

# A Study of Lot-Streaming in Job-Shop Production System

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## ABSTRACT

In recent years, optimized production technology (OPT) has become an important tool for production planning and scheduling. Lot-streaming is the most important idea of OPT. The purpose of lot-streaming is to split a process batch into several transfer batches, and production then can be run simultaneously on different manufacturing processes so that the makespan of producing the entire batch can be shortened. Although the concept of lot-streaming philosophy, has been widely used in practice and has shown favorable results. Up to present, most related literature, however, merely describe the concepts of OPT and very few focuses particularly on the quantitative analysis of lot-streaming. In this research, first, the study develops two kind of lot-streaming model for job-shop production system, which are minimization of the makespan model and minimization of the cost model. Following, a multiple objective model is constructed in which both the makespan model and cost model are considered simultaneously to obtain a comprised schedule. Finally, some experimental analysis are designed to provide some suggestion for the following researchers.

Keywords : process batch ; transfer batch ; lot-streaming ; job-shop production system

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