



**WORK STUDY IN MANUFACTURING WITH VALIDATION USING  
QUEST SIMULATION**

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## **ABSTRACT**

Increasing productivity is a big topic in appraising today. The manufacturing industries have to make improvement in order to compete in the competitive world. This project is focusing to increase productivity in manufacturing industry. Time taken at every workstation and during the model change was recorded. Current production is then simulated using Quest Simulation V5R11. The problem occur at the line was identified from the work study and customer quality report from October 2002 until September 2003. To encounter the problems, three ideas of improvement was proposed and discussed. Selected ideas was simulated using Quest Simulation V5R11 to predict the result of the improvement. Based from the validation, the improvement is expected to increase the production rate by 12.9% compared to initial target 10% and the suggestion of improvement will have no incremental in manufacturing cost, no major changes due to the process and no effect on quality of product.

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## **CHAPTER 1**

### **INTRODUCTION**

Production line rarely performs up to design expectations. Manufacturing managers, schedulers and engineers constantly try to counteract the effects of equipment breakdown, quality problems, line change over and other problems that contribute to low productivity.

Productivity is the ratio of output divided by one or more input. It can be achieved in 2 ways either reduction in input while output remains constants or reduction in output while input remains constants. Increasing productivity means improving efficiency where it does job well with minimum of resources and waste.

Increasing productivity is a big topic in appraising today. The manufacturing industries have to make improvement in order to compete in the competitive world. Because of that, our project is concern to improve productivity in manufacturing by work study.