

Fully Automatic Organic Sanitary Pad Manufacturing Machine

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Abstract: *The problem of improper disposal of menstrual secretions is an obstacle in achieving the goal of our 'Swacha Bharat' mission to make India clean. This waste is problematic for many reasons. A pile of napkins laden with disease-causing bacteria poses a danger.*

Women are safe, but they are unaware. It's one of the best ways to work without creating one. This action must be taken to address the problems that napkin use creates for health and the environment. It is an industrial textile used. Sanitary napkins are layered because they have to meet different end-use properties simultaneously. For this study, her 500 women from different parts of Turkey were examined in detail.

The first part of the survey asked respondents about their expectations for sanitary napkins, their perceptions of sanitary napkin performance characteristics, and problems with current sanitary napkins.

We also collected information to design innovative and functional sanitary napkins.

Current sanitary napkin preferences, usage habits and the effectiveness of product promotions were also analysed to inform companies in this sector.

As a result, we found that women pay attention to order less sanitary napkins that are pleasant to the touch, in addition to being dry and absorbent.

The most common problems with pads today have been leaks, orders, and the need for frequent replacement. In parallel, the most desired functional property of new sanitary napkins was antibacterial activity. There were some statistically significant differences in women's expectations, sanitary napkin selection factors, and problems across age groups.

Sanitary napkins are technical textile products used by women to hygienically collect menstrual fluid during menstruation. Sanitary napkins are layered because they have to meet different end-use properties simultaneously. For this study, her 500 women from different parts of Turkey were examined in detail.

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We also collected information to design innovative and functional sanitary napkins. Current sanitary napkin preferences, usage habits and the effectiveness of product promotions were also analyzed to inform industry players.

As a result, we found that women are paying attention to sanitary napkins that are odorless and soft to the touch, in addition to being dry and absorbent. The most common problems with pads today have been leaks, odors, and the need for frequent replacement. In parallel, the most desirable functional property of new sanitary napkins is antimicrobial activity. There were some statistically significant differences between women's expectations, sanitary napkin selection factors, and problems across age groups.

Keywords: Sanitary Pad

I. INTRODUCTION

Waste disposal is a growing concern in India as the plastic used in sanitary napkins is non-biodegradable and poses risks to the environment and health.

This impact is made more pronounced by the way neighbor hoods are constructed, solid waste disposal and management, and transport networks in villages and towns.

Another big problem with sanitary waste has always been its classification. That is, plastic or biomedical waste. On the other hand, the Biomedical Waste Management Regulation advises that products such as contaminated casts, bandages,

cotton wool, bandages, and bedding are waste and should be microwaved, autoclaved, or incinerated to kill pathogens. The lack of interest in waste prevention in our country is reflected in the fact that there are no statistics on this issue. Waste management is essential as there is little documentation on waste management in this area.

The pad belongs to the disposable sanitary products belonging to technical textiles, as it is made of functional fiber materials. There is a large market for sanitary napkins as nearly half of her world population is made up of women and all women experience menstrual bleeding during the fertile period.

The sanitary napkin market will maintain its size until new technology is developed that makes it easier to use, more accessible, more hygienic, and more convenient. Sanitary napkins are manufactured in a layered structure because they must simultaneously satisfy various properties such as absorbency, leak prevention, and wearing comfort. These layers include textile and film structures (Fig. The top, body-contacting layer is the topsheet.

The top sheet material is polyethylene film or spun bond polypropylene fabric. The Absorption Distribution Layer (ADL) lies below the top sheet and distributes menstrual flow along the sanitary napkin and transfers it to the underlying absorbent layer. ADLs can be made from air laid wood pulp batts or multicomponent structures made from woodpulp and synthetic fibers. Absorbent layers are typically composed of wood pulp and superabsorbent polymers. Can be made by air laid different configurations.

The bottom layer, or back sheet, is usually an impermeable film.

ADL and absorbent layer are made of non-woven fabric.

Menstrual hygiene remains one of the most challenging development problems today,

Misinformation, myths, and taboos create the illusion that pregnancy is black, disgusting, and bizarre, but that Indian women and girls often lack access to sterile substances and sanitary pads, which are necessary for hygiene care, are wonderful. ?

A study by AC Nielsen shows that only 12% of Indian options are like ash in cloth or sand in husks. 70% is common among these girls.

The lack of interest in waste management in our country is reflected in the lack of statistics on this issue. Management documentation is scarce in the region and waste management is critical. The study, titled "Hygiene protection: well-being for every woman," estimates that only 12% of 335 million girls have access to it. Environment Portal to Earth estimates that 432 million pads are discarded each month.

Their loved ones cannot afford them, and 88% of women use sand, rags, or cloth to manage their flow. , indicating the need to reduce costs.

1.1 Advantages

- Organic
- Comfortable
- High Hygiene

1.2 Applications

With the help of these machines, women can easily access sanitary napkins at workplaces, schools, colleges, bus stations, airports, hospitals, shopping malls and other public places. These machines care about privacy, cleanliness, health and hygiene.

II. CONCLUSION

In this study, expectations for sanitary napkins, perceptions of sanitary napkin performance characteristics, requirements for functional characteristics, and usage habits of 500 Turkish women were evaluated in detail.

The main performance requirements for sanitary napkins are absorbency, leak resistance, dry feel, soft finish and odor control. Moisture, leaks, and the need for frequent replacement were the most common issues for respondents.

Although the use of superabsorbent polymers improves the absorbency and leakproofness of sanitary napkins, conventional sanitary napkins are not sufficiently dry and leakproof.

Therefore, further research needs to improve the gelling properties of the absorbent layer, and some research should also be done on the moisture management properties of the top layers, namely the topsheet and the intake distribution layer. Moisture and dampness in the genital area are known to cause skin irritation and dermatitis .

Research shows that women prefer sanitary napkins with higher performance, so they can spend more money on better choices. In addition, there were statistically significant differences in the ratings of some statements, depending on the age group of the respondents.

B. Leakage prevention and evaluation of vanes as performance criteria. In addition, the survey results indicated that the most important functional addition to sanitary napkins is antibacterial properties.

This property may contribute to odor control. Respondents did not like to put perfume on their sanitary napkins to mask the odor, but wanted an antimicrobial system to fundamentally solve this problem. Care should be taken to avoid deterioration of skin flora.

Therefore, the absorbent sheet can be targeted to impart antimicrobial properties to inhibit the growth of menstrual bacteria rather than the topsheet in contact with the skin. Given the useful life of sanitary napkins, value for money should be carefully considered.

Another issue highlighted by this survey is that respondents lack confidence in their sanitary napkins. They believe sanitary pads may contain harmful chemicals that can damage the skin. That's why they want to use natural sanitary pads.

This is believed to have something to do with the increasing promotion of organic sanitary napkins on TV. Although there are some studies in the literature indicating that sanitary napkins contain harmful dioxins [31, 32], these studies are limited.

Further research is needed to determine whether levels of these substances are harmful to health. In order to make the right decisions in this regard,

we need to compare the resistance to bacterial growth, comfort level, need for pesticides and chemicals, environmental damage, and extinction duration of both natural and synthetic sanitary napkin raw materials.

According to findings, the frequency of pad replacement varies with the menstrual cycle. The joint frequency can be evaluated from various perspectives. The first perspective concerns waste pollution. Surveys show that most sanitary pads are wrapped in insoluble coverings or plastic bags and thrown away.

Therefore, even if the sanitary napkin itself is made of biodegradable material, frequent replacement will increase the waste burden. For this reason, manufacturers of biodegradable sanitary napkins recommend making cover cases from biodegradable materials, taking women's usage habits into account. On the other hand, long-term use of sanitary napkins (eg, 12 hours or more) is also assumed.

III. FUTURE SCOPE

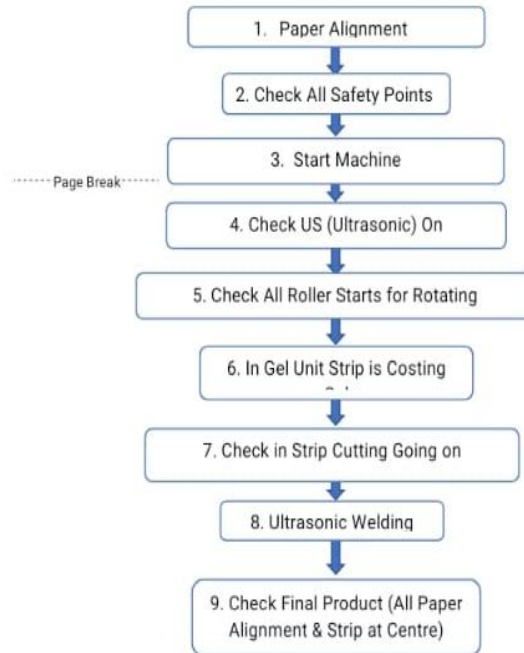
Feminine hygiene is of utmost importance and must be maintained. Indian women are still reluctant to buy pads from medical supply stores or even dispose of used pads.

This problem was solved by the production of internal combustion engines. This project offers a solution to destroy napkin waste in a very hygienic way.

These systems also help fulfill the mission of 'Swachha Bharat' and avoid numerous diseases.

Napkin disposers can also be manufactured and incorporated into vending machines, thus dispensing and disposal in a single unit. You can do.

Flow chart:



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