

Waste Segregation for Society

Prof.sandeep Gore

Shubham pimpale#1, Shardul jagadale#2, Rohit kolhe#3, Vinit Pethe#4

Dept. Of Mechanical Engineering

Nutan Maharashtra Institute of Engineering And Technology, Talegaon Dabhade, India

Abstract

Waste segregation is an important component in waste management claim as make is possible to realize effective reuse recycling and recovery. Segregation at the source is the key in solid waste management, when we have limited economical resources. Lack of awareness, loosely implementation of laws and various other reasons are obstacles are achieving appropriate results. waste management should be sustainable as well as economically. In a developing country like India, it's very important to have an effective waste management plan.

India face problem associate with waste generation, waste collection, treatment and disposal. current state volume waste generation due to increase population it effects on the environment to waste management system useful resources within economy generate from landfill methane extract from this process.

Key world -waste segregaion

practices. By segregating waste, individuals and communities can reduce the amount of waste sent to landfills, minimize the release of harmful chemicals and greenhouse gases into the environment, and conserve natural resources by recycling and reusing materials.

Furthermore, waste segregation can also promote community involvement and raise awareness about the importance of environmental protection. When individuals take responsibility for their waste and participate in waste segregation initiatives, they become more conscious of their consumption habits and can take steps to reduce waste generation.

Overall, waste segregation is a crucial practice for promoting sustainable waste management practices and protecting the environment. By introducing waste segregation to society, we can promote responsible waste management practices, conserve natural resources, and reduce the environmental impact of waste.

Introduction

It is necessary to make system cost effective o reduce cost and high effective and convenient to use the wase segregation help to separate he waste int liquid, solid, iron, other magnet iron ,plastic waste.

Waste segregation is the process of separating different types of waste materials at the source of generation, such as households, commercial buildings, and industrial facilities. The aim of waste segregation is to facilitate recycling, composting, and proper disposal of waste, which in turn reduces the environmental impact of waste and conserves natural resources.

Introducing waste segregation to society is crucial for promoting sustainable waste management

Literature Review

Author Naur Khaliesah Abdul malik et.al[2015] has been study the 'community participant on solid waste segregation through recycling programs in Putrajaya' in which The community participation level in use programs within the whole space of Putrajaya was vital with the community perspective and their data on waste segregation. The finding results can be utilized by the assorted stakeholders to review and improve policy or enforced use programmer. Future analysis may explore the effectiveness of education tools as a turning purpose.

Author Cherry Agrawal et.al[2019] has been learning 'automation of waste segregation

management 'in which we focus Due to large population of word large amount of waste generated every day hence the increase the requirement for efficient process of waste management. required less power and no human supervising. hence study effective procedure separation and solved challenging problem.

Author Nimisha Gupta et.al [2011] has been work on 'automatic waste segregation' in which we work on theWaste management colleting process of collection segregation with the help of automatic sensors like ultrasonic and many more to manage the waste gradually. In these we review the types of sensor.

Author Tunmise Oititojuno et.al [2014] has been research on 'Automated waste segregation system using machine learning a compressive analyses' in which research on the Various step and method used effect management and disposal all these garbage and waste device work maximum capacity classify material from and various forma iron garbage hence it is easy to recycle waste into various category

Author Myra G et.al [2019] has been study on automatic 'waste segregation system using machine learning 'a compressive analyses has been research on Various step and method used effect management and disposal all these garbage and waste device work maximum capacity classify material from and various forma iron garbage hence it is easy to recycle waste into various category

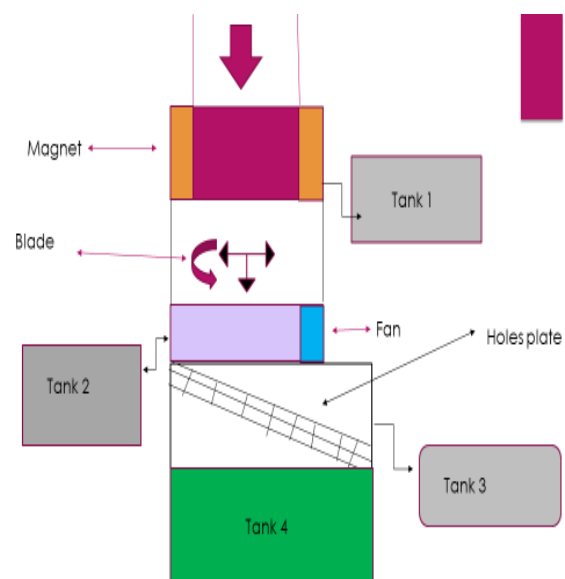
Author Vella Atienza et.al [2011] has been focus on waste management system in Philippine ;initiative to promote waste segregation and recycling through good governance' has been research on The creation and implementation of policies is a very important component in handling the various problems and considerations within the governance of solid waste. The absence of policies will impede or limit enhancements in garbage pickup and postal (Ocean 2001, 2002, 2003, 2004).

Author G. Saisushant et.al[2020] has been study on 'garage waste generation using deep learning technique 'in which research on Recycling could be a important development in an exceedingly healthy and inexperienced surroundings. With raising awareness among the voters of Republic of India concerning the importance of exploitation exercise things to decrease the consumption of natural resources and disposal, the exercise trade is booming. People are willing to use a lot of recycled merchandise and conjointly contribute their half to the society by confiscating their waste to recycle

Author Nithi Aayog et.al [2019] has been study on 'promoting behavior change for strengthening at source' has been working on Study the challenges occur in waste segregation and discuss how effectively work on it and how to solve the problem and discuss various problem yet not be solve up to date and also developed the invention to recycling behaviors and how effectively apply on it.

Author Maria Carman Carner et.al [2020] has been study on 'waste segregation FEMA model integrating intuitionistic fuzzy set and the paprika method' has been working on Study the Study the challenges occur in waste segregation and discuss how effectively work on it and how to solve the problem and discuss various problem yet not be solve up to date and also developed the invention to recycling behaviours and how effectively apply on it

Working layout



Material selection

Serial no	material	component
1	Ms steel	Body of the project
2	Magnetic coil	Used for electromagnet

Purposed layout

Process 1-2: -magnet catch the iron particles.

process 2-3: -Blade moving and removing the outer cover of the mix waste

Process 3-4:-Fan remove the plastic to another side tank.

Process 4-5: -There are holes which separate the waste

Process 5-6; The waste material goes into the tank

Electromagnet

1.Coil: The coil is the most essential part of an electromagnet. It is made up of a length of wire wrapped around a core material such as iron. When an electric current flows through the wire, it creates a magnetic field.

2. Core: The core is the material around which the wire is wrapped. It can be made of ferromagnetic materials such as iron or steel, which are good at conducting magnetic flux.

3. Power source: An electromagnet requires an external power source to create a magnetic field. This can be a battery, a DC power supply, or an AC power supply.

4. Switch: A switch is used to turn the electromagnet on and off. It can be a simple mechanical switch or an electronic switch.

5. Magnetic field sensor: A magnetic field sensor can be used to measure the strength and direction of the magnetic field created by the electromagnet.

6. Housing: The housing is the enclosure that protects the electromagnet and its components. It can be made of plastic, metal, or other materials.

7. Cooling system: Some large electromagnets generate a lot of heat, which can damage the components. A cooling system such as

a fan or a liquid cooling system may be needed to keep the electromagnet operating within safe temperatures.

8. Control circuitry: In some applications, the electromagnet may require control circuitry to regulate the current flowing through the coil and control the strength of the magnetic field

RESULT

separation of waste it necessarily make standard process improve efficiency make simple design process and reduce cost of the product and also reduce time

Conclusion

waste separation is crucial for society in many ways. It helps to reduce the amount of waste that goes to landfills and incinerators, conserves natural resources, and reduces the environmental impact of waste. By separating waste at the source, it becomes easier to recycle materials and recover valuable resources.

Moreover, waste separation helps to improve public health and hygiene by reducing the spread of diseases and preventing pollution. It also provides economic benefits such as job creation in the recycling and waste management industry, and cost savings for municipalities and businesses by reducing the amount of waste sent to landfill or incineration.

Overall, waste separation is an important practice that can contribute to a cleaner, healthier, and more sustainable future for society. It is important for individuals, businesses, and governments to work together to promote and implement waste separation programs, and to educate the public on the importance of proper waste management.

RESOURCES

1. Department of Statistics Malaysia. Demographic indicator; 2013.
2. Badgie D, Mohd Armi AS, Latifah AM, Azizi BM. Assessment of municipal solid waste composition in Malaysia: Management, practice, and challenge. *Pol J Environ Stud* 2012; 21(3): 539 – 547.
3. World Bank. Malaysia Economic Monitor: Smart Cities. Washington, DC: World Bank; 2011. Retrieved from <http://documents.worldbank.org/curated/en/2011/1/15508845/malaysia-economic-monitor-smart-cities>
4. Idrus MM, Mohd Baharudin R, Shahabudin M, Rashidah A. An overview of landfill management and technologies: A Malaysian case study at Ampar Tenang. 1st National Seminar on Environment, Development and Sustainability, Selangor, Malaysia; 2008.
5. United Nations Development Programme. Malaysia developing a solid waste management: model for Penang; 2008.
6. Department for Environment, Food and Rural Affairs. Good practice and regulatory guidance on composting and odour control for local authorities; 2009.
7. Burntley SJ. A review of municipal solid waste composition in the United Kingdom. *Journal of Waste Management*; 2007; 27 (10): 1274 – 1285.
14. Nur Khaliesah Abdul Malik et al. / *Procedia Environmental Sciences* 30 (2015) 10 – 14
8. Sujaudhin M, Huda MS, Rafiqul Hoque ATM. Household solid waste characteristics and management in Chittagong, Bangladesh. *Journal of Waste Management* 2008; 28: 1688 – 1695.
9. Cole C, Osmani M, Quddus M, Wheatley A, Kay K. Towards a zero waste strategy for an English local authority. *Resources, Conservation and Recycling* 2014; 89: 64 – 75.
10. Keramitsoglou KM, Tsagarakis KP. Public participation in designing a recycling scheme towards maximum public acceptance. *Resources, Conservation and Recycling* 2013; 70: 55 – 67