Two Stage Assembly Flowshop Scheduling Problem Minimizing Total Tardiness

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Abstract : The two stage assembly flowshop scheduling problem has lots of application in real life. To the best of our knowledge, the two stage assembly flowshop scheduling problem with total tardiness performance measure and separate setup times has not been addressed so far, and hence, it is addressed in this paper. Different dominance relations are developed and several algorithms are proposed. Extensive computational experiments are conducted to evaluate the proposed algorithms. The computational experiments have shown that one of the algorithms performs much better than the others. Moreover, the experiments have shown that the best performing algorithm performs much better than the best existing algorithm for the case of zero setup times in the literature. Therefore, the proposed best performing algorithm not only can be used for problems with separate setup times but also for the case of zero setup times.