PERFORMANCE ANALYSIS IN MANUFACTURING INDUSTRY USING QUEST SIMULATION SOFTWARE

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ABSTRACT

In the millennium era, softwares have becoming an important tools in word processing, database, spreadsheet, designing, simulating and others. Software will simplify, facilitate and ease human being in the manual job. This thesis intends to introduce to new users or entrepreneur about new manufacturing software called QUEST simulation software. The software is use to model floor layout in 3D simulation of a company. Beside of that, it also capable in modeling Computer Aided Design (CAD) in a 3D space such as AutoCAD, Solid Edge, Catia and etc. This thesis will provide a guide to the users on constructing a floor layout. By using the software, a lot of advantages can be obtain such as reducing time on rearranging the factory layout, saving costs, increase profit, increase productivity, reduce idle time, reduce lead time, and etc. From this thesis, a comparison between actual factory layout and QUEST factory layout is made to prove that the results will similar (by using all the data that are taken from the factory and applying the original layout). There are some errors that have to be considered such as human errors, machine errors and etc, but the result will remain the same.

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CHAPTER I

INTRODUCTION

1.1 Introduction

This thesis presents the performance analysis in specific industry using Quest Simulation Software. The concepts of the plant layout are apply in this thesis and also useful in the various analytical developments. Presentation of the thesis follows the objective, scope, methodology, significance project, cost and schedule of the project. So it is hoped that the variety of the content of the thesis, the problem and result will provide the necessary flexibility for the application that have been done.

1.2 Objective

i) To explore the QUEST simulation software.

ii) To develop specific model on the real manufacturing cases.

iii) To simulate the model and to determine the production process, cycle time and current lead time of the production system.