Wankaruna Kwanon 2009: A Heuristic to Solve Flexible Flow Shop Sequencing Problem with Shared Resources. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering. Thesis Advisor: Associate Professor Anan Mungwattana, Ph.D. 77 pages

This research introduces a heuristic to solve flexible flow shop scheduling problem with shared resources. This problem has been proven to be NP hard. The heuristic solves the problem by adapting from K-stage flexible flow shop to m-machine classical flow shop. This problem is divided into two steps for solving and different heuristic methods are used for solving problem in each step. The solution of flexible flow shop scheduling problem with shared resources has an objective of minimizing makespan by using the small sample which has three and four stages of flexible flow shop. Each stage has three and four machines and has five and eight jobs which have to go through assigned routes with the constraint of the production's capacity. All results have makespans which are average 7.69 % above the optimal solution.

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