

The LRT Pulse

THE NEWSLETTER from LAKSHMI RING TRAVELLERS



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LRT at Texfair - 2024, Coimbatore, India



LRT Product Seminar at Bhopal, India



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A year from now you may wish you had started today.

Do you Know

Artificial Intelligence Role in Textile Industry

In the Textile industry, Artificial Intelligence is revolutionising processes from design to production. Through data analysis and automation, artificial Intelligence enhances efficiency, improves quality control and fosters sustainability. From predicting trends to personalising products, it empowers Textile manufacturers to innovate and meet evolving consumer demands. As it continues to weave its way into the Textile realm, it promises a future of creativity, efficiency and sustainability.



It enables the designers to create innovative Textile designs by analysing trends, consumer preferences and historical data. It helps in generating patterns, colour combinations, textures, speeding up the design process and enhancing creativity.

Artificial Intelligence optimises supply chain management by forecasting demand, managing inventory and improving logistics. Predictive analytical algorithms help in predicting fluctuations in demand and optimising production schedules accordingly.

Artificial Intelligence powered systems can detect defects in Textiles more accurately and efficiently than manual inspection processes. Computer vision and machine learning algorithms can identify imperfections in fabric, stitching, printing and ensuring higher quality standards.

It enables Textile companies to offer personalised products tailored to individual preferences. By analysing customer data and preferences, Artificial Intelligence algorithms can suggest customised designs, sizes and styles, enhancing customer satisfaction and brand loyalty.

Artificial Intelligence technologies help in optimising production processes to minimise waste and reduce environmental impact. By analysing data on resource usage and production efficiency, this system can identify areas for improvement and implement sustainable practices.

Overall, Artificial intelligence revolutionise the Textile industry by improving efficiency, enhancing product quality, enabling customisation and driving innovation while contributing to sustainability goals.

Courtesy – [Link spriker.com](https://www.linkspriker.com)

Textile News

The Rise of e-commerce in the Textile Industry

In recent years, the Textile industry has witnessed a revolutionary transformation, thanks to e-commerce. The fusion of fashion and technology has created a vibrant and ever-evolving online market. Here we can see the rapid rise of e-commerce in the fashion world and how global trends are shaping this constantly changing industry.



One of the most significant trends in Textile e-commerce is the personalised shopping experience. Online stores can offer highly accurate product recommendations. This not only caters to individual customer needs, but also fosters consumer loyalty. Personalisation goes beyond products, it is also reflected in exclusive content offerings and promotions tailored to each customer's interests.

Growing environmental awareness has led to an increase in demand for sustainable and ethical Textile products. Online stores are responding to this trend by promoting brands committed to responsible practices and eco-friendly materials. Sustainability labels and ethical certifications are increasingly visible on e-commerce platforms, providing consumers with the peace of mind that their purchases align with their values.

Augmented and virtual reality technology has completely transformed how consumers interact with fashion online. Customers can now virtually try on clothes explore different style and colour combinations, and assess how items will look on them before making a purchase. This immersive experience has reduced the uncertainty associated with online shopping, encouraging more people to make Textile purchases on digital platforms.

Efficient logistics are essential in e-commerce. Textile companies are investing in advanced inventory management systems, automated warehouses and real-time tracking technology to ensure seamless order fulfilment. Further more, fast delivery has become the norm with options like next-day delivery and same-day delivery significantly enhancing the customer experience and encouraging repeat purchases.

In addition to Business-to-Consumer (B2C) Business-to-Business (B2B) e-commerce is gaining momentum in the Textile industry. Brands and retailers can connect with manufacturers and suppliers more efficiently, simplifying the supply chain and reducing costs. Hence it is obvious that the rise of e-commerce in the textile industry is reshaping how we shop, sell and perceive fashion.

Source : connectamericas.com

Felicitation



Mr. S. Nallathambi, Spinning Master – Maintenance, Prabath Spinners India Private Limited receiving LRT Best Reply Award from their General Manager Mr. N. Krishnamoorthy



Mr. B. Ravichandran, Maintenance Manager, Omax Cotspin Private Limited receiving LRT Best Reply Award from their Director Mr. Rahul Patel



Mr. S. Kanthimathinathan, Maintenance Manager, Pariyur Amman Spinning Mills receiving LRT Best Reply Award from their Director P. Baskar

Replies from the Readers

What are the settings to be done in Ring spinning to reduce the hard waste in Autoconer?

Mr. N. Kannaiah, General Manager, Ranganayaka Spinning Mills Private Limited, Boyapalem, Andhra Pradesh

In General, Autoconer working performance and efficiency is depending upon spinning cop content and spinning working performance. Regarding hard waste reduction in Autoconer following settings to be taken care in spinning.

Overall clearer cuts and cop rejections to be controlled to minimise the hard waste in Autoconers. Under winding to be optimised as to unravel easily by siders in Autoconers. It should be 3 to 4 rounds. If beyond that all will go in hard waste.

Mr. R. Jayaramraj, Factory Manager, Akshara Spinning Mills, Unit-2, Dharapuram, Tamilnadu

Following are the settings to be done in Ring spinning to reduce the hard waste in Autoconer

- Set breakage rate level 6 to 7% after doffing to prevent over end piecing.
- To avoid using damaged empties.
- To avoid using vibrating spindles.
- Ring centring schedules should be followed without deviation.
- Proper movement of ring should be ensured.
- Proper fitting of empties on the spindles to be followed.

Mr. Sanjaykumar R Jadhav, General Manager, Siddhi Industries Limited, Vataman, Dholka, Gujarat

The following are the settings to be done in Ring Spinning to reduce hard waste in Autoconer. Cop top and amp - bottom clearance should be maintained minimum 10 mm at bottom side and 15 mm top side by adjusting ring rail height so slough off bobbin formation on bobbin will be completely nil, so hard waste at Autoconer stag will be minimised. Maintain binding to winding coil ratio 1:3, so slough off cops will be reduced due to this hard waste at Autoconer stage will be reduce minimising the back winding in ring cops will produce less hard waste at Autoconer.

Mr. C. Preman, Production Manager, Indo Count Industries Limited, Kolhapur, Maharashtra

The hard waste generation in winding can be well controlled by the ring frame itself apart from the autoconer condition and latest technology in winding.

- Basic yarn quality with low flaws in the yarn. That will reduce cuts in winding.
- Set Ring frame with lesser end breaks with proper selection of ring Traveller.
- Set Ring frame with lesser back winding, which should be near to unity
- Set Ring frame with lesser under winding by trials
- Set individual Ring frame to reduce restarting breaks.

Mr. Amzad Khan P, Assistant General Manager - Maintenance, GTN Engineering India Limited, Medak, Telangana

To optimise start up breaks to keep the settings in ring frame. Back winding 2 to 2.5 rounds and under winding coils 5 to 6 rounds, Long snarl dog 240 mm, S22, S23, S24 limit switch setting to keep as per instruction manual, B 33 cam setting 75 to 80 mm, variator break setting to keep 0.5 mm, monitor lappet tilting and lappet end function should be proper - adjust micro valves as required, long snarl cylinder function should be smoothening - adjust micro valves as required. Ensure optimum cop content, cop diameter = ring diameter minus 2.5 to 2.8 mm, optimum top and bottom clearance. Reduce manual doff activation through DOFF BUTTON / SWITCH.

Mr. S. Vijayan, Factory Manager, Kiwi Cottspin Mill Private Limited, Annur Tamilnadu

The following are the settings to be done in Ring spinning to reduce the hard waste in Autoconer:

- Chase length to be increased for avoiding loose cops.
- Winding length to be reduced according to the count for avoiding slough-off cops.
- Heavier Travellers may be selected for avoiding the slough-off cops.
- Count variation and pearl chain cops should be avoided by close monitoring.
- To avoid pearl chain faults like damages of cots, aprons, shell and loose tapes.

Mr. S. Sujeesh Kumar, Maintenance Manager, Sayed Cotton Mills Private Limited, Moondraippu, Tamilnadu

The following point to be taken care in ring spinning to reduce the hard waste in Autoconer.

1. Optimum winding length to be fixed depends upon the count to avoid the slough off in Autoconer.
2. Under winding setting should be maintained 2 to 3 turns to reduce the hard waste in Autoconer.
3. Optimum ratchet teeth to be kept depends upon the count to improve cops content.
4. Chase length must be 8% to 12% more than the ring diameter for easy unwinding in Autoconer.
5. Balance of ring rail and lappet should be proper to avoid cops addas.
6. Traveller number should be selected properly to avoid slough off in Autoconer

Dr. Debasish Banerjee, Executive Director, Blackstone Synergy Consulting Group Limited, Nairobi, Kenya

Over spinning conditions and hosiery twist flows merit closer pitch and higher winding on density to prevent slough off at the Autoconer with linear speeds beyond 1200 m/minute. Under spinning conditions ensure higher yarn density and cover factor with a stronger core, thereby meriting wider pitch and relatively lower winding on density optimisation for improved sloughing off performances. This is fundamentally a design defect for the bearings used in the carrier trail for the front roller drives triggering severe ends down and sloughing off cops during the occurrence of the break down for the carrier gear following substantial front roller lapping.

Mr. D. Prasanna Kumar, Assistant Quality Manager, Ravali Spinners Private Limited, Tanuku, Andhra Pradesh

The following measures required in Ring frame to reduce the hard waste in Autoconer :

- Maintain low breakage rate by improving the parent yarn quality.
- Improve the quality of cop by reducing the defective cops like ring cuts, slough off, over filled cops.
- Maintain under winding and back winding 1.5 to 2.5 coils.
- Maintain top clearance of the cop should be 10 mm. If it is too less, it may create slough off.
- Maintain bottom clearance of the cop should be 10 mm. If it is lesser it may create spoiled bobbin.
- Maintain bobbin hardness 55 degree to 65 degrees, soft cops lead to slough off problem.

Mr. N. Balaji, Spinning Master – Production, Prabath Spinners India Private Limited, Salaipudur, Palladam, Tamilnadu

- Cops diameter to be set 3 mm lesser than ring diameter.
- Chase length should be maintained 10 to 12% higher than ring diameter.

- Cop bottom and top clearance to be maintained as 10mm.
- Ring centering to be done once in 6 months.
- Underwinding coils placed in bobbins at 3 mm height position.
- Startup breaks should be lesser than 3% on manual doff, for auto doff 1% to be maintained.

Mr.T. Pushparaj, Unit Incharge, Sree Narashima Textiles Private Limited, Sulur, Tamilnadu

We have optimised the cops content setting in Ring frame basically up to 40s count around 55 grams in 38mm diameter rings and 170mm lift, above 40s count around 50 grams maintained. If more cops content maintained in spinning, we can reduce the number of cops changes in Autoconer. Hence, we can reduce the hard waste percentage. Optimised under winding in ring frame cops, otherwise hard waste will be high. Normally ring spinning manual doffing 3 to 4 coils tail winding setting to be done and the auto doffing 2 coils is enough.

Mr. Ravindra R. Patil, Manager – Maintenance, The Ichalkaranji Co Operative Spinning Mills Limited, Ichalkaranji, Maharashtra

Selection of correct Traveller profile as per count is important to control breakage level and to achieve optimum working performance and yarn quality. Optimum roller setting as per fibre length and optimum machine setting like ring, spindle, lappet and ABC centering will reduce end breakage rate. Humidity level should be maintained uniform 50 – 55% through all shifts. Supply and exhaust air ratio should be maintained to avoid fly and fluff generation in yarn. Cleaning of machine, drafting zone should be proper. Avoid Traveller mix up to avoid soft, hard cops and mix up of count.

Mr. Akkimuthu N, Deputy Manager - Quality Assurance, Rajapalayam Spintex, Ramco Group of Textile Division, Rajapalayam, Tamilnadu

Points to be taken care for good quality of yarn are cleanliness of drafting zone, OHTC running Condition, optimum break draft and spacer, optimum TPI in roving, bobbin holder condition, optimum top roll condition, top and bottom aprons condition etc. Now a days, there is good awareness among spinning mills to maintain above condition to ensure optimum cuts in Autoconer. Points to be taken care for good quality of cops are hardness of cop, chase length, winding - binding coils ratio, diameter of cop, under winding of cops, operator work practices - over piecing, double piecing etc.

Mr.V.Kannan, Senior Technical Manager – Spinning, Ashok Textile Mills, Ponneri, Namakkal, Tamilnadu

Based on quality requirements, clearer setting done in auto coner, according that quality, need to fine-tune ring frame by altering top and bottom roll settings - wider width back zone helps to reduce thin cuts, Spacer - minimum size gives undrafted, breakages and higher cuts, replacement schedules like top and bottom aprons, cots buffing, Traveller and ring changes, drafting services etc. We cannot avoid cop change. But reduce number of cop changes by achieving optimum cop content by adjusting cop diameter, top and bottom clearance in empties, slim type empties, timely ring centering also helps to achieve higher cop content without breakages.

Mr. Abhishek Mehta, Senior Vice President - Maintenance, Nahar Spinning Mills, Unit – Nahar Fibres, Malerkotla, Punjab

Bottom build up or cop base has to be made according to the count spun and speeds selected, so that the unwinding at the auto coner is smooth without disturbing layers and causing disruption. Chase length is selected to avoid slough off and repeated splicing as it is kept on higher side in case of link coners. Winding length per chaise to be selected as per count and material type being spun. Speed pattern for breakage rate between 4-5% per thousand spindles per hour.

Mr. G.K. Senthilkumar, Factory Manager, Sri Balaganesan Spinners, Srivilliputhur, Tamilnadu

In Spinning, under winding coils and back winding coils should be optimized 2/1.5. Chase length should be 4mm greater than ring diameter for normal yarn, in case of slub yarn it should be 10mm. Ensure smooth ring rail movement. Short

snarl ring rail movement should not greater than 4mm. Slow up and fast down of the ring rail speed should be ensured for better unwinding in Auto coner. Cop bottom gap and cop top gap should be minimum 8 mm, to enrich cop content. One number heavier Traveller or otherwise better optimum spindle speed gives best cop hardness, it does not lead slough off.

Mr. K.T. Srinivasan, General Manager, Kumaran Ginning & Pressing Mills, Palladam, Tamilnadu

Higher the cop weight can reduce cop changes in the Auto coner. Reduce cop rejection in the Auto coner by: Avoid top, bottom adas, ring hit cops by proper adjusting and maintaining of builder mechanism and ring rail load 30 to 35 kgs and it plays and accurate ring centre and height settings. Avoid loose winding and slough off cops by proper set of chase, winding length and avoid slow speed at 1/4th during running time and avoid lighter Traveller and smooth surface ring tubes. Adjust damping and brake settings for under winding 3 turn and back windings 1.5 turns .

Mr. Krishnamoorthy. S, Vice president, Mr. Murugaraj, Manager - Quality, Vaibhav Ginning & Spinning Mills Private Limited, Gondal, Rajkot, Gujarat.

In order to reduce the hard waste in Auto coner, the bobbin supplied from Ring spinning should have lower quality defects, Higher cop content, correct amount of under winding coils, back winding coils and also should not slough off while higher unwinding speed. To achieve the same, the following settings in Ring spinning to be done according to count spun. Under winding speed and time: To get enough 1 or 2 under winding coils, under winding speed of 85mm/Sec and 0.1sec to be set. Lower under winding coils reduce hard waste and lower start up breaks. Under winding Position: Under winding coil should cut by cutter. Example - 6mm helps no protruding under winding coils leads lower cop rejection and lower start up breaks.

Mr. Angamuthu.V, General Manager, Kutti Spinners Private Limited, Tiruchengode, Tamilnadu

Ring frame wise cop rejection% study should be conducted and take corrective action accordingly by identifying root cause of mechanical defects such as ring cut, improper built, less clearance at top and bottom, stained and oiled bobbin, slough off, defective empty bobbin, soft built at frequent intervals or any quality deviation in all aspects - variation in count, imperfections and CSP. Ring frame end breakage rate to be maintained with very minimum level and restarting breaks after the doff taken should be very minimum level.

Mr.M. Salaudeen, Quality Manager, Sumati Spintex Private Limited, Vapi, Gujarat

The following are the points to be considered in ring spinning setting to reduce the hard waste in Auto coner:

- Top bunch position setting = Lift + 15mm. Higher back winding coils - doff speed, ring rail downward speed setting to be set to get 1 to 1.
- Top adass bobbin - doff length to be set according to get top clearance height of 20mm.
- Sufficient length not put in magazine - doff speed, under winding time to be set 1 to 2 and under-winding coils of 2 to 3.
- Slough off bobbin to be controlled cop hardness to be arrived in the range 55 to 63 degree according selection.

Mr. S. Kather Mohideen, Maintenance Manager, Sree Ayyanar Spinning and Weaving Mills Limited, Malankinar, Tamilnadu

The following points to be considered in ring spinning to reduce the hard waste in Auto coner:

- Chase length : Lower chase length will cause higher slough off in auto coner. It should be ring diameter + 8 to 12% to be maintained.
- Back winding should be 2 to 3 turns.
- Under winding should be 3 to 4 turns.
- Clearance between ring and cops should be maintained 2.5 to 3 mm.
- Ring centering must be taken for six months once to reduce ring cuts.

— We have edited replies received to fit the page available —

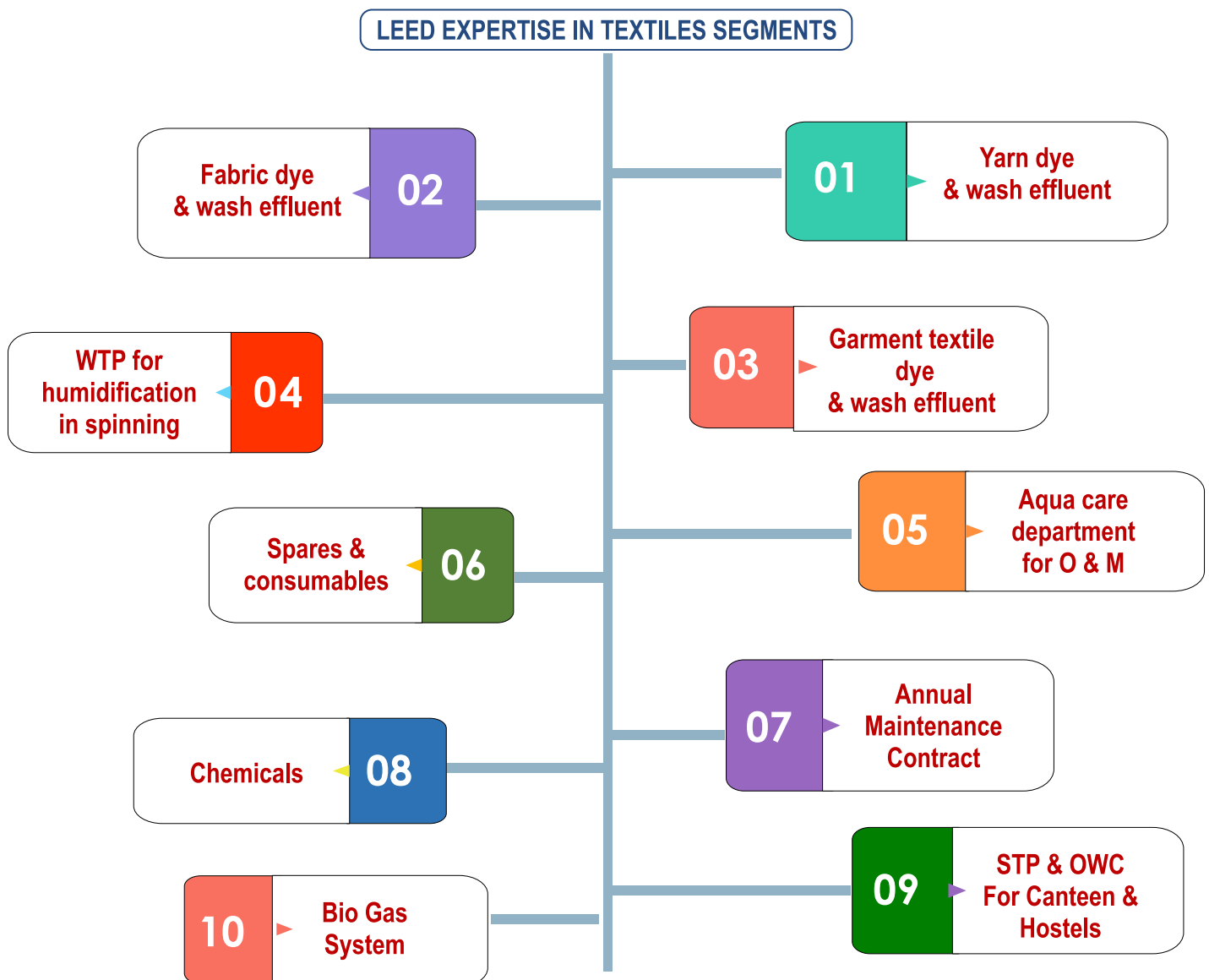
LEED – Offering complete Environmental solutions

The Textile Industry is a significant contributor to water pollution, with wastewater containing dyes, chemicals, heavy metals and other pollutants. Treatment of Textile wastewater is crucial to prevent environmental harm and ensure safe reuse or disposal.

Some common methods used in the treatment process are:

- **Physical Treatment:** Screening, sedimentation and filtration to remove solids and particulate matter.
- **Chemical Treatment:** Coagulation, flocculation and neutralization to remove color, heavy metals and other pollutants.
- **Biological Treatment:** Aerobic or anaerobic processes using microorganisms to break down organic pollutants.
- **Advanced Oxidation Processes:** using oxidation agents like ozone, hydrogen peroxide or UV light to degrade persistent pollutants.
- **Membrane Bioreactors:** Combining biological treatment with membrane filtration for high quality effluent.
- **Nanofiltration/Ultrafiltration:** Using membranes to remove dissolved solids, dyes and other pollutants.

LEED - Lakshmi Energy and Environment Designs Private Limited, a group company of LRT - Lakshmi Ring Travellers (Cbe) Private Limited have rich experience and exposure to the above-mentioned processes and have established treatment plants, supplied standalone equipment's, providing spares, chemicals, O & M, AMC's, adequacy study to existing plant performance and its improvements are been carried out by our Team of experts.



Please send your enquiry's and requirement's to leedsales@lrt.co.in or call us at +91 93481 87222

Know your Product

LRT Clipex – Traveller Insertion and Removal Tool

LRT has introduced its LRT Clipex during Texfair-2024, Coimbatore, a handy tool for inserting and removing of heavier Travellers.

In spinning mills, workers are using hooks and knives to insert and remove very heavier Travellers, this leads scratches and damages on the rings surface. This issue is totally over come after introduction of this tool. LRT would like to thank its customers for acceptance of the product.



Advantages of LRT Clipex :

- Suitable for insertion and removing of heavier Travellers.
- Ergonomically designed.
- Hardness is lesser than rings, hence no impact on rings.
- No strain to fingures while using.
- A Simple and a very Handy tool.

Congratulations

We are happy to announce privilege cards from Reliance Trends to the following winners for their best reply.

Mr. N. Kannaiah,

General Manager,
Ranganayaka Spinning Mills Private Limited,
Boyapalem, Andhra Pradesh.

Mr. R. Jayaramraj,

Factory Manager,
Akshara Spinning Mills, Unit-2,
Dharapuram, Tamilnadu.

Mr. Sanjaykumar R Jadhav,

General Manager,
Siddhi Industries Limited,
Vataman, Dholka, Gujarat.

Win Exciting Prizes

What are the invisible losses in Spinning Mills and ways you can reduce it? Share your practical experience

Technocrat of the issue



Mr. K. Somasundaram is a well-known Textile Technologist with over three decades of experience in the Indian Textile industry. He is currently serving as Vice President at KPR Mill Limited, Coimbatore, South India - one of the largest vertically integrated organizations with a diverse focus spanning across yarn, fabrics and garments. He is known for his courteous nature and pleasing personality. Mr. Somasundaram hails from Suler, Coimbatore district, South India.

He completed his Diploma in Technology from PSG Polytechnic in 1992 and completed his M.Com in Annamalai University, Chidambaram, Tamil Nadu. Mr. Somasundaram began his career in 1992 at NEPC Textiles Limited, Coimbatore, as an Erection Supervisor and Production Supervisor. In 1995, he joined Ramani Textiles, Tirupur, as ASM – Production and was later promoted to SM – Maintenance. By 2000, he had moved to Purani Textiles Private Limited, Karadivavi, Coimbatore District, where he was initially appointed as SM and subsequently promoted to Factory Manager. At these roles, he was instrumental in initiating, implementing projects and streamlining processes.

Between 2007 and 2012, Mr. Somasundaram provided consultancy services to various spinning mills across South India. He joined KPR Mill Limited in 2012 as Factory Manager, was promoted to General Manager and now holds the position of Vice President, overseeing 210,000 spindles, 250 knitting machines and vortex spinning across three units in the group.

He has extensive expertise in spinning, knitting, processing and garment manufacturing. His excellent practical knowledge in these fields has helped KPR maintains a strong market position for their products and ensures a continuous supply of high-quality yarn. He is consistently engaged in human resource development, supporting everyone from workers to technicians and promoting their growth. Mr. Somasundaram approaches challenges with compassion and turns issues into positive outcomes through his adept problem-solving skills.

Mr. Somasundaram has travelled to China, Thailand, South Africa, Nigeria, Germany, Spain, Switzerland and Gulf countries to study market requirements and participate in trade fairs.

As noted by his team at KPR Mill, "Mr. Somasundaram is always eager to continuously learn about innovations in technology. He encourages everyone at all levels, ensures that no one is left behind and supports talented individuals in their advancement to the next level." We wish Mr. K. Somasundaram continued success and growth in his contributions to the industry.

For further details please contact :

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