COMPARATIVE STUDY OF INVENTORY MANAGEMENT AND JUST-IN-TIME TACTICS

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ABSTRACT

This thesis is presenting a comparative study of inventory management system and just-in-time (JIT) tactics. Inventory management system always related to the efficient technique of storing the inventory. It has been practicing long time ago and still being used nowadays. Apart from that, JIT tactics is a quite new technique and it is a subset of lean manufacturing. Just-in-time (JIT) is a management philosophy that strives to eliminate sources of manufacturing waste by producing the right part in the right place at the right time. This thesis contains comparisons between inventory management system and JIT tactics, analysis of related costs and case study. It discussed on the differences of these two techniques in managing the inventory in term of lot sizes, layout, workforce, suppliers, scheduling and maintenance. Also, the comparison between Economic Order Quantity (EOQ) and Just-In-Time (JIT) is clearly being shown in this thesis.

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

1.0 OVERVIEW

The principal role of the manufacturing firm is to turn physical raw materials into tangible products. A tangible product is one that can be physically touched, valued in monetary terms, visualized and described by dimensional terms such as weight, length, height and volume. These type of firms use and generate a high volume in inventory and very often require high capital investment for their operation.

The product is designed to satisfy a certain need and normally is sold in a competitive environment and so the product's success is driven by market forces and must compete on cost, quality and delivery time.

Thus, there is a need for reduction in operating cost in order to gain high profit. One of the ways is by properly managing the inventory. Inventory has a value which means that keeping a store of goods costs money. The three categories of cost in inventory are carrying costs, ordering costs and stockout costs.

Ideally, the same product produced by just-in-time system is in the same sequence, in the same quantities and in similar period. This system will reduce lot sizes and the inventory levels. Low inventory level means low operational cost but there are still some considerations before turn into this system.