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| Thesis Title | Optimal Scheduling of Tableting Process |
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Abstract

The Government Pharmaceutical Organization (GPO), one of the largest pharmaceutical manufacturers in Thailand provides various medicinal forms such as tablets, solution and capsules. The tablet form is accounted for 70% of total production. Pharmaceutical production comprises of several processes, i.e. mixing, tableting, coating, and packing. It is due to the fact that there are several types of tableting machine with different capability mixed in the production line. Thus, effective capacity assignment is quite complex and difficult to attain manually. Therefore, this thesis aims to develop mathematical model in order to optimize capacity planning to different machines with sequence dependent setup and production time. This mathematical model utilizes mixed integer programming with an aim to minimize makespan. It is found that the production planning can be achieved with an aid of this mathematical model.

Keywords: Mixed integer programming / Non-identical parallel machines / Scheduling