

An order fulfillment model for the LED chip manufacturing plant

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Abstract

The LED chip manufacturing (LED-CM) is an important process in the LED supply chain.

The make-to-order production strategy is a general production model for the LED-CM plants to satisfy the variety requirement of their customers. However, the special features of the unstable production output and a product composed of the chips of different feasible Bins exist in the LED-CM plant. The production planner will confront the issue of effective inventory control and exact due-date performance under the severely competitive pressure. Therefore an effective order fulfillment procedure for production planners is a required key issue to accomplish the inventory control and exact due-date performance. An order fulfillment model for production planner is thus proposed in this paper to meet the requirement of the LED-CM plants. A real-life LED-CM case is also utilized to demonstrate and evaluate the application and effectiveness of the proposed model.

Keyword : LED chip manufacturing, Unstable production output, Bin grade allocation, Order