Conference Paper – 6th International Conference on Interactive Digital Media, ICIDM 2020, Pages 1 - 6

Job Shop Scheduling Approach for Managing Tasks' Allocation Time in Factory

Abstract

To date, in modern industrial competitions, there are several industries demanded a high quality in terms of efficiency, adherence of delivery dates, and speed to achieve a demand work. One company in Jordan, specialized to produce a glass utilizing advanced machines and high-quality raw materials, whereas, there is a difficulty to fulfill the coverage of local demands. This paper, the researchers aims for an improvement of glass factory to minimize the unnecessary issues. To do so, it requires an effective method in order to enhance the production process in factory. As stated earlier, the effective method is required in this study namely Job Shop Scheduling (JSS), it is appropriate method to be used to deal with unnecessary problems that usually occur and present a suitable schedule which can guarantee an optimal solution in terms of minimizing the completion time that required to complete the whole production flow. This study aims to enhance the flow of the production line by diminishing products operation time. Thus, recent studies highlighted the outcomes declination in the product operation time by saving 85 minutes using random search (RS) algorithm, and each production line by 75 minutes via classical computation method. Thereupon, solving classical job shop scheduling (CJSS) model, which related to the study case of this paper, via RS algorithm is more significant than classical computation methods.

Keywords

Job shop scheduling; Optimization; random search algorithm