

LRT would like to wish all its readers a Happy New Year 2023 and may great prosperity and good health be yours throughout the year and forever

LRT at India ITME - 2022, Greater Noida, India



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DTG - 2023

15 - 18 February, 2023

Hall No. H7

Dhaka, Bangladesh

Do you know

Interesting Facts on Textile Design

Textile design is a broad term that refers to designing the physical construction of fabrics. Construction happens by means of knitting, weaving or organising fibres using non-woven techniques such as felting. In addition, the term also refers to designing for the surface of fabrics, through methods such as printing, discharge printing and resist-dye techniques. The word croquis comes from the French and simply means sketch. Before computer aided design programs, print designers drew their designs as a croquis. Using that sketch, they put their design into a repeat, which needs to be suitable to the fabrics end use and with no obvious lines or breaks in the design



The invention of clothing marks one of the significant milestones in the evolution of humanity. The oldest known textile to have been discovered is a thread fragment found in a cave in the Republic of Georgia. Scientists have dated it as being 34,000 years old. The production of silk, sericulture in China dates to 4000 BCE. However, China guarded the secret of silk production heavily for thousands of years. Eventually, a Japanese expedition managed to get silk worms eggs out of China

The industrialisation of the textile industry began in 1764 with James Hargreaves invention of the spinning jenny, a machine used to manufacture yarn. When settlers arrived in the American colonies, they brought looms with them knowing they would have to be self-sufficient. In those early years, the most common fibre in America was linen. Colonists had been able to travel with flax seeds easily and the northern climate could not grow cotton. Textile designs have often had political consequences. Many countries around the world have enacted sumptuary laws dictating what colours or fabrics certain people could or could not wear. This was often an effort to keep people in their proper social station

In 1824, the first jacquard loom was introduced in US. It used punched cards to deliver information to the loom about which warp ends to raise and lower to create a design. This technology inspired an inventor to build a machine that used punched cards to hold data and tally the census of 1890. As a result of its success, this technology evolved further to develop the first computer in 1946 at Pennsylvania University

Textile News

Scope of Textile Engineering Industry after Covid

There was an unprecedented boom in Textile Engineering Industry after Covid in 2021 as we all know. The industry booked huge orders for machinery both for modernisation and expansions and some had order booked for next 2 years. Indian Textile machinery industry achieved a growth of 130% in 2021 - 22 compared to 2020 - 21 by clocking a record production of 11,700 crores. This has come in the back of stagnant figures ranging from 5000 to 7000 crores in the last few years

However, in the last nine months starting April 2022, there has been a lull in the market mainly due to inadequate demand for apparels in the global market. Reasons could be many, ranging from high inflation globally, Russia -Ukraine war and Zero Covid Policy in China. This sort of situation was never seen on a global basis in the past. We had never seen all the countries engaged in major Textile production reduce the capacity utilisation and close down their plants at the same time

The spinning industry especially in India has over 15 million spindles, which are 15 years and older. These needs to be modernised over the next few years and the Textile engineering is in for good times. Also, huge labour shortages throws up companies focusing on automation. In today's digital world companies focused in this field will prosper. For the investment cycle to kick start again, the industry sentiment needs to improve and it is anybody's guess when this will happen

Post Covid there has been a clear shift in purchases of textiles outside of China from the developed countries. This is a big boon to countries like Bangladesh, Turkey, Vietnam, Uzbekistan, Indonesia, India and Pakistan. However countries like Bangladesh and Pakistan are facing challenges in Forex issues and gas availability for production is a concern. Also they need to import the machineries and raw materials which jacks up their production cost. This has put the spotlight on countries like India, which would be one of the first countries to recover from this slowdown once the demand picks up. Already we are seeing signs of this and yarn exports to Bangladesh from India will pick up in the coming months

Another point is the overcapacity in the spinning industry globally. In the best of times, the capacity utilisation globally has been to the tune of 75 - 80%, which has now crashed to around 50%. It would be survival of the fittest as always and countries have modern machinery, manage input costs better and deliver high quality products on time will be a clear winner. Only these companies will be able to supply quality products at competitive prices. Textile engineering industry globally will benefit due to this as they many companies are looking forward to modernise or go for new machineries scrapping the very old machines. It is only a matter of time when all the negative factors prevailing today reverses and in the long run Textile engineering Industry globally will do exceedingly well

Felicitation



Mr. J. Loganathan, Factory Manager,
Sri Annur Annamalai Textile Mills Pvt Limited receiving LRT Best
reply Award from their Managing Director Mr. A.P. Annamalai



Mr.R.N.Emran, Chief Operating Officer,
Nagreeka Exports Limited receiving LRT Technocrat Award from
Mr.S.C.Kanakasabapathi, Chief Manager Customer Service, LRT (Cbe) Pvt Limited

Replies from the Readers

What are the precautions to be taken while process change from cotton to synthetic and blends in spinning?

Mr. Purnawasi Prasad Gupta, Chief Manager – Production, Arihant Spinning Mills, Malerkotla, Punjab

In Ring frame, higher pneumafil suction and closer suction tube setting is required to avoid lapping. Lappet size needs to be increased to liberate static charges. So, lappet size needs to be changed 3.5mm with special coating for running medium count. Traveller clearer setting is important to reduce ring Traveller loading and reduces in breakage rate. Hence, change is required in Traveller clearer setting gauge as per Traveller number and yarn diameter. In synthetic material, yarn diameter increases, so selection of Traveller with sufficient bow height is important. More running-in is required for synthetic material after ring Traveller change. Due to high generation of heat and lack of lubrication Traveller life optimisation is must

Mr.B.P.Sankarbalaji, General Manager, Sasi Anand Spinning Mills (I) Private Limited, Perundurai, Tamilnadu

Draw frame bottom roller setting based on fiber length, if 32 mm fiber front zone should be 42 mm and back zone 46 mm with break draft of 1.2 in finisher draw frame. Draft at simplex to maintain around 8 - 10 and simplex roving TM should 0.8 to 1.2 based on fiber type and blend. Draft at spinning to maintain around 25 - 40. Spinning TM should be 2.8 - 3.2 based on fiber type, blends and working conditions. Use higher bow height and heavier Traveller. Buffing frequency of drawing, simplex, spinning should be decided based on working and cots grooving, preferably closer buffing frequency when compared to cotton

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

About 5% higher RH% than that for cotton spinning are to be maintained while spinning man-made fibre and blended yarn. Simplex speeds should be reduced by 10% and roving TM maintained from 0.65 - 0.75 and select groove in false twister as 8 - 10. In spinning anti-wedge ring with Elliptical and Universal Travellers are suitable and the cross section of the Traveller should be half oval. Twist for man-made fibres should be much lower than that for 100% cotton. Polyester weaving 3.2 - 3.5 and viscose weaving 2.5 - 3.0, roller setting 38 mm - 44/65, 44 mm - 50/65, 51 mm - 58/70 and total draft 20 - 40 and breaker draft 1.13 - 1.38 maintained. Spacer size from 2.25 - 3.75 and top roller loading higher as 20/14/18. Shore hardness of cots - polyester/cotton - 80, man-made fibre - 85 and antistatic type of cots or acid treated cots with bigger diameter help to keep the roller lapping tendency under control

Mr.P.K.Pratheesh, Factory Manager, Gughan Textiles Mills, Vedasendur, Tamilnadu

For polyester, PV and PC process, the RH% in the inner spinning shed should be set from 45 to 48% according to the outer RH% section. It is based on the spin finish of each fiber product. Lapping tendency should be avoided by using cots with 85 degree shore hardness in front and back of cot in draft area. Ring Travellers should be changed within 5 to 6 days and it should not be extended beyond 10 days. Spinning ring rail movement should be maintained slow movement from top to bottom. Moving faster from bottom to top. For this, cam direction should be changed in the ring frame. Overhead travelling blower should be in working condition. Spinning department house keeping should be in good condition. Floor grills should not be obstructed by waste

Mr. Ravindra R. Patil, Maintenance Manager, The Ichalkaranji Co-op Spinning Mills, Ichalkaranji, Maharashtra

Selection of speed pattern is also very important for smooth working performance. Speed curve should be gradually in increasing mode. Rotary pneumafil drum to stationary fan conversion kit will be beneficial to avoid choking problems and improve the working performance. Proper suction system modifications give increase in suction pressure and gives lower lapping tendency results in better working performance. Bottom Roller settings may be widened in the back zone depending on process and fibre length

Mr. Sudhakar Kodela, Vice President, Sri Venkata Siva Parvati Spinning Mills, Chebrolu, Andhra Pradesh

In Ring frame, adjust bottom roll settings to 44 to 65mm. Adjust top roll settings based on bottom roll settings. Buffing cycle to be reduced to 30 days. Apply top rollers with liquimix

solution to overcome lapping tendency. Use 2 to 3 numbers heavier Traveller with medium bow height. To arrange steel bush to suction tube to avoid damages and tube choking which leads to multiple breaks. To arrange molded separator clips to the damaged surface of separators. Keep sufficient under winding setting. Adjust suction delay and draft delay settings to get minimum restarting breakage. Suction should be min 7.0mm water column in the last spindle of the pneumafil fan control. Provide single spindle monitoring to identify rogue spindles and get better production

Mr.S.Kather Mohideen, Factory Manager, Poigai Spinners India Pvt Limited, Aravakurichi, Tamilnadu

Synthetic fibre have higher strength when compared with cotton, so we have to increase the shore hardness of the top roller cots 83° to 90°. Yarn passage gap between ring and Traveller should be high, so we can use half oval cross section and heavier Traveller. Synthetic fibres cots lapping, difficult to clean, so we have to increase the suction power by changing heavy weight fans. Also, minimum end breakage rate to be maintained. Fibres internal cohesiveness is low for synthetic, so creel height must be reduced. Spacer to be slightly opened depends based on trial. For synthetic we will give lower TPI, so we have to check and correct the tape tension, spindle button condition

Mr.S.Muruguraj, Executive-QAD, Madura Coats Private Limited, Ambasamuthiram, Tamilnadu

Traveller life is very less when viscose rayon is processed especially semi dull fibre, because of low lubrication. Traveller life is better for optical bright fibres. Traveller life is better for PC blends, because of better lubrication between ring and Traveller. Since, para aramid fibres tenacity is very high while spin this fibre more care to be taken while selecting Traveller. So that while fixing Traveller life, yarn hairiness ie S3 value to be checked along with Traveller burnout ratio and breakage rate trend. If the lapping tendency is very high when processing synthetic fibres for non-critical end uses, it is better to use 90 degree shore harness cots to avoid cots damages. This will improve the working and the yarn quality compared to working with 83 degree shore hardness

Mr.Abhishek Mehta, Senior Vice President – Maintenance, Nahar Fibres Limited, Jitwal Kaian, Punjab

In Ring frames, break draft and back zone gauge to be increased along with back saddle gauge. Spacers to be increased, twist multiplier to be decreased, Traveller weight to be increased and clearance to be more. It is advisable to begin with sapphire plus and gradually shift to Express plus for much better life. U1 HM UDR and U1 US UDR profile suit the most. Bottom apron length may be reduced as buckling tendency is more in synthetics, also the spring tension at tension fork, roller has to be maximised. Ring and lappet rails to be properly earthed for discharge of static charge build up. Top arm pressure may be increased. Central lubrication frequency to be increased as loads will be higher. Duct cleaning to be done regularly. Differential pressure for the drum rotation to be readjusted with batt thickness

Mr. K. H. Rajesh Babu, Production Manager, Super Spinning Mills Limited, B-Unil, Hindupur, Andra Pradesh

In the Blow Room, we need to maintain less beating points to avoid fiber rupture. Bye pass arrangement has to be provided while processing synthetic blend yarn. Depending upon mixing fiber length, in blow room and carding we need to maintain a suitable wider setting and gauges. Maintain suction pascals as per recommendation. In all departments collier trumpet has to clean thoroughly and provide suitable sizes. Based on blend%, we have to decide the wire points of the blow room beater and carding elements. In all departments we need to maintain proper RH% for good working

Mr.K.T.Srinivasan, Manager, Premier Mills Limited, Pulankinar, Tamilnadu

Selection of synthetic raw materials with adequate spin finish, cut length, denier, crimp and fuse fibers. Use antistatic oil to avoid lapping and static electricity. In blow room, beating points, beater speed and waste extraction should be much lower. In carding, licker-in - cylinder - flat top - SFL, SFD wires PPSI must be lower. Bulkiness of sliver control by higher loading of calendar roller pressure in subsequent process. Require lower in roving TM, static electricity and numbers of feeds in drafting. Apart from this, need wider clearer setting, suitable splicer prism are required in winding

LRT at CAITME - 2022, Tashkent, Uzbekistan



Don't Wait for Opportunity, Create it

Know your Product

LRT ELECTRO CLEAN- EC3

LRT has introduced its application tool **LRT ELECTRO CLEAN – EC3** in Texfair - 2022, based on the various suggestions received from the customers, which is more robust and rugged than the earlier tools. The battery is made with higher capacity for long duration with higher torque and spindles speed. It is available with 200, 300, 400 and 500 mm spindle lengths



Also, LRT provides all the required spares when required, so that the users can themselves replace the required parts in future. Customers are requested to send their valuable enquiries to sales@lrt.co.in

- > **Robust and rugged tool**
- > **User friendly**
- > **Smoother operation**
- > **Higher battery capacity**
- > **Longer battery life**
- > **Increased spindle speed**
- > **Longer rotation time**

Congratulations

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

Mr. Purnawasi Prasad Gupta
Chief Manager – Production
Arihant Spinning Mills
Malerkotla, Punjab

Mr. B.P. Sankarbalaji
General Manager
Sasi Anand Spinning Mills (I) Private Limited
Perundurai, Tamilnadu

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

Win Exciting Prizes

How to control end breaks in spinning related to ring Traveller? Kindly send your reply in Ms-word attachment

Technocrat of the Issue



Mr. Narayanasamy Arunachalam is a well-known Technologist in the Indian Textile Industry for the past four and half decades and is presently working as Vice President in Armstrong Spinning Mills Private Limited, Tamilnadu, India. Armstrong Spinning Mills has a complete setup from farm to fashion, manufacturing and supplying best quality of Products to many of global leading brands. He is amicable and simple in nature, which has helped him to connect well with persons in all levels. He hails from the Temple City of Madurai, South India

After passing his B. Tech – Textile Technology from PSG College of Technology, Coimbatore in 1978, started his career at Pioneer Mills, Coimbatore as a supervisor. In the year 1983, he shifted to Precot Mills Limited, Hindupur as Assistant Spinning Master. Later he was elevated to Spinning Master and Executive Officer

In the year 1990, he joined at Thanjavur Textiles as Assistant General Manager. Following this, in the year 2001, he joined at Armstrong Spinning Mills Private Limited, Nambiyur as General Manager and at present working as Vice President

In all these places, he has done marvellous appreciable works in expansion, maintaining required quality and enhancing production with all type of machines. Also, he has continuously involved in getting various sustainability certifications such as GOTS, Fairtrade, GRS, OCS, RCS, Higgindex in Organic cotton and Recycle Pet Polyester. He is the Chairman of Advisory committee in Control Union Certification of India for the last six years. Also, he is one of the members of Standard Revision Committee in Global Organic Textiles Version 7.0

He has visited many Asian and European countries for attending speaker engagement on Fairtrade, social compliance in GOTS, Control Union and MSI-TN conferences. In September 2022, FairTrade authority invited him to Italy to impart knowledge on fair trade practises to various stake holders involved including School children and Public

Mr. Narayanasamy Arunachalam says, **“Even though I am 67 years old, still I am learning new things and we are maintaining sustainability throughout and maintain circularity. I sincerely thank our Chairman and Managing Director for giving opportunity to be in ARMSTRONG as being one in their family”**. We wish Mr. Narayanasamy Arunachalam for his further growth and services to the industry

For further details please contact :

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