عنوان مقاله:

Balancing the queuing systems and improving the production throughout using Simulation in a job shop environment

محل انتشار:

کنفرانس بین المللی مدل ها و تکنیکهای کمی در مدیریت (سال: 1399)

تعداد صفحات اصل مقاله: 11

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خلاصه مقاله:

The management of bottlenecks has become a central topic in the planning and control of production systems and Simulation is a very helpful and valuable work tool in manufacturing. It can be used in industrial field allowing the systems behavior to be learnt and tested.The objective of this article is to study the application of simulation in a job shop production in order to increase line productivity. Bottlenecks were recognized by simulation of an initial model by Arena software. This study focus on reducing average number waiting and average waiting time by using heuristic method and considering short process time (SPT).The simulated model with ۵ replication shows that after tow attempt, production line was balanced which affected on shorter que and waiting time .Thesimulation model was validated by rough cut capacity plan (RCCP) and planning experts who worked in planning department. As a result .production throughout was increased from A to A+۴۴۸ and it s about one million dollar

کلمات کلیدی:

Simulation - Bottleneck - Production Line Balancing - Queuing systems