

اينستيتوت تكنولوجي مارا



## FINAL YEAR PROJECT REPORT

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FACULTY OF MECHANICAL ENGINEERING  
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# THE STUDY OF THE RECYCLING PATTERN METALS IN MALAYSIA

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OCTOBER 1997

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## **ACKNOWLEDGEMENTS**

*In the name of GOD the most Gracious and Merciful*

We would like to express our deep sense of gratitude and appreciation to our project advisor, **Ir. Dr. Mohamad Nor Berhan** for his endless contribution and valuable guidance that helps us in numerous ways throughout the preparation of this project. His wide point of view and experiences have made it possible, gave us the knowledge and exposure to obtain the desired result regarding this case study.

We must also extend our gratitude to thanks Mr. Radzi Dahalan of Perwaja Steel Sdn. Bhd. and Mr. Michael Goh of Amalgamated Steel Mills Sdn. Bhd., who providing and facilitated us with useful information about manufacturing process of possible recycling of metals.

We would like to take this opportunity to thanks Ir. Azizah Kassim of Jabatan Kerja Raya (JKR), who providing us the government automobile procedure of disposal.

Further more, we would like to thanks Mr. Razali Suparman of Majlis Perbandaran Shah Alam (MPSA), Mr. Jefri of Majlis Perbandaran Klang (MPK) and Mr. Mark Lim of Hoto Stainless Steel Industries Sdn. Bhd. for their helping hands in providing us with beneficial information and consultation.

Finally, we would like to express our gratitude to all our classmates, family, our friends and also the staffs of Faculty of Mechanical Engineering who are directly or indirectly involved in making this project a success.

*May GOD bless all of us.*

**Ahmad Faris Mohd Salleh**

**Omar Bapokutty**

## **ABSTRACT**

In the middle ages, alchemists tried to turn base metals into gold. In recent times, newspaper articles have turned into a cliché the idea that recycling (processing material for reuse) is a modern form of alchemy, turning waste into gold.

Recycling is valued as the equivalent of gold in some cultures. In Mexico, for example, as in other Latin and South American countries, the pepenadores have lived for years near landfills and by birthright, picked certain materials from the trash to sell for some form of reuse.

'Nor' is recycling new. The Romans who pulled the stone from the Coliseum to pave highways were pioneers in C & D (Construction & Demolition) recycling. The Germanic hero Siegfried, as portrayed in Richard Wagner's operatic ring cycle, rather than patching his great sword, melted it down and reforged it. He was practising metal recycling. The steel industry in Malaysia has almost always recycled its old steel.

What is new in the late twentieth century is the fervour is due to concern about the environment, conserving our resources and the lack of landfill space in Malaysia. Recycling is easy to understand, something new is made out of something old. It is not thrown away, it is reused.

## 1.0 INTRODUCTION

Analysis of the world production of some of the more important engineering materials in their bulk form, including steel, some non-ferrous metals shows that the growth of the production of metals with time is now more speedy from 70's. The demands we make on metals and materials in our current engineering practice ensure that any piece of equipment will contain a variety of metals, alloys and other material, each serving a special purpose. However, the complexity of the product may make it difficult to separate the different metals and alloys and the contamination resulting from incomplete separation is a cause of concern to the metals industries, most of which use some recycled materials.

The first requirement was to promote a deeper understanding and better information and publicity about the opportunities for recycling. This is of course is a long term job, people do not change their attitudes and some take a great deal of persuading to change them at all.

Local authorities have an important role to play in reclamation. Many of them are keen to promote recycling of waste in their areas, and are looking into ways in which they can organise local schemes to reclaim household waste.

Recycling is defined as *reuse an old scrap or waste from the original or some other purpose such as input material, material recovery or energy production.*