

FINANCIAL ASPECTS OF PARTIALLY AUTOMATED LAC BANGLE MANUFACTURING

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Abstract— Absence of support, effect of current makes, change in tastes, scarcity of crude materials, and inability to channel the conventional structures and outlines into cutting edge tastes have been the principle variables adding to the set back endured by the customary expressions and artworks. Conservatism of the artisan and expert to adhere to the conventional structures and plans, in any case, need not be criticized. It has been as much a benefit as a risk. In any case, for his industriousness, the customary outlines may have been altogether lost. While new plans and structures fitting in with cutting edge taste should be presented, the customary outline theme must be protected. Lac bangle fabricating unit has colossal potential for mechanization. It is more imperative to enhance the procedure and strategy for creation, instead of supplant the conventional plans with the cutting edge one. The present study centers one contextual investigation on the adjustment in job of Pandharpur bangle makers by incomplete automation in assembling process.

Keywords- Lac bangle, traditional, automation, livelihood.

I. INTRODUCTION

Bangles were an vital ornament of ladies in view that long in many components of the arena and particularly within the sub-continent. girls, specifically married, sense incomplete with out bangles as those are considered a image of joy and happiness. Bangles, conventional adorns worn with the aid of women are the essence of womanhood and a tradition that has persisted when you consider that ages. And every female in the international, who has seen lac bangles, would really like and like to put on those bangles as it provides more allure and glory to her beauty and character.

Lac is a coloured resin that is received from wild timber. it's miles gathered from insects that collect this resin and is very well purified before use. Multicoloured balls and sticks of lac are made with the aid of twisting coloured melted sealing wax round the stick or ball from pinnacle to backside in alternate bands. Thereafter, the stick or ball is held before the fire and with the help of a needle extraordinary colourful designs are made on them. those are then unexpectedly rolled on a groovy and clean surface. Making of lac bracelets additionally consists of tricky steps.

Pandharpur being a holly area and the dwelling house of Lord Vithala, pilgrims go to Pandharpur and women depart wearing bangles as a part of a holy ritual. Lac bangles with appealing colours and cultural styles have grow to be more elegant for these days's jet-set women. however, in Pandharpur, best conventional bangles are synthetic. keeping a check at the state-of-the-art traits from across the u . s . a . and the globe, the lac bangle-makers need to evolve to the current traits. There are around 30 bangle producers in Pandharpur, who have been manufacturing them via the identical traditional methods from 5 generations. it's far the primary source of income that helps their livelihood. Their popular of residing is as but now not upto the mark. if they foresee it as their future source of livelihood and intention to survive and at the equal time upgrade their widespread of living, they want to trade the technique of manufacturing.



Figure 1. Lac Bangles

The existing look at focuses one case take a look at at the trade in livelihood of bangle manufacturers with the aid of automation and modernization of these industries by means of considering the monetary aspects. commercial enterprise difficulty needs finance to satisfy their requirements in the monetary global. Any kind of commercial enterprise hobby depends at the finance. subsequently, it is called as lifeblood of enterprise enterprise. whether the enterprise worries are massive or small, they want finance to fulfill their business activities.

II. TRADITIONAL PROCEDURE OF LAC BANGLE MAKING

Amid this procedure the, Lac pieces are initially liquefied in a shallow vessel or kadai. When it is in a semi-liquid state, Pevedi (yellow) powder, and shading are added to it. The blend is mixed consistently. The shaded lac is presently stuck on the end of a wooden stick.



Figure 2. Ranzha , Lac , Pevedi

The lac (without shade) stuck around a wooden pole is warmed gradually over the coal burner or angethi. It is at the same time squeezed with a stone or a wooden apparatus called hattha at consistent interims. When it is adequately warm and delicate, it is wrapped with the fancied shading by rubbing the hue lac stick on it uniformly. For this reason the shaded lac stick additionally must be sufficiently warm and is along these lines warmed over the burner. After the shading has been connected to the lac base it is molded into a meager loop with the assistance of hattha and cut off from the plain lac pole. Heating the uncolored lac then uncolored lac squeezed with hattha; Rubbing the hue lac. The loop is warmed over the burner so that the closures can be joined together to shape a bangle. In the wake of being gone along with it is snuck past a round wooden pillar (with a decreasing end for various sizes) and balanced for size.

The bangle is prepared to be decorated with sequins, semi-valuable stones, and so forth. The sequins are put on a tin thwart and warmed over a burner. They are warmed with the goal that they can liquefy the lac surface on which they are put and stick there after cementing. They are grabbed each one in turn and stuck on the Bangle. The procedure requires awesome exactness. It takes any longer when working with littler estimated sequins.

However numerous detriments are there for uniform blending of crude material by physically to make LAC bangles, in this procedure includes numerous disadvantages are as recorded as follows:

- For blending these crude materials, talented laborer is required
- He needs to take heaps of endeavors for uniform blending of crude material.

- Due to exhaust wellbeing issue jumps out at the administrator.
- Excess warmth can change the property of crude material.
- Less security for the administrator as encompassing is dangerous.



Figure 3. Manually mixing of raw material.

III. LAC BANGLE MANUFACTURING THROUGH PARTIAL AUTOMATION

At the present situation, in Maharashtra lac bangles are second most worn sort of bangles after glass bangles by ladies. The lac bangle industry is growing a great deal in India and it supplies widely to the entire India and additionally to the entire world. The Study was done in the condition of Maharashtra where Solapur Region Pandharpur Town was picked as study area in light of the presence of the lac ventures.

There are around 30 bangle makers in Pandharpur, who have been assembling them by the same customary strategies from five eras. It is the principle wellspring of pay that backings their employment. Their way of life is up 'til now not upto the imprint. On the off chance that they forsee it as their future wellspring of vocation and mean to survive and in the meantime update their way of life, they have to change the technique for assembling. In order to, empower them to contend with the standard of bangles from Hyderabad, and to satisfy the desires of clients of Choodi Bazaar.

They contribute altogether to the occupation of the general population;

- They are moderately since quite a while ago settled throughout the years and are mechanically immature.
- They are among the more mainstream artworks and along these lines have a gigantic improvement potential.

Blending is the procedure to blend the liquid and powder to disintegrate the powder completely in given blend and shape a uniform item. The stirrer of routine machine pivots in one bearing just which makes a specific stream design in the liquids subsequently the particles tend to adhere to the dividers of compartment attributable to the divergent constrain as opposed to blending altogether in blend, eventually comes about into low quality blend of liquid there by low quality yield of liquid.

To defeat the above disadvantages and expand the generation quality by presenting programmed blending gadget with particular heating course of action was created. Keeping a beware of the most recent patterns from the nation over and the globe, the LAC bangle-creators need to adjust to the present day patterns. The present study concentrates on the adjustment in work of bangle producers via automation and modernization of these businesses. Current work concentrated on configuration and advancement of planetary stirrer with controlled heating course of action for the LAC bangles fabricating. Primary point of this work is to decrease human endeavors required in LAC bangles fabricating by building up a gadget which is utilized for uniform heating and blending of crude material.



Figure 4. Early trials of planetary stirrer.

For this situation investigation of Pandharpur automation is done in first operation of lac blend, taking after results are watched while doing Examination of traditional and mechanized crude material blending operation :

Sr. No.	Parameters	Conventional Mixing	Automated Mixing
1.	Time required	30 Minutes	15 to 18 Minutes
2.	Labour Efforts	More	Less
3.	Production	Less	More
4.	Type of Labour	Skilled	Semi Skilled
5.	Labour Cost	More	Less
6.	Overall Cost	Less	More

IV. CONCLUSION

In the wake of leading trials by lac bangle fabricating unit with planetary stirrer taking after conclusion can be drawn.

1. Uniform heating and blending of LAC is conceivable with planetary stirrer.
2. Enhanced productability : By changing over the conventional assembling industry into large scale manufacturing industry with the same labor higher yield can be accomplished. This will build deals and there by improve their procuring.
3. Lessening in human endeavors : It diminishes physical labour and time which can be utilized for different exercises of creation.
4. Lessening in labor cost because of motorization : The supplies utilized as a part of customary assembling of the bangles are unrefined and intensely rely on upon the expertise of the specialists. In this way, the proprietor is reliant on talented labor. These types of gear can be changed over into large scale manufacturing hardware which does not rely on upon aptitude of the artisan/specialists.
5. Diminishment in Expenses of Generation : In conventional lac bangle producing the inexact expense of crude materials like coal and Wood (Rs.20 per cycle), Talented work (Rs.300 every day) is acquired, where as in halfway mechanization just cost of power 1 unit for each cycle (Rs.8) and untalented work (Rs.250) is brought about. Bringing about sparing of Rs.62 per cycle.
6. Enhanced profitability: Because of expansion in the profitability it is conceivable to acquire benefit in the bangle business which is useful in surviving the present business sector situation.

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