The model to determine optimal timing of capacity replacement for manufacturing technology upgrades

王昭宜,杜瑩美
Industrial Management
Management
amytu@chu.edu.tw

Abstract

Over the past decade, product and process technology migrations have been due to short product life cycle. Under this circumstance, companies have to develop more advanced technology and purchase sophisticated tools to meet the market demand and reduce manufacturing cost as well. When process technology migration occurred, DRAM manufacturers always used the past experiences to handle the migration. Howev-er, the challenge is totally different to the past that causes the manufacturers have to suffer many unexpected difficulties. In this work, an integrated model for technology migration is proposed. Regarding to the time schedule setting, a time-cost function of capacity expansion should be developed. Based on the above information, a wafer release schedule of new technology under the minimal install cost can be defined.

Keyword：Technology migration; DRAM; Capacity expansion; Install cost