

ABSTRACT

PT. Inti Pindad Mitra Sejati is a construction company that has several production branches. Plastic production is one of those branches which manufactured with make to order system. This company has not a control and schedule of their production system. Therefore, only 19% of orders produced punctually. Production process's documentation is not available as well. This makes evaluation of production process is hard to do. The purpose of this project is to design a system that can control, plan (scheduling), and make documentation of production process.

Evaluation of existing system starts with making the existing process flow that aim to know the weakness of the system. Then, a system which can reduce weaknesses is designed. The designed system made in this project is a system that can control new job with pending job and reschedule it with some methods of sequencing such as SPT, WSPT, Slack and Hudgson Algorithm, then save the new schedule as a document. This system must be appropriate with the fabric condition as well.

Methods used in this project are chosen based on the needs and purposes in running the production. SPT is the method for minimizing flow time. WSPT is the methods used if an order has different priority and value than others. Slack and Hudgson algorithm is used to minimize lateness values.

By using this application, the company can control jobs, and place jobs to appropriate machine with appropriate condition. Besides, this application can be reported the production's control and schedule as a document.

Keywords: make to order, production control, production schedule, application design, sequencing rules.