



MEC 332

MECHANICAL ENGINEERING DESIGN

FINAL YEAR PROJECT

TITTLE:

CRUMPLE DINING TABLE

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CHAPTER 1: INTRODUCTION

1.1 OVERVIEW OF THE PROJECT

Dining table is a must-have piece of furniture for everyone who have a house. The dining table has always been a symbol of many things such as the place where family member gathered and where family celebrates important milestone. It is also a place where to share the experiences and discussing problem among family members. According to a family therapist Dr Reenee Singh, families who are eating together around dining table are likely close to each other. This is the reason why dining table is one of the vital features in home.

Hence, an idea to combine the cabinet and dining table has generated. This idea is to minimise the usage of space in the house specially to help people with a small house. The table is place in the cabinet when it is not used. If they wanted to use the table, they only have to pull the table form the cabinet because the table have moving mechanism which is tyre. The material used for the dining table and cabinet is made from waterproof wood to ease in cleaning job. Besides that, this project had been designed with a few improvements features which is the round compartment for cutlery to make it difference from other product in the market. Based on the advantages that have been stated, hoping that this project will help many people when using our product.

CHAPTER 8: CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

The “Crumple Dining Table” design is an outstanding design that rarely can be seen in the market. The concept used is inspired by the hand fan which can be crumple. Besides, the table also comes with a cabinet that can store many kitchen appliances. This project is to ease people who having a smaller house and the objectives are achieved. The table can be pull out during needed and can be store back in when not using it. Furthermore, the price for the “Crumple Dining Table” is affordable since it is a rare design which is hard to find in the market. Besides, the unique design of the product which attract people to survey and buy the product.

Even though the table is completed, but there are limitations during the on-going project that gives effect with the product animation. The project is done by using software which is Solidworks. The Solidworks has some limitations which are, it does have a limited materials options. The type of wood used for the table and cabinet is Walnut, but the type of wood used for the analysis is Balsa. This is because, Solidwork does not contain Walnut wood for the materials. The Walnut and Balsa has few differentials which are the bending strength or the modulus of rupture. For Walnut, the bending strength is 0.100663GPa while the Balsa is 0.019GPa. This shows that the Walnut wood can withstand a higher impacting force.

In addition, there is limitation during the product assemble. The limitation is the part cannot be move if it is imported from other file. Besides, all parts of the project cannot be assemble in one file because it will caused the software to become not responding or crash. Therefore, the surface of the table cannot be move and the animation cannot be done. The component that can be move during the animation is only the door of the cabinet. Despite the limitations, the complete unit of the project is still a success.

In conclusion, the “Crumple Dining Table” is a product that can give a lot of benefits to the users. Besides, the multifunctional uses can helps people that faced problems regarding their house space. The colour of the product also is pretty and can be easily fit to any house theme. Lastly, the “Crumple Dining Table” is a multifunctional product that can ease people which comes with affordable price.