DEMAND ANALYSIS FOR PRODUCTION PLANNING USING DYNAMIC SIMULATION SYSTEM IN YARN INDUSTRIES
(CASE STUDY: PT. ABC )

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Abstract

Fierce competition level among companies forced them to impose number of production and production capacity to meet the market demand. The right momentum to predict production capacity must be identified by the company to make sure the decision taken to the target precisely. Before the market share experience decline momentum.

The use of dynamic system model will help to solve the problem. One of its advantages is to create experimental experience for the policy makers based on the behavior of system support factors. There are some sub models that will be developed some of which are sales model, order and production. The simulation period will be in eleven years by consider the age of production capacity facility and the dynamic of customer.

The PT. ABC is a bonded zone company which produce string that adopt made by order system and have few loyal customer. This company has three kind of different machine in production process. If raw materials in warehouse run out, then the customers have to wait longer. This is because the company still has to order the raw materials from the supplier. Of course the agreement of both parties has been
made. The purpose of this research is to help the company to predict the customer demand in next five years; as a result the utilization of the machine can be increase.

Result of this thesis is a report of number of production capacity, and which machine will be utilize the most in string production forecasting for next five years. As for it hopefully this thesis may give benefit for company in predict the customer demand and capacity planning.

**Keyword:** dynamic simulation system, machine utilization, capacity planning, predicting and customer demand.