

VARIOUS TECHNIQUES OF CONVERTING AND UTILIZATION OF CURRENCY NOTES WASTE IN INDUSTRIES

- [1] Dr. A. G. Matani, Associate Professor- Mechanical Engineering, Government College of Engineering, Amravati – 444604 [M.S.] India, Email: dragmatani@gmail.com, ashokgm333@rediffmail.com
[2] Premesh P. Bhatkar, 2nd Year M.Tech. [Thermal Engineering], Government College of Engineering, Amravati – 444604 [M.S.], E-mail: premesh_bhatkar0612@gmail.com
[3] Mohd. Sohail Ansari, 2nd Year M.Tech. Production, Government College of Engineering, Amravati – 444604 [M.S.], Email: ansari10sohail@gmail.com
[4] Ashish Mali, 1st Year M.Tech. Thermal Engg, Government College of Engineering, Amravati – 444604 [M.S.], Email: ashishmali04@gmail.com

Abstract

Recycling is not an obligation, but rather it is a way of living for a sustainable future. In today's competitive world, manufacturers create low cost products resulting in less product life, thereby generating huge amount of waste, which harms our nature & environment. To fulfill the same '7R', effective tools for recreation & long lasting life of products is utilized.

** Research – Devising ways to convert 'Waste' into 'Resource'

** Renovate – Modification of 'Waste' into 'Resource'

** Reduce – Waste Minimisation by appropriate techniques

** Reuse – Innovative use of 'Waste' as 'Green Products'

** Recycle – Converting to value added end products

** Recover – Energy and Product recovery through conversion.

** Recharge – Conserve our most precious renewable resource

This paper explores the potential of currency waste utilization towards environmental protection in India

Keywords: Banknote Destruction, Disposal, and Recycling, Banana fiber, biotechnology in processing of shredded currency waste

Various Techniques and Mechanisms of converting soiled currency notes into usable products

Money may not be growing on trees, but it certainly can be used as a substitute for wood. An Indore-based company is set to use soiled notes for making furniture and doors. After many failed attempts to recycle waste currency notes into eco-friendly material, Rajratan Technique and Technology, Indore has finally cracked it. It has succeeded in recycling waste currency notes into eco-friendly sheets. These sheets, like plywood, can be used to make doors and furniture. The eco-friendly sheets, 32 sq ft in size, will be waterproof. So far, soiled notes have been used to make trays, coasters and paper weights. The Reserve Bank, in accordance with the pace of demand

for banknotes, tries to ensure a steady supply of clean banknotes as per its Clean Note Policy. It also continues its efforts to strengthen the security features of banknotes and enhance public awareness of banknotes, for which it has initiated various sensitization programs.

Soiled and unfit banknotes were removed from circulation and disposed of in an eco-friendly manner by shredding and briquetting them. In order to prioritize the detection of counterfeit notes in the system, banks were directed to enhance their use of technology. The government has initiated the process of selecting new features for the next series and the Reserve Bank is actively associated with this activity. Simultaneously, the Reserve Bank initiated the process of reviewing the banknote designs in consultation with the Government. To promote a reporting system for counterfeit notes, the administrative and legal procedures are being simplified. Further, as part of its Clean Note Policy, the Reserve Bank has been exploring alternatives for enhancing the life of banknotes, such as plastic notes, which will be introduced on a trial basis in select Indian cities.

Conclusions

The Navsari Agriculture University (NAU) in Gujarat has standardized a process of manufacturing high value paper from Banana fiber, which it claims has the property of making currency notes lasting for about a Century. The paper has been tested in the Central Institute for Research on Cotton Technology. During the research, it was found that paper made out of this fiber has shelf life of over 100 years as it is the strongest of the long fibers ever found amidst natural fibers. It can be folded for as many as 3,000 times. This fiber has the potential to find application in making of the paper required for the printing of currency notes and other valuable documents.

References

- [1] Ahmed Yehia, Khaled E. Yassin, Alaa Eid (2017), Recycling of shredded currency waste of Egyptian Central Bank for making good-quality papers, *Journal of Separation Science & Technology*, 53(3), 544-550.
- [2] Chauhan, S., Khan, M.E., Sharma, A.K., and Jain, R.K. (2008), Enzymatic pulping of shredded currency waste : A potential fiber resources for handmade paper industry , *Proceedings of National Conference on Application of Biotechnology in Sustaining the Environment*, Indian Science Congress Association Jaipur 5-6th Feb. 2008, 1--16.
- [3] Dr. Ashok G. Matani , Dr. S.K. Doifode (2015), Effective industrial waste utilization technologies towards cleaner environment, *International Journal of Chemical and Physical Sciences*, 4(2), 536-540.
- [4] Johnny Bolden, Taher Abu-Lebdeh and Ellie Fini (2015), Utilization of recycled and waste materials in various construction applications, *American Journal of Environmental Sciences*, 9(2) , 14-24.