

Study on wafer rework strategies and dispatching rules at the
photolithography stage

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Abstract

Due to the high costs of wafer materials and machines, it is feasible to apply rework to increase wafer yield at the photolithography stage. At the same time, in order to maintain good fabrication quality, shorten the process time and meet the required due date, it is absolutely necessary to have good rework strategies for wafer rework so as to make up the wafer defects in the photolithography area. In order to find the best fabrication control combination, this paper studied rework strategies to be applied in coordination with some commonly used dispatching rules at the photolithography stage. By applying simulation, combination models between the foregoing rework strategies and the five commonly used dispatching rules, including FIFO, SPT, EDD, SRPT and CR+, were analyzed individually to find the most suitable rework model for each specific production goal.

Keyword : wafer fabrication, rework strategy, dispatching rule, simulation