

# Sterlite saves 60% packaging cost through returnable steel drums

Traditionally, wooden drums are used to transport power conductors & cables in India. To pack 1.1 MT of conductors pa (Indian market size), about 0.6 million trees are cut. To address this, Sterlite Technologies used returnable steel drums for packaging & transportation of its power products. The innovation has saved 32,000 trees in a year and slashed packaging cost by a whopping 60 per cent!

Sterlite Technologies (STL), an end-to-end power and telecom solutions provider, is the 7th largest manufacturer of Telecom and Power products & services globally. The company was facing transportation challenges for its power conductors and cables products due to wooden drums which are used for packaging. These products are sensitive to damage during handling, storage and installation. Any damage degrades product performance to the extent that replacement becomes necessary. Increasing product lines, recurring cost of drums, and increased packaging weight had generated the need to address the issue immediately.

## The packaging innovation

To solve this, Sterlite came up with the innovation of shifting packaging material from wood to steel with returnable model. Sterlite introduced a new approach to storage/shipments of power transmission conductors, combining packaging improvements



as well as switching from wooden drums, to steel drums. Since its inception, this initiative has helped the company reduce wood consumption, eliminate quality complaints due to fungus and nail damages to the product, and gain substantial savings on recurring cost of drums.

Sterlite also proposed its customers to shift packaging material from wood to steel with returnable model wherein, detailed study, analysis, and trials were conducted in the presence of the customers. After necessary trials and inspection, the company's major customer, PGCIL, approved usage of steel drum on returnable basis followed by private companies like Adani & Essar. Thus, all the shipments were moved to steel drum returnable model.

## Size optimisation for logistics efficiency

In view of the sturdiness of the steel drum, it is possible to select and standardise one drum size which is suitable for a range of loads and conductor lengths. Sterlite maximised the conductor/cable weight per drum and accordingly, worked towards increasing the standard length of conductor per drum.

The key factors such as conductor manufacturing machine capacity, load carrying capacity of the drum, transport efficiency optimisation for outbound drums by making the dimensions compatible with common truck and trailer sizes, handling capability of gross weight at site for unloading & stringing, availability of raw material like steel &

HDPE sheets, were critically evaluated before finalisation of drum dimensions and conductors with standard lengths & loads.

Additionally, Sterlite approached their customers to move from wooden battens to PP Sheet for outer covering of conductors. PP sheet is a new option for the replacement of wooden lagging. Extensive testing was done by Sterlite and the returnable steel drum came out as a usable packaging solution for safe delivery of Sterlite's products to the customers.

## Key benefits

Some of the major benefits include good impact and puncture resistance in case of mechanical collision, mechanical shock absorption without transfer to conductor, good ESCR-Long lifetime, impervious to climatic change or UV exposure, zero risk of deterioration and fungus formation, eco-friendly and recyclable upto 4 times, no risk of nail damage to conductors, fast unpacking at installation site, and easy refitting after part drum installation.

If this solution is replicated in the Indian power conductors' business, whose size is 1.15 MTPA, close to 6 lakh trees would be saved annually. Since implementation of sustainable packaging, Sterlite has saved nearly 32,000 trees a year. Also, due to size optimisation of all-steel drums, it is possible to select one drum size suitable for a range of loads and conductor lengths. This has resulted in minimal stocking of inventory as well. The company has won the Manufacturing Supply Chain Awards 2016 for the implementation of this innovation.

## Future prospects

With the successful implementation and positive response from Sterlite's customers, the company is aiming at 100% adoption of sustainable packaging across Sterlite's Optical Fibre Cable & Power Units further extending the ecological benefits of the innovation.

Caption: Sterlite's returnable steel drums are weather resistant, free from transit damage, and easily transportable at site as compared to wooden drums. Being recyclable, they have a scrap value as well.

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