



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

SECOND USED PACKAGING

This report submitted in accordance with requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor Degree of Engineering Technology (Manufacturing Process) (Hons.)

by

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FACULTY OF ENGINEERING TECHNOLOGY

2015

BORANG PENGESAHAN STATUS LAPORAN PROJEK SARJANA MUDA

TAJUK: **Second Used Packaging**

SESI PENGAJIAN: **2014/15 Semester 1**

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ABSTRAK

Projek Pembungkusan Kedua adalah penggunaan semula item sekali lagi selepas ia telah digunakan dan mengambil barang-barang dan menggunakan mereka dalam bentuk asal mereka, dengan kemungkinan pembangunan, sama ada untuk tujuan yang sama atau sesuatu yang berbeza. Selain daripada pembungkusan, pengguna tidak menggunakan sepenuhnya pembungkusan dengan cara yang betul dan hanya membuang bungkusan atau menggunakannya sebagai kotak simpanan sahaja. Kajian ini adalah untuk mengatasi persepsi pengguna yang menggunakan pembungkusan sebagai perkara kedua untuk digunakan dan daripada itu, keputusan yang diperolehi dengan jawapan yang diterima kajian berdasarkan beberapa pengguna, pelajar, pekerja dan pengeluar. Ini kerana, untuk mengenal pasti keperluan dan persepsi mereka terhadap pembungkusan kedua digunakan. Fokus projek adalah pada membangunkan pembungkusan kotak kertas dan pembungkusan yang mempunyai kualiti yang baik untuk digunakan semula sebagai pembungkusan kedua. Jangkaan hasil adalah untuk membangunkan reka bentuk baru yang memberi kesedaran kepada pengguna supaya apabila pengguna membeli produk mampu untuk memelihara dan melindungi alam sekitar daripada sebarang bentuk bahaya. Di samping itu, pembungkusan kedua ini boleh digunakan semula dengan betul dan dengan itu pengguna boleh menjimatkan wang dengan membeli produk pilihan mereka dimana bungkusan barangan mereka boleh digunakan semula untuk tujuan pelbagai.

ABSTRACT

This project of Second-Used Packaging is a reuse of an item again after it has been used and taking idle goods and materials and using them in their original form, with possibly of development, either for the same purpose or something different. Aside from packaging, the consumer does not fully use packaging in a proper way and simply throw the packaging or use it as a storage box. The study is to overcome the consumers' perception on using packaging as second-used item and from that, the result is obtained by collected the survey answer based on several consumer, student, worker and manufacturer. This is because, to identified the need and their perceptions toward second-used packaging. This project focus on developing the paper boxes packaging and the packaging that have a good quality to be reused as second-used packaging. The result expectation is to develop new design that give awareness to user so that when consumer bought the product and able to conserve and protect the environment from any sort of harm. In addition, this second-used packaging could be reused properly and thus consumers can save money by buying their preferred products which the packaging can be reused for multi-purpose.

DEDICATION

This thesis is dedicated to my parents Nik Yusoff Bin Che Ablah and Faridah Hj Othman who have supported me all the way since the beginning of my studies.

Also, this thesis is dedicated to friends who have been a great source of motivation and inspiration.

Finally, this thesis is dedicated to all those who believe in the richness of learning.

ACKNOWLEDGEMENT

First and foremost, I would like to express my highness gratitude to Allah for giving me the opportunity and strength to complete this Bachelor Degree Project on time.

I would like to express my sincere gratitude to Universiti Teknikal Malaysia Melaka (UTeM) for giving me opportunity to further my study especially to the Manufacturing Process Department for the support and guidance throughout my study at this university.

Next, I would like to forward my appreciation and thank you to my supervisor Mdm Umi Hayati Binti Ahamd for her guidance and wisdoms. Very special thanks to other friends and technicians for their supports and helps in completing this project. Finally, I would like to express my deepest gratitude to my beloved family for their patient and encouragement.

Thank You.

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CHAPTER 1

INTRODUCTION

Packaging is a material that used to wrap or protect goods (Oxford Dictionaries). Packaging is used for enclosing or protecting products for distribution, storage, sale, and use. Packaging and packaging design have become an important factor in marketing diverse “consumer goods” and have a key role in communicating product benefits to the customer. Product packaging is therefore also related to other variables in the marketing mix (Czinkota and Ronkainen, 2007).Packaging also refers to the process of design, evaluation, and production of packages. Packaging can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells. In many countries it is fully integrated into government, business, institutional, industrial, and personal use.

Second used packaging is a reuse of an item again after it has been used (CollinsDictionary). It is taking idle goods and materials and using them in their original form, with possibly of development, either for the same purpose or something different. Normally, the consumer does not fully use packaging in a proper way and simply throw the packaging or use it as a storage box. For this second used packaging it concern on how to encourage the manufactures to develop the packaging that can be fully utilized by consumers.

Recycle paper fiber is incorporated at the vat stage, and usually must face some separation processing to remove adhesives and other contaminants (including an increasing number of electronic devices such as anti-theft and RFID tags).

Separation is usually accomplished by reducing the cycled paper to pulp and then subjecting it to several stages of cleaning in order to remove the large, dense contaminants such as staples, and then using screening and hydrocyclones to remove less dense contaminants such as adhesives, tape fragments and waxes. The presence of these lighter contaminants is an ongoing concern for the paper industry because they will clog screen and slow paper output, through presorting and the separation process have managed to control defects.

The cost and energy input for this second used packaging must be considerable, with the results that many of these types of materials are being investigated and the final economic outcome is often very changeable.

Sustainability is a term of that originality referred to the simple concept of continuity of processes, but has expanded to encompass the idea of a larger, if not global, system of operation and life that is sustainable on a ongoing basis. Further definitions include quality of life and ecosystem conservation. The ongoing collision of expanding population and rapid economic development of highly populated countries such as India and China against the older ones of the United States and Europe, finite energy and other natural resource supplies in a competitive globalized economy and mounting evidence of man-made irreversible changes in various ecosystems have highlighted the need for a change from the immediate, parochial view of industrial manufacturing, marketing and business.

Many of things that can contribute to sustainability in product lines (and their packaging) stem from commonsense implementation of the simple principles outlined earlier, recycling, efficiency improvements and source reduction. Source reduction includes minimizing the use of materials in both product and packaging manufacture in order to reduce their overall amount before they enter the MSW management system.

1.1 Problem Statement

Lack of consumers' perception on using packaging for second-used.

1.2 Objectives

The objectives of this project are to:

1. To develop a new packaging that has its own added value.
2. To design and develop a new idea of product packaging that can give awareness to consumer to reuse the packaging.

1.3 Scopes

The scopes of the project consist of:

1. Focus on developing the paper boxes packaging that can be fully utilized, which could be using for second-used.
2. Focus on developing the packaging that have a good quality to be reused as second-used packaging

CHAPTER 2

LITERATURE REVIEW

This section covers the overviews of second-used packaging process, reviews on results and findings from published works related to this research topic. Besides that, the reasoning for selecting process, characterization method and, survey on customer perceptions of this research are also discussed.

2.1 The Packaging Cycle

Packaging is a globally integrated discipline: It draws on nearly every aspect of science, technology, business, social science, and engineering. For that reason, the greatest difficulty in teaching a subject that encompasses so many fields is trying to pull them all together into a coherent map to follow as the discussion proceeds. Because most students have encountered some kind of cyclic model, whether a metabolic cycle in biology, a water or nitrogen cycle in earth sciences, or the flow of materials in engineering, a “Packaging Cycle” was devised in 1993 as a roadmap for new Package Engineering classes at the University of Illinois. This has served well and will serve as a basic roadmap for the materials in this book. This is simply a materials’ life cycle, tracing the flow of materials from raw resources to finished packaging, but it helps pull together concepts from many different sources and disciplines to contribute to the final packaged product. The cycle completes or terminates as the materials are either discarded or, in a closed cycle, reused in recycling and refilling operations.

It is also necessary to include subjects that relate to several of the “steps” in the packaging cycle if one is to have a good grasp of the interrelationship between the packaging materials, machinery, and the actual food products and materials that are contained and preserved within the package. (Scott A. Morris, 2011)

2.2 Product Packaging Perceptions

From the managerial point of view, in order for packaging to suitably develop its functions, the structural and graphic design of the packaging and even the optimum size of the pack will be subject to market research undertaken by the company and the positioning that the company wants the product to occupy in the market (Ivanez Gimeno, 2000). So, packaging is, without doubt, specifically related to the strategic decisions of the marketing mix (Underwood, 2003) and, therefore, to positioning decisions.

From the consumer perspective, packaging also plays a major role when products are purchased: packaging is crucial, given that it is the first thing that the public sees before making the final decision to buy (Vidales Giovannetti, 1995). This function has increased with the arrival and popularization of self-service sales systems which have caused packaging to move to the foreground in attracting attention and causing a purchase. Prior to this, it had remained behind the counter and only the sales attendant came between the consumer and the product (Cervera Fantoni, 2003). According to (Sonsino, 1990), self-service has transferred the role of informing the customer from the sales assistant to advertising and to packaging. This is why packaging has been called the “silent salesman”, as it informs us of the qualities and benefits that we are going to obtain if we consume a certain product (Vidales Giovannetti, 1995)