Success Story
Machines & Systems

Higher Process Efficiency with Autoconer X6 and Preci FX

Arthanari Loom Centre Textile Pvt Ltd (ALC) is a renowned Indian textile mill for the manufacturing of yarn dyed fabrics, which was established in 1982. ALC's production process included yarn dyeing, weaving, fabric processing and finishing, with a dye house capacity of 22 to 24 tons per day. In order to be less dependent on yarn sourcing and for higher process efficiency, ALC inaugurated its first in-house spinning department in 2024 with ten ring spinning machines, linked to ten Rieter winding machines Autoconer X6 with the winding technology Preci FX. This replaces the procurement of approx. 12 tons of yarn per day.

The Challenge

If the yarns are purchased from the market as hard packages, they must be adapted for efficient further processing. Before dyeing, the hard packages were rewound into cylindrical dye packages, with a lower density and cropping (edge breaking) is required. After dyeing, rewinding into a conical package shape was necessary for efficient unwinding during warping/ weaving. To remain competitive in the demanding textile market, a faster response to customer requirements, greater process efficiency, and a reduction in labor and production costs were a must.

The Solution

It was clear to ALC, that they could produce the right yarns for faster availability in their weaving and finishing processes with their own ring spinning unit. Rieter supplied the winding machines Autoconer X6 and convinced the customer to invest in the drumless winding technology Preci FX. Preci FX enables pattern-free, process-optimized package design, for example round edges for dyeing packages, an excellent package build-up for easy unwinding, and a higher package content for economical downstream processing.

Individual process-optimized package design with Preci FX

The Customer's Benefits

Preci FX packages are the key to high economic benefits. No rewinding before dyeing is required. ALC calculates a cost saving of INR 5/kg/process step. With their daily production of approx. 12 tons of cotton compact weaving yarns, this means a saving of INR 21.72 million/per year.

The customer can produce dye packages with a weight of 1.7 kg with Preci FX, instead of purchasing dye packages with a weight of 1.65 kg. This means better utilization of the dyeing machines per dyeing process. In the end, this leads to savings of water, dyestuff and energy cost.

Unique to the drumless winding technology is the production of dye packages with rounded edges. This eliminates the need for the cropping process (edge breaking) before dyeing, thus saving the operator for this process. Even more important, however, is that yarn and package damage is avoided. The dyed packages can be unwound directly in their warping and weaving mill with maximum efficiency.

Thanks to the high-precision length measurement Ecopack FX, the weight variation between the packages is minimal. Yarn waste during warping has been reduced.

The Customer's Statement

"The investment in our own spinning unit enables us to drastically shorten our process chain. With Rieter's support, we benefit from lower operating costs, lower energy and water costs and lower labor costs. We can operate the ten winding machines Autoconer X6, type V with only three operators. Our expectations have been exceeded. This investment in the spinning process marks a new chapter in our company's ability to remain competitive and deliver world-class products to our customers in India and abroad with greater speed and flexibility."

A. Alagarasan
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