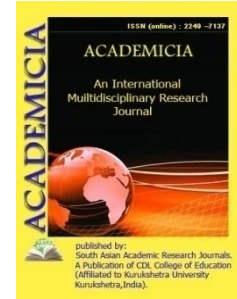




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AN EVALUATION OF THE STATE OF ELECTRONIC TRASH RECYCLING METHODS

Mr. Jitendra Kumar Singh Jadon*¹; Rajkishor Singh²; Mr. Anil Kumar***³**

^{1, 2, 3}School of Electronics,
 Electrical & Mechanical Engineering, Faculty of Engineering and Technology,
 Shobhit Institute of Engineering and Technology,
 (Deemed to be University), Meerut, INDIA
 Email id: jitendra@shobhituniversity.ac.in ²rajkishore@shobhituniversity.ac.in
³anil.kumar@shobhituniversity.ac.in

ABSTRACT

As the usage of electrical and electronic devices grows, so does the amount of electronic trash produced (e-waste). It is the quickest. The world's increasing garbage stream Printed circuit boards are an integral component of almost all electrical and electronic devices. Improper disposal of these electronic trash may put human health and the environment at risk. On the contrary, the effective management of this trash requires a well-thought-out plan for waste awareness, collection, recycling, and reuse. These days, the effective trash recycling has long been seen as a major problem for any community. Circuit boards (PCBs) (PCBs). Many electronic businesses rely on precious heavy metals and hazardous halogenated organic compounds, which are abundant in these rocks. In this case, the makeup of various PCBs, as well as their hazardous consequences, are addressed in this article. There are a variety of recycling methods in use today. The most significant metals from e-metallic waste's fractions are shown. Metals may be recovered from e-waste once it has been processed. Physical separation through pyrometallurgical, hydrometallurgical, or biohydrometallurgical methods is also addressed, as well as biohydrometallurgical separation.

KEYWORDS: *End-Of-Life (EOL), Electronic Waste (E-Waste), Infrastructure, Materials Recovery, Recycling.*

REFERENCES:

1. S. Ottewell, "Processing packaging plastics," *Chem. Eng.*, 1990.
2. J. chun Lee, H. T. Song, and J. M. Yoo, "Present status of the recycling of waste electrical and electronic equipment in Korea," *Resources, Conservation and Recycling*. 2007, doi: 10.1016/j.resconrec.2007.01.010.
3. L. Zhang and Z. Xu, "A review of current progress of recycling technologies for metals from waste electrical and electronic equipment," *Journal of Cleaner Production*. 2016, doi: 10.1016/j.jclepro.2016.04.004.
4. E. Alvarez-de-los-Mozos and A. Renteria, "Collaborative Robots in e-waste Management," *Procedia Manuf.*, 2017, doi: 10.1016/j.promfg.2017.07.133.
5. D. Beverungen, R. Knackstedt, and O. Müller, "Developing Service Oriented Architectures for Product-Service Systems -- A Conceptual Approach and its Application for the Recycling of Electronic Equipment," *WIRTSCHAFTSINFORMATIK*, 2008.
6. R. Wang and Z. Xu, "Recycling of non-metallic fractions from waste electrical and electronic equipment (WEEE): A review," *Waste Management*. 2014, doi: 10.1016/j.wasman.2014.03.004.
7. S. N. M. Menikpura, A. Santo, and Y. Hotta, "Assessing the climate co-benefits from Waste Electrical and Electronic Equipment (WEEE) recycling in Japan," *J. Clean. Prod.*, 2014, doi: 10.1016/j.jclepro.2014.03.040.
8. P. Chancerel and S. Rotter, "Recycling-oriented characterization of small waste electrical and electronic equipment," *Waste Manag.*, 2009, doi: 10.1016/j.wasman.2009.04.003.
9. C. P. Cheng and T. C. Chang, "The development and prospects of the waste electrical and electronic equipment recycling system in Taiwan," *J. Mater. Cycles Waste Manag.*, 2018, doi: 10.1007/s10163-017-0612-6.
10. S. Zhang, Y. Ding, B. Liu, D. Pan, C. chi Chang, and A. A. Volinsky, "Challenges in legislation, recycling system and technical system of waste electrical and electronic equipment in China," *Waste Manag.*, 2015, doi: 10.1016/j.wasman.2015.05.015.