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Application of Interior Waste: Re-Using as an Interior Furniture Elements for Residence

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ABSTRACT:
Interior waste management is a crucial aspect of sustainable interior design. it involves the minimization of waste generated by interior design activities and the efficient use of resources. Waste minimization strategies include the avoidance, reduction and reuse of waste materials. Up cycling, which involves the creative reuse of waste materials to recreate functional interior spaces, is also an important aspect of interior waste management.
Sustainable interior design practices also emphasize the use of reclaimed and salvaged materials to minimize waste generated. Overall, effective interior waste management is essential for reducing the environmental impact of interior design activities and promoting sustainability.

KEYWORDS: Interior waste management, reuse materials, plywood waste, sustainable interior design.

INTRODUCTION:

Interior waste can be refers to the waste generated during the design , construction process in interior spaces, such as homes , offices and commercial buildings. Common types of interior waste includes materials like bricks, cement, wood, nails, tiles, ceramics, glass, wiring, fabrics, carpets, wall coverings, plywood, laminates and many more. Waste management is crucial for reducing waste and promoting sustainability in Interior Design. Waste management includes the various schemes to manage and dispose of waste, and it can be done by discarding, destroying, processing, recycling , reusing and controlling waste. The main objective of waste management is to reduce the amount of un-usable materials.

ENVIRONMENTAL IMPACT OF INTERIOR WASTE:

Waste can be dangerous for environment and human health. Improper handling and disposal of interior waste can lead to environmental pollution and degradation. This can include the release of harmful chemicals into the air or water, contamination of soil, and the depletion of natural resources. Deteriorating, damaged, or disturbed insulation, fireproofing, acoustical materials, and floor tiles can also release harmful chemicals. Mismanaged waste can also contribute to environmental degradation, affect public health, and contribute to climate change. Exposure to hazardous materials and pollutants from interior waste can lead to the respiratory issues, allergic reactions and other health problems. So that, the aim of waste management is to reduce the hazardous effects of such waste on the environment as well as human health. It not only protect the environment but also reduces the expenses for disposal of waste and saves on cost of a project.

INTERIOR WASTE MANAGEMENT STRATEGIES:

The key of these minimization strategies are Reduce, Reuse and Recycle [3R]. The Reduce , Reuse, Recycle [3R] concept is increasingly being popular and incorporated into interior design industry to promote sustainability and minimize interior waste.

These 3R which is Reduce, Reuse , Recycle concept is being applied in interior design as follows :

1. **Reduce:** Interior designer can reduce waste by using materials more efficiently. This can involve optimizing space and layout to reduce material usage and incorporating energy-efficient design.
2. **Reuse :** The key aspect of sustainable interior design is reusing materials. Designers can repurpose or reuse furniture and decorative items as well as incorporate antique and vintage decor into their designs. Additionally, recovered materials from demolitions or unused materials can be creatively reused. Those creative ideas gives them a new life in interior spaces.
3. **Recycle :** Another important strategy is recycling waste materials . Designers can use recycled materials like glass, plywood , metal and many more into their project . By incorporating recycled materials , designers can contribute to waste reduction and promote sustainability.

INTERIOR DESIGNER AND WASTE MANAGEMENT:

Interior designers can play a significant role in reducing waste and promoting environmental friendly practices within the industry. As a interior designer , one can use waste minimization strategies during the design , pre- construction phase, construction phase and finishing phase. Instead of demolishing or dissembling old furniture , interior designers can consider creative ways to up cycle or reuse existing furniture.

To improve quality of interiors, designers and architects are integrating recycled and reclaimed materials into their projects. By choosing the right materials and incorporating them into smart designs, designers can create beautiful, functional spaces while reducing the waste on site. An important way to make sure a space makes a minimal impact on the environment is by using eco-friendly, sustainable and responsibly sourced materials.

Designers can help to save money on waste management cost by adopting zero waste design principles and also improve the reputation of their own. In addition, the use of smart technologies and automation in waste management processes can improve efficiency and reduce human error.

CASE STUDY:

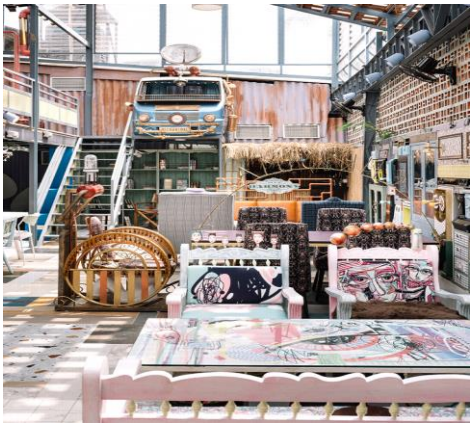
Several interior designer and architect have embraced the use of waste materials in their projects , creating sustainable and innovative spaces. here are some notable examples :

1. KAMIKATSU ZERO WASTE CENTRE, JAPAN / HIROSHI NAKAMURA :

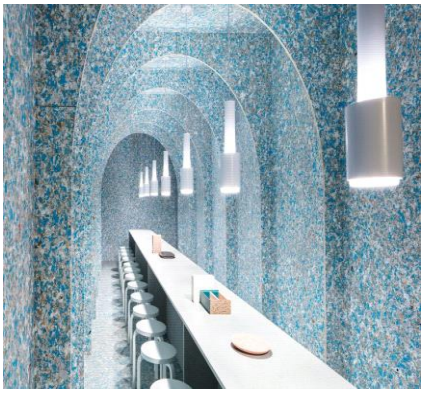
Architect Hiroshi Nakamura has created a facade made of 700 windows donated by the local community in the town of Kami katsu, the first place in Japan to pass a zero-waste declaration. The building's facades are made using timber offcuts and the fixtures were measured, repaired and fixed in a position, creating a seemingly random yet precise patchwork effect. In 2003, Kami katsu became the first town to issue a Zero Waste Declaration in Japan, which means that all waste produced by its residents is reused or recycled rather than being sent to landfill.

2. CIRCUS CANTEEN , INDIA / MULTITUDE OF SINS , BANGLORE :

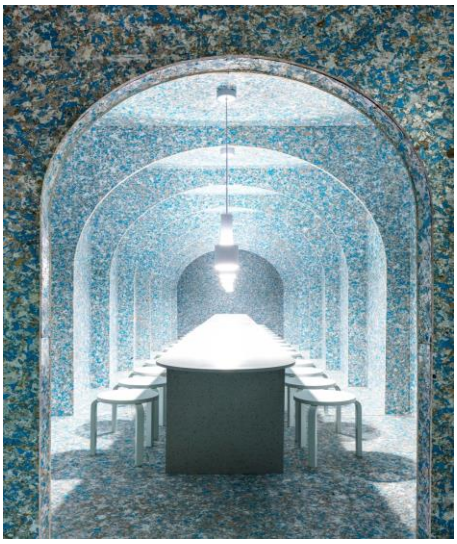
The Circus Canteen - designed by Smitha Thomas from Multitude of Sins, an interior design studio in Bangalore , features a collage of unwanted objects sourced locally , showcasing the potential of reclaimed materials in design. A farm-to-table bistro 'prioritizing nature, nutrition and livelihoods'. the canteen is designed and decorated with reclaimed materials. Collected from city-wide donation drives, dump yards and salvage markets, a multitude of eclectic objects like cassette tapes, DVD players, paint brushes, funnels, wheel rims, and a whole van furnishes the space with each table. The Circus Canteen gives a nostalgic trip inspired by unshackled creative expression.




3. ZERO WASTE BISTRO RESTAURANT / LINDA BERGROTH :



Designer Linda Bergroth designed, zero waste - Bistro restaurant by using entirely recyclable and recycled materials, using sustainable design pieces, Finnish furniture and tableware that comes from generation to generation. Each collaborator and partner was invited through the curating process and selected on the basis of their stake in sustainability. Zero Waste Bistro was designed on themes of circular economy, sustainable design and new material innovations.




FINDINGS :

We want some unique ideas for one of the partition on site for privacy purpose in kitchen. After discussing with client, we decided to reuse waste materials which was plywood and laminate pieces for making partition.

Here is the procedure of making partition using waste materials on site:

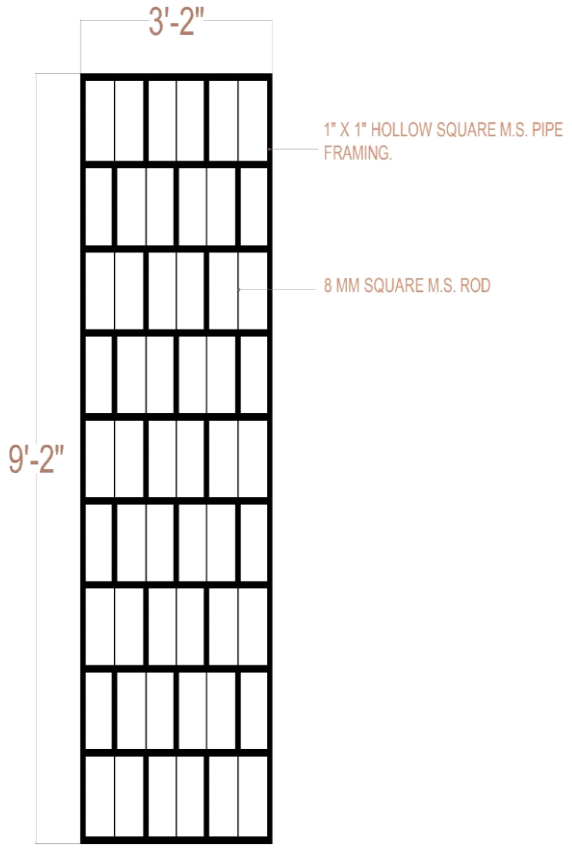
Materials used for partition are as follows :

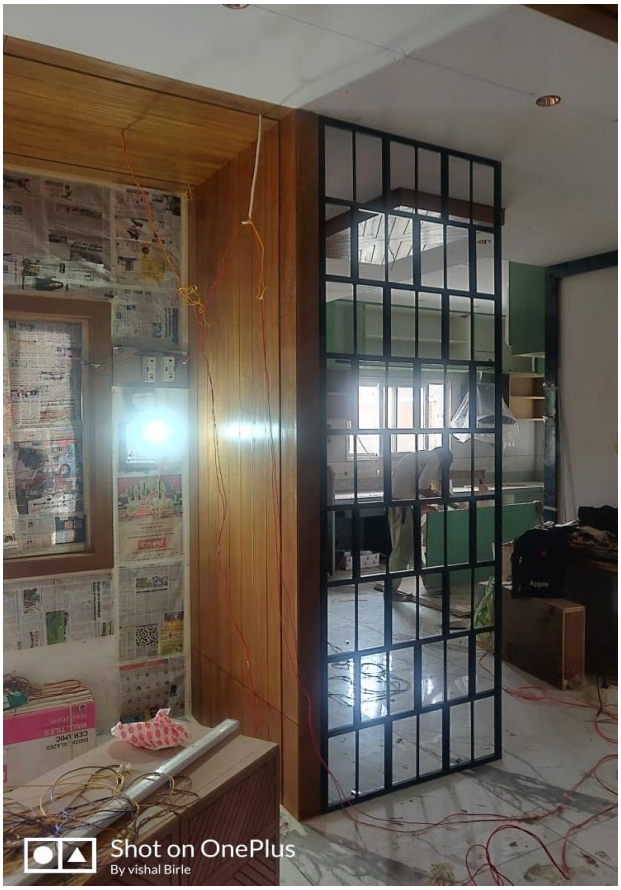
1. Hollow 1"x1" sq. m.s. pipe for framing.
2. 8mm thick m.s. rod.
3. 12mm waste plywood pieces.
4. Waste laminate pieces of different color.

We made framing of Hollow m.s. sq. pipe of 1"x1" by fabricator.

Also add 8mm thick m.s. rod in alternative manner as per design.

Black color powder coating is applied to the framing for finishing touch to it.

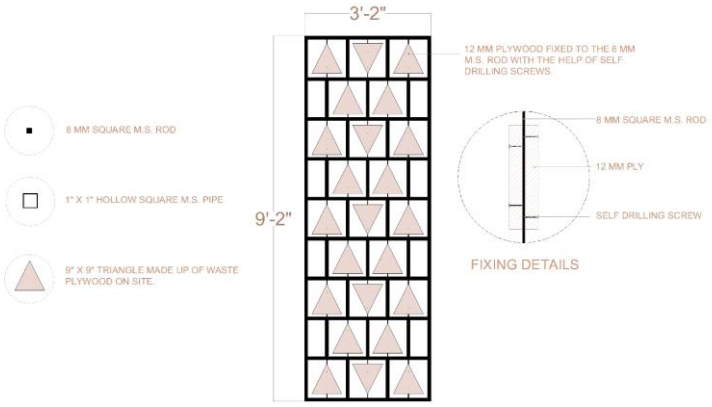




Waste plywood on site cut into triangle shape pieces of 9"x9" according to design.

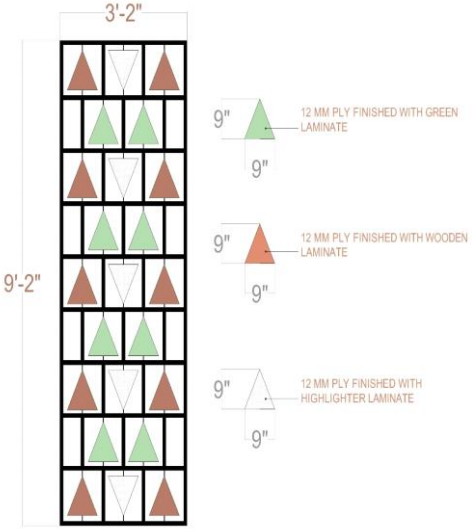
Total no. of pieces are 23.

Then, this plywood triangle pieces fitted to the 8mm m.s. rod with the help of self-drilling screws.



Now these triangle pieces are finished with 3 different types of laminates with the help of adhesive material.

after all finishing work is done, the partition placed in position on site.



CONCLUSION

Interior waste management emphasizes the importance of sustainable practices to achieve environmental sustainability and the health and well-being of occupants. Implementing effective waste management strategies can lead to cost savings, revenue generation, and a cleaner environment. Interior designers are encouraged to raise the level of environmental sustainability by using sustainable materials, encouraging reuse and recycling, and creating efficient design. This approach can lead to the reduction of material consumption and the use of recycled , up cycled and reused materials, ultimately contributing to a more sustainable future.

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