

Optimal Maintenance Headcount Allocation:

Role of Maintenance in the Achieving Fast Cycle Time

Abstract

The ABSTRACT follows:

In a semiconductor wafer fabrication facility (as well as virtually any type factory) the allocation of maintenance technicians to tool sets (or clusters of tools) plays a crucial role in the determination of tool set availability. Tool availability, in turn, determines factory capacity and drives factory performance in terms of outs, inventory, cycle time, and velocity. With tools now composing 70 percent or more of the cost of current (i.e., 300mm wafer) multi-billion dollar facilities, even seemingly slight increases in tool set availability can translate into savings on the order of millions or hundreds of millions of dollars. In this presentation an approach for deriving the allocation of maintenance technicians for this problem by means of Chebyshev Goal Programming is described and illustrated. The importance of all aspects of maintenance is then summarized.

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*It isn't the incompetent who destroy an organization.*

*It is those who have achieved something and want to*

*rest upon their achievements who are forever clogging*

*things up."*

-- Charles Sorenson

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