LINE BALANCING AT A PACKING PROCESS OF MEDICAL PRODUCTS

By

BOON CHEE KEEN

SUPERVISOR: MR. MOHD FATHULLAH BIN GHAZLI @ GHAZALI

Report submitted in partial fulfillment of the requirements for the Degree of Bachelor of Engineering (Manufacturing Engineering)

APRIL

2010

ACKNOWLEDGEMENTS

First of all, I would like to take this opportunity to express my greatest thank to my project supervisor, Mr. Mohd Fathullah bin Ghazli @ Ghazali who guided me, giving me full support and helping me while doing my Final Year Project. I also would like to express my gratitude Lecture Nor Zaiazmin bin Yahaya for his invaluable guidance and support me while learning Witness software and allow me to use all the equipment provided at the laboratory. My appreciation also goes to all the Manufacturing Laboratory staff for their encouragement and constructive comments.

Special thanks go to my friends, staff and lectures in University Malaysia Perlis (UniMAP) for their kind support and invaluable co-operation during my final year project. I am very grateful for their comments and suggestions about my logbook and final report. I also wish to recognize the determined efforts and patience of my beloved family especially to my mum and dad for their encouragement and understanding.

During my study in UniMAP for almost four years, I become to appreciate the vital nature of manufacturing engineering, design engineering and technology as an academic subject that is exciting, challenging and important as any other discipline.

Finally, it is hoped that this final report will assist others to understand the concepts of final year project and thus make the learning process both effective and enjoyable. At last, I would like to highlight my apology for any mistake I had made. Thank you very much.

APPROVAL AND DECLARATION SHEET

This project report titled Line Balancing at A Packing Process Of Medical Products was prepared and submitted by Boon Chee Keen (Matrix Number: 071050105) and has been found satisfactory in terms of scope, quality and presentation as partial fulfillment of the requirement for the Bachelor of Engineering (Manufacturing Engineering) in Universiti Malaysia Perlis (UniMAP).

Checked and Approved by

_____

(Mr. Mohd Fathullah bin Ghazli @ Ghazali)

Project Supervisor

School of Manufacturing Engineering

Universiti Malaysia Perlis

APRIL 2010

GARIS PERIMBANGAN DI PROSES PEMBUNGKUSAN DALAM PRODUK PERUBATAN

ABSTRAK

Tujuan utama untuk menyiapkan laporan ini adalah untuk merekod semua kemajuan dan keputusan yang diperolehi ketika dalam tempoh yang ditetapkan untuk menyiapkan tugasan ini. Projek yang dikendalikan untuk kedua dua semester, semester 1 dan 2 2009/2010 ini ialah untuk Garis Perimbangan di proses Pembungkusan dalam produk perubatan dan mengkaji pengendalian dan menyokong susun system pembuatan. Projek ini diselia oleh Mr. Mohd Fathullah bin Ghazli @ Ghazali, selaku penyelia projek. Laporan ini menerangkan perkembangan keseluruhan projek dan informasi seperti kaedah Yamazumi Board yang digunakan selain menggunakan perisian Witness 2003 untuk tujuan simulasi proses. Tujuan projek ini adalah menyesuaikan pembuatan 'lean' teknik untuk dapat menyimbangan process secara teknologi memajukan.

LINE BALANCING AT A PACKING PROCESS OF MEDICAL PRODUCTS

ABSTRACT

The main purpose for preparing this report is to record all the progress and results obtained during the period required to complete this task. Project conducted for the two semester, semester 1 and 2 for 2009/2010 is in the Line Balancing at a Packing process of Medical Product and review the operation and support of the manufacturing system layout. The project is supervised by Mr. Fathullah Mohd Ghazali bin Ghazli @, as the project supervisor. This report describes the development of the whole project, and information such as methods used Yamazumi Board other than using Witness in 2003 for the purpose of the simulation process. The purpose of this project is adjusting manufacturing 'Lean' techniques in order to develop the balance technological process.

TABLE OF CONTENTS

CHAPTER 2 LITERATURE REVIEW

CHAPTER 3 METHODOLOGY

CHAPTER 4 RESULTS AND DISCUSSION

LIST OF TABLES

LIST OF FIGURES