

Nipa Chongchoho 2009: Development of Decision Support Software for Production Scheduling of Glass Industry. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering. Thesis Advisor: Assistant Professor Roongrat Pisuchpen, D.Eng. 104 pages.

The objective of this research was to develop the program for any solution of the complicated production scheduling. In addition, it also concentrated on developing the user interface for key in data and modifying which was appropriate for the actual situation encountered. That was revealed any persons who were interested in solution of the general scheduling to solve issue of insufficient softwares. Because the limitations have been discovered form the former times until now.

This research studied about production scheduling system of glass industry. The findings of production scheduling systems have 10 job's type and different process routing. The traditional job scheduling then we found that delivery date was often tardiness. This proposed the computer simulation software (Arena) that used for planning and presents the heuristic approach such as (Shortest Processing Time (SPT), (Earliest Due Date (EDD), Earliness cost to Tardiness cost Ratio (ETR), Longest Processing Time (LPT) and Least Operation Number (LOPN) to minimize total cost.

From this research comparison using real production data in August 2008 between heuristic algorithm to generate active schedules the result indicates that Shortest Processing Time heuristic scheduling is the best method because total cost decreases by 79.20%, number of tardy jobs decreases by 90.00% and Cmax decreases by 26.67%.

Student's signature

Thesis Advisor's signature

____ / ____ / ____