

ARROW COIN SYSTEM

By

ADAM HOOD B. AB. RAHIM
99081895

AQIL B. AB. WAHAB
99161941

MOHD. YASIN B. ALWI
99082255

H.M. IFTITAH B. AHMAD SUBKI
99082031

DIPLOMA IN MECHANICAL ENGINEERING

MARA UNIVERSITY OF TECHNOLOGY

APRIL 2002

ABREVIATIONS

Trolleys are among facilities provided by Business Company such as supermarkets and wholesales. But they facing problem in maintaining this facilities. The consumer sometimes lack of responsibility to put back the trolley after using it. This will cause damage to the trolley and other consumer will not be able to use this accommodation usually in pack time such as weekend and school holidays.

The companies also need to spent money when they hire more workers just to pick up the trolley and return them into their nest. As a result, the companies lose their profit for trolley maintenances only. Some companies such as MACRO and CAREFOUR have provided trolleys with the coin system. They managed to save their income by fewer workers to maintain the trolleys.

For our project, we plan to build a prototype of coin system on trolley base on previous project. We see that the important of this accommodation at the most country's proud; KUALA LUMPUR INTERNATIONAL

AIRPORT (KLIA). Same problem as the stores, KLIA also need to throw out their money just to get manpower for the trolleys maintenance.

The previous students have done complete research and observation about the importance of the trolley system in the project entitled “Suggestion of Integrated Trolley System in KLIA”. Another group have continue this project and come out with great effort and ideas. They had designed the trolley system in the project entitled “Aero Token System”.

In order to complete this project, we are going to come up with the real prototype. We will use more fabrication process not neglecting the design and also the mechanism inside the prototype. We name our project “ARROW COIN SYSTEM”.

TABLE OF CONTENT

1. Introduction	1
2. Methodology	4
3. Casing Analysis	6
4. Mechanism Analysis	8
5. Costing	32
6. Machining Processes	36
7. Conclusion	43
8. Bibliography	44
9. Appendix	

INTRODUCTION

Final project is the main requirement for the student of Diploma of Mechanical Engineering in order to graduate. Our final project is to produce the coin system on the trolley. This coin system is a mechanism attach to the trolley to ensure that the user be more responsible and discipline when used this service. Furthermore, user needs to put their own coin as a share; they took the trolley when they want to use them and return them after used it at its own place. Then they will get back their coin.

The coin system on the trolley that we will produce is adapted from the previous student's final project. We did some adjustment to the previous design and mechanism in order to make it more realistic and more efficient.

The first group of the student has done the research and full information the use of token system in KLIA. They produced a project entitled "Suggestion of Integrated Trolley System in KLIA".