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Environmental Excellence : Integrating the Circular Economy

Trigger : "What is the right thing to do"

Is this just a checkbox for a compliance to attract customers or do we believe that this is our social responsibility ?

From a narrow focus on legal requirements to a broad commitment to ethical and sustainable practices which is visioned by the Top management, initiated by Middle Mgmt. and implemented by operation level members.

Unique concept : Our projects, which include plastic re-use, cardboard shredding for secondary packaging, and paint waste reprocessing into primer, are unique because they are designed for easy and scalable replication across all our sister companies and all organizations having these common applications.

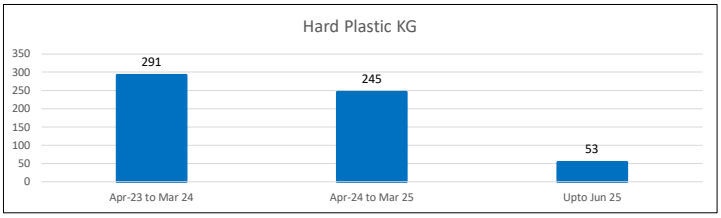
Major Milestone in our circular economy projects was successfully changing our suppliers' mindsets to prioritize sustainability. Collaborate and Co-develop Solutions. Integrate Sustainability into our Procurement Process.

1	2	3	4	5
Successfully closed the loop on plastic waste.	Elimination of Thermocol (Exp. Polystyrene - EPS)	Successfully transformed waste into valuable packing material	Pioneering a circular solution for paint waste conversion	Next waste - WOOD
November 2023	June 2024	January 2025	July 2025	

2

Successfully closed the loop on plastic waste with below projects :

We have implemented a robust re-use program, actively collecting all our empty copper wire spools and sending them back to our supplier, effectively eliminating plastic spool waste from our operations. By committing to this initiative, we've drastically cut down on our consumption of new plastic spools, directly contributing to lower plastic production and a reduction in our overall carbon footprint.



Monthly consumption : 100 spools needed per month (4 trips worth = Rs. 10000 each).

With around same no. of spools going back in the same vehicle which brings back the new spools in a month we save one way transport charges. Transport charges for an empty vehicle to collect the spools from supplier is saved. Direct reduction in the fossil fuels burned for transportation which reduces our carbon footprint

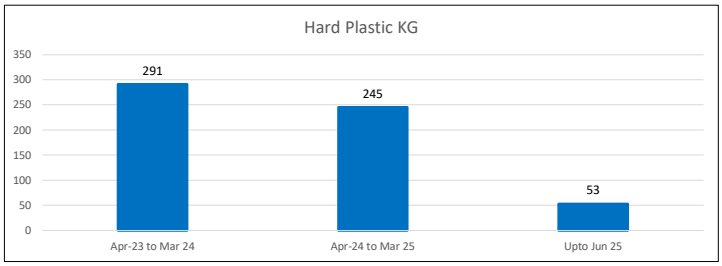
So, saving of 40k per month = 40 * 12 = 4.8 L per year.

3

Pioneered a zero-waste approach for flange coverings :

We have successfully implemented a comprehensive re-use program for all incoming flange protection coverings, ensuring that these valuable plastic components are returned to our suppliers and diverted from landfills.

This initiative has dramatically cut down on the amount of single-use plastic waste generated at our facilities, underscoring our commitment to environmental stewardship and resource conservation.



Monthly consumption : 2000 covers needed (4 trips worth = Rs. 10000 each).

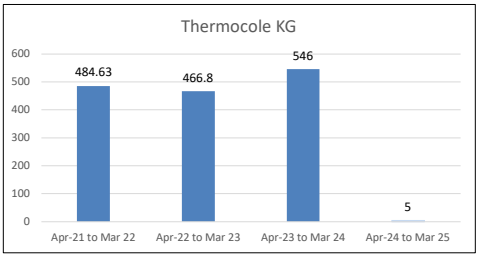
With almost same volume of covers going back in the same vehicle which brings back the new flanges, we save the one way transport charges.

So, again saving of 40k per month = 40k*12 = 4.8 L per year.

4

Elimination of Thermocol (Expanded Polystyrene – EPS)

We've successfully transitioned our raw material – converter casing packaging away from Thermocol (Expanded Polystyrene/EPS) for all shipments from our China-based suppliers, marking a significant step in our commitment to environmental responsibility. This initiative directly supports our broader sustainability goals by decreasing our carbon footprint associated with manufacturing and disposing of Thermocol packaging, demonstrating our dedication to a greener supply chain.



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Our teams have collaborated to create an efficient process for collecting, consolidating, and preparing these specialized bins for return, ensuring they reach our supplier in optimal condition for immediate refilling.

This program is a testament to our commitment to the circular economy, transforming what was once single-use waste into a continuously circulating asset, benefiting both our company and our supplier.

Monthly consumption : 26 bins needed per month (1 trip worth = Rs. 10000 each). Here, the commercials are initially set and negotiated with the supplier at a discounted price of 10%.

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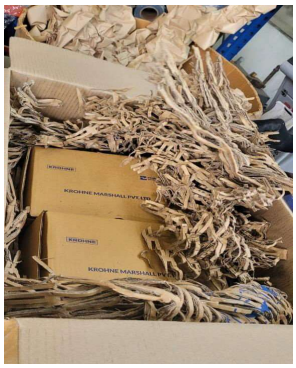


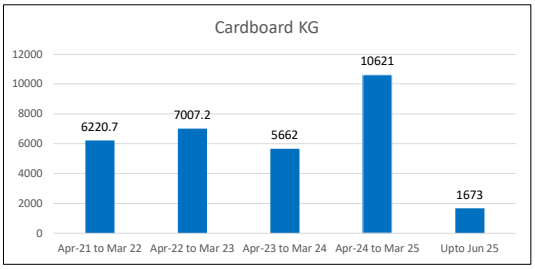
Transformed waste into valuable packing material: Our used carton boxes are now shredded internally to create high-quality, eco-friendly void fill and cushioning, which serves as our secondary packing material in the dispatch department.

Eliminated the need for virgin packing materials: By utilizing our shredded carton waste, we have completely removed the reliance on new, bubble wrap, virgin paper or other void fills, significantly reducing our material consumption and environmental footprint.

Beyond the obvious positive environmental impact of reducing waste and conserving resources, this program has also resulted in considerable cost savings by eliminating the need to purchase external secondary packing. materials.

Monthly consumption : 100 Kg of carton boxes shredded and used replacing void filler packing material (virgin paper) of worth Rs. 10000 in a month.

Other than minimal cardboard waste, we save transport charges for disposal of these carton boxes saving 1.2 L per year. Yes, however we do need a person for shredding which is done by the packing department every weekend.



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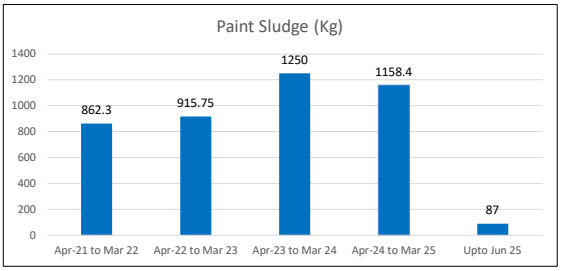
Pioneering a circular solution for paint waste: We are actively engaged in a cutting-edge sustainability initiative to transform our waste paint sludge, a challenging industrial byproduct, into a usable primer for our internal painting applications.

Our teams are currently researching and developing a specialized process to treat, purify, and reformulate the paint sludge, aiming to create a high-quality primer that meets our internal industrial specifications.

By successfully converting sludge into primer, we anticipate substantial reductions in both the volume of waste requiring external disposal and the procurement costs for virgin primer materials.

Yearly consumption : 800 Kg of paint sludge reported yearly is converted into quick dry primers of a good quality which are used in local painting within our organization.

That saves our 800 L primer cost for the year. Quickdry primer, 250/- per litre i.e. 250*800 = 2 L – 1.3L (transport and conversion charges) = 70 K



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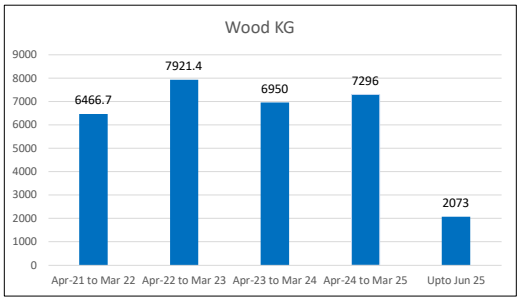
Upcoming Project – Wood waste

Reuse the inbound packaging wood for packing finished goods.

Each inbound delivery comes packed with **high-quality wood** which is sent to scrap after unpacking. At the same time, new wooden crates are purchased from external vendors to pack finished goods. Options we are chasing : **Re-construct/Re-use** these scrap wooden boxes OR **Wood Briquetting.**



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Challenges and Learnings Template

Challenges	Learnings
It's tough to change a company's culture; people resist new sustainable processes	Start small to build confidence and gather data before scaling up.
Circular economy initiatives need significant initial investment and are complex to implement.	By understanding the 'why,' engaged and trained employees become change advocates.
Re-processed materials lack consistent quality, which affects the final product's properties	Sustainability drives innovation and profit by transforming waste into valuable, new business opportunities

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measure the facts
measure
the facts
technology driven by KROHNE
Thank you, all !

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