

Review Paper on Design of Generalized Framework for Case Good Products

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Abstract - In standard designing practice, we need to upgrade the segment while planning the parts the majority of the computations continue as before for lessening the tedious work and improving the usefulness, we can use programming abilities.

In the present pandemic circumstance part of businesses previously confronted creation misfortune, and now time is to recuperate the entirety of the misfortunes. In such time re-planning, the segment for every one of the diverse info is definitely not a smart thought. Plan mechanization can be perhaps the best answer for this sort of excess work. Assuming we form bookkeeping page as indicated by the difficult assertion, there will be a onetime speculation after that we can get brings about a couple of snaps in particular.

I.INTRODUCTION

The India Furniture Market is anticipated to reach USD 32.61 Billion by 2018 by registering a CAGR (Compound Annual Growth Rate) of 13.38% during the forecast period i.e., 2018-2023. Moreover, the market is expected to garner USD 61.09 Billion by the end of 2023. Further, the India furniture market is anticipated to achieve a Y-o-Y growth rate of 14.30% in 2023 as compared to the previous year.

India furniture market growth is driven by various attributes such as rising trend for modular and state of the art furniture among the population living in urban cities, growing urbanization in Indian states, rising demand for durable and hybrid seating furniture. On the back of these factors the furniture industry is expected to propel in India. Further, the rising trend of online and mobile shopping in India is envisioned to

bolster the demand for furniture through online channels.

The players such as Pepperfry, Urban ladder and others are generating significant revenue through online platforms. Also, the rising trend of online shopping is pushing the manufacturers like Godrej Furniture, Nilkamal etc., to introduce and sell their furniture through online space. For instance, leading offline retailer of readymade furniture products named @Home, which is a flagship brand of Nilkamal Pvt. Ltd, has launched its online shopping portal for the exclusive range of @Home furniture, furnishings and home d'cor items.

The intent behind this project is to utilize my engineering knowledge and CAD skills to design a platform for Cases Good products (Storage Units) from which number of products can be pulled out in just few clicks.

In regular engineering practice, we have to redesign the component while designing the parts most of the calculations remain the same for reducing the repetitive work and improving the productivity, we can utilize software skills.

In today's pandemic situation lot of industries already faced production loss, and now time is to recover all of the losses. In such time re-designing the component for each of the different input is not a good idea. Design automation can be one of the best solutions for this kind of redundant work.

Excel is one of the most common and productive tools to manage lots of data. Excel can also be a good tool for engineering calculations also.

If we formulate spreadsheet according to the problem statement, then there will be a one-time time

investment after that we can get results in a few clicks only.

Design software can be connected to excel, and the automation can lead us to a better solution.

Our ultimate aim is to automate the design process using excel /MathCAD and design software.

II. LITERATURE SURVEY

A. “Customized Wardrobe Function Modular Design” by Kunlun Chen, Zhongfeng Zhang, Jijuan Zhang

This paper summarizes the key problems of modular design of custom wardrobe and puts forward a new method of customizing wardrobe modular design in combination with customer's requirement. Through the new division and partition configuration of the wardrobe function module, the function module size standard and the module combination mode are determined.

B. “Research on the Design of the person Wardrobe Based on Ergonomics” by Chunling Gu and Jing Zeng
Based on the storage demand this paper analyses the problems existing in the use of the wardrobe based on the ergonomics and the psychological and behavioral characteristics of the person.

C. “Application of Failure Mode & Effect Analysis (Fmea) For Continuous Quality Improvement – Multiple Case Studies in Automobile Smes” by Jigar Doshi, Darshak Desai

Failure Mode and Effects Analysis (FMEA) is a quality tool used to identify potential failures and related effects on processes and products, so continuous improvement in quality can be achieved by reducing them. The purpose of this research paper is to showcase the contribution of FMEA to achieve Continuous Quality Improvement (CQI) by multiple case study research.

D. “Opportunities for the applications of FMEA Model in logistics processes in Bulgarian enterprises” by Maria Vodenicharova

The results show that FMEA is not used for assessment in logistics processes and provides useful insights for decision-making to improve the reliability of supply. A framework based on the survey is presented for determining the reliability of logistics processes in manufacturing plants. The study

demonstrates the applicability of the method in logistics processes and the role FMEA can play in assessing logistics processes.

E. “Static Analysis of Shelf to Study the Effect of Different Meshes and Addition of Stifnners on FEA Results” by Mr. G.C.Mekalke Koustubh S. Hajare Ankush B. Khot Yuvraj M. Shet Harshwardhan C. Ketkale Naval B. Sangave

Shelves are subjected to uniformly distributed load and concentrated load many times over its life span. Strength of these structures are increased by adding stiffeners to its base plate. This paper deals with the analysis of Shelf with and without stiffener. A comparison of without stiffener shelf and one, two and three stiffeners is done for the same dimensions. In order to continue this analysis various research papers were studied to understand the previous tasks done for stiffened shelf. Hyper mesh is used to do the analysis. Triangular flat plates are used as stiffener at middle, both outer side of shelf. Displacement plot and stress plots are studied for all above cases and comparison table is prepared. On that which case is good or better is found out.

III. PROBLEM STATEMENT

- If any new product requirement is there then engineer need to start from the scratch. Where most of the parts attribute are common but due to dimensional variations engineer need to repeat the entire design cycle again.
- This design cycle includes CAD modelling of components and assemblies, Finite Element analysis of components, design review, creating drawings, creating BOM and costing, creating carton drawings, creating Packaging sequence and assembly guidelines and many more steps like this.
- To reduce this cycle time platform can be a relief, with the help of platform, engineer just need to change the dimension in the table and the product will be ready in just few clicks.
- Even if there is a requirement of developing a product which is having different specification but having the same attributes then that product can also be developed using the same platform.

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