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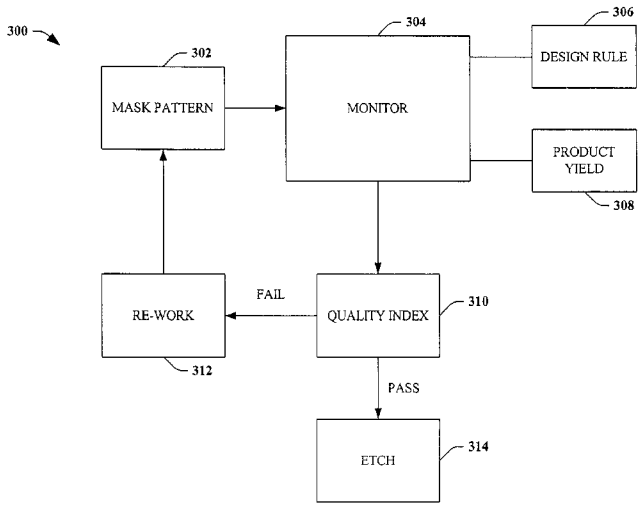
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(54) Title: COMPREHENSIVE INTEGRATED LITHOGRAPHIC PROCESS CONTROL SYSTEM BASED ON PRODUCT DESIGN AND YIELD FEEDBACK SYSTEM



(57) Abstract: The present invention provides systems and methods that facilitate performing fabrication process. Critical parameters are valued collectively as a quality matrix, which weights respective parameters according to their importance to one or more design goals. The critical parameters are weighted by coefficients according to information such as, product design, simulation, test results, yield data, electrical data and the like. The invention then can develop a quality index which is a composite "score" of the current fabrication process. A control system can then do comparisons of the quality index with design specifications in order to determine if the current fabrication process is acceptable. If the process is unacceptable, test parameters can be modified for ongoing processes and the process can be re- worked and re-performed for completed processes. As such, respective layers of a device can be customized for different specifications and quality index depending on product designs and yields.

WO 2004/031859 A2