Rose Petal Seperator and Grindging Machine

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Abstract **-Flowers are a symbol of devotion and reverence. Every year tons of waste flowers are dumped in the rivers choking them to death - killing fishes and creating havoc in the fragile ecosphere of the water body and cause enormous pollution. This floral waste can be utilized in different ways to produce valuable products and can thus help to save environment from pollution caused due to improper disposal of flower waste. Techniques like vermicomposting, composting, dyes extraction, extraction of essential oils, making of holi colours and bio-gas generation can be used. Moreover, this flower waste can also be used for making incense sticks besides using them for some art and craft techniques. There is need to utilize these flowers for preparation of various eco friendly products.**

Keywords -Flowers, Holi Colours, Flower Waste

I. INTRODUCTION

India is a vast country and the Indian people follow various religions, speak different languages and follow different customs and traditions. Inspite of this diversity, all people use agarbatti (Incense sticks) at all the places of worship, religious functions, festive occasions, weddings. This itself speaks volumes of the high importance agarbatti has. The burning incense in religious and social functions has been practised in India since early times. The demand for agarbatti is increasing both in the domestic and export markets because of the improvement in quality and increase in the types of products. India is the largest producer of agarbattis in the world. Incense-stick making machines that are currently available in India remain unaffordable to many poor workers who continue to make them manually by smearing the paste, which is a mixture of charcoal powder, wood powder and binding agent, around a bamboo stick. Such labour intensive work mostly involves about half a million poor women in rural and urban slum areas across India.

II. LITERATURE REVIEW AND OBJECTIVE

Literature survey and review has been carried out based on the reference gathered, on agarbatti manufacturing, and discuss about the aspects of technical, economic, safety and ergonomic aspects from the project materials collected. Besides, this chapter will also explains about data requirement and the basic concept in designing machine, the required functions and finally obtain details of manufacturing specifications sufficient for fabricating and assembling the desired project.

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The literature reveals agarbatti (incense stick) has a huge demand and a sizeable market both in India and abroad, very little development has taken place in this field.

¬ The people involved in this trade are mostly below the poverty line and still use primitive ways of manufacturing incense sticks.

¬ It was concluded from the existing literature that there is no proper safety measures during agarbatti manufacturing to the workers.

¬ The literature review concludes there is a need for improved ergonomic machines and safety design to be introduced there is low or almost no awareness of the new designs and techniques that have been developed in our country.

¬ Emerging of new technology in agarbatti manufacturing will make India leading producer of agarbatti throughout the world.

III.SYSTEM DESIGN

3.1 Mechanical Design: Mechanical design phase is very important from the view of designer as whole success of the project depends on the correct design analysis of the problem Many preliminary alternatives are eliminated during this phase Designer should have

adequate knowledge above physical properties of material. loads stresses, deformation, and failure Theories and wear analysis. He should identify the external and internal force acting on the machine parts This force may be classified as

1] Dead weigh forces
2] Friction forces
3] Inertia forces
4] Centrifugal forces

Designer should estimate these forces very accurately by using design equations. If he does not have sufficient information to estimate them he should make certain practical assumptions based on similar conditions. This will almost satisfy the functional needs. Assumptions must always be on the safer side. Selection of factors of safety to find working or design stress is another important step in design of working dimensions of machine elements. The corrections in the theoretical stress value are to be made according in the kinds of loads, shape of parts & service requirements. Selection of material should be made according to the condition of loading shapes of products environments conditions & desirable properties of material Provision should be made to minimize nearly adopting proper lubrications methods. In, mechanical design the components are listed down & stored on the basis of their procurement in two categories.

Components of machine:

1. Hopper: In hopper there are nine chambers, each chambers have a multiple holes of clearance size 1.4mm. The clearance is maintain 1.4mm for 1.3mm of round stick which can easily passes through this holes.

2.Collector : collector collects the Rose petals.

3. Flange mounting: On flying mounting 8 nos of collars of 4cm diameter are mounted.

4. Motor: In this we used 0.5HP(1440 rpm) 3phase electric motor.

5. Plummer Block: A Plummer block is a pedestal used to provide support for a rotating shaft with the help of compatible bearings & various accessories. Housing material for a pillow block is typically made of cast iron or cast steel. The fundamental application of both types is the same which is to mount bearings safely enabling their outer ring to be stationary while allowing rotation of the inner ring. The housing is bolted to a foundation through the holes in the base. Bearing housings are either split type or unspilt type. Split type housings are usually two piece housings where the cap and base can be detached, while certain series are one single piece housings. Various seals are provided to prevent dust and other contaminants from entering the housing. 25 Fabrication and analysis of incense stick making machine Dept. of mechanical engineering, SIT, Valachil, Mangaluru page | 16 Thus the housing provides a clean environment for the expensive bearings to freely rotate, hence increasing their performance and duty cycle.

6. V belt: It is mostly used in factories and workshops. By this belt moderate amount of power is transmitted Power is transmitted from one pulley to another pulley only when the distance the distance between pulleys is moderate. The material used for that belt is lather, cotton and fabric material, flexible rubber, balata belt.

7. Pulley: It is made for the aluminum and this pulley diameter is 110 mm The pulley is attached the Stepper motor by using belt drive. When the Spur gear rotates then the pulley is rotated and transfers the motion belt drive through motor. Then the generate electricity.

8. Flourmill:

4. WORKING

A rose petal beating and collecting device relates to agricultural machinery, in particular to an integrated rose petal beating and collecting device used for making roses into rose petals and meanwhile clearing sundries in the rose petals. The device is characterized by comprising a petal separator, a petal selection device and a petal collection device which are sequentially connected. The petal separator comprises a conveying belt and a petal beater. The conveying belt is inclined, a feeding port is arranged in the lower end, and a discharging port is arranged in the upper end. The petal beater is fixed below the discharging port, the petals are beaten by the beater and enter the petal selection device, and the petals enter the petal collection device through a material outlet of the petal selection device. The rose petal beating and collecting device is scientific in design, simple in structure, convenient to use, free of manual intervene in the whole operation process and capable of effectively improving working efficiency, reducing production cost.

5. CONCLUSION

From foregoing discussion, it can be concluded that the challenges to utilization of waste and minimize losses can be fulfilled by utilizing floral waste for one or the other useful products. Floral waste can not only be disposed safely in an environmental friendly manner but can also be utilized for making diversified products. Floral waste utilization would eventually be beneficial to the society as people would get to live in a clean and a healthier environment. Floral waste utilization would eventually be beneficial to the society as people would get to live in a cleaner and a healthier environment. The “green temple concept” can prove to be helpful in Government policy formulation for waste management and in promoting sustainable development approach towards temples.

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