42). If the operation of the projection exposure apparatus is interrupted after relatively long operating durations, the correction state previously present can be rapidly reestablished by simply reloading the stored control commands, without a renewed measurement of the imaging aberrations of the projection objective (26) being required.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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| Y | paragraphs [0033] - [0049], [0054], [0056]; figures 1-4 | 2 |
| X | DE 10 2010 003938 A1 (ZEISS CARL [DE]) 14 October 2010 (2010-10-14) | 1,3-10 |
| Y | the whole document | 2 |
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☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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