

ABSTRACT

In manufacturing operations, production system is certainly an important aspect. Thus, company should do the planning and production control well in order to have satisfactory system. One of the production planning process is scheduling. This process is one of the main process in production planning. The urge of doing the scheduling process is due to scheduling is the details of the planning process. The production scheduling in textile industry is considered as the industry with the hybrid flow shop scheduling type. Moreover, in this company there are several machine have the characteristic of sequence dependent setup time. Thus, in order to get the optimal solution this research used Immune Algorithm. This algorithm combines an efficient mutation to cooperate the pursuit for a near-optimal solution.

Keyword: Hybrid flow shops, Sequence Dependent Setup Times, Makespan, Immune Algorithm