Textile Trends

68TH YEAR OF PUBLICATION, NO. 01 APRIL 24, 2025, ISSN 0040 - 5205, Rs. 60/-

VOL. LXVIII. NO.01, TEXTILE TRENDS, APRIL - 2025

E-mail : indiandyesprings@gmail.com

Whenever There's a need for Dye Spring

Always think of.....

INDIAN DYE SPRINGS CO.

Product Range :

Dye Spring

Yarn Perforator Steel Tube & Gravity Lock Nut

INDIAN DYE SPRINGS CO.

MANUFACTURERS OF S.S.DYE SPRINGS

Address : B-1102, Ratnatej, Dhaval Hills, Gawand Baug, Pokhran Road No.2, Near Gawand Lawns, Thane West, Maharashtra, Pin: 400 610.

Phone : +91 98920 87026 / 97691 11988 / 77384 61456

AUTOTEX

100 MILLION BOBBIN HOLDERS

HISTORY HAS BEEN MADE
THANKS
FOR YOUR TRUST

Proven
Solution

AUTOTEX - BLS

The World's First Bobbin Holder with Bobbin Locking System - BLS

Not just Holding... It is a system to hold and lock.

www.autotex.net

W: www.mylonmetallics.com

MYLON
Mylon Metallics Pvt. Ltd.

MYLON FOLLOWS THE LINES OF DEEPSEEK WITH MINIMUM INVESTMENTS FOCUSSED ON INNOVATION, QUALITY AND DELIVERY

Innovation That Saves – MYLON METALLICS,
Your Partner in Frugal Engineering

Over 100 installations in 5 years, Supporting 800+ Customers for spares and services
One simple contact - mail to mylonmetallics@gmail.com
NO TO - SERVICE APPS, BUREAUCRACY, HIERARCHY, FANCY DESIGNATIONS

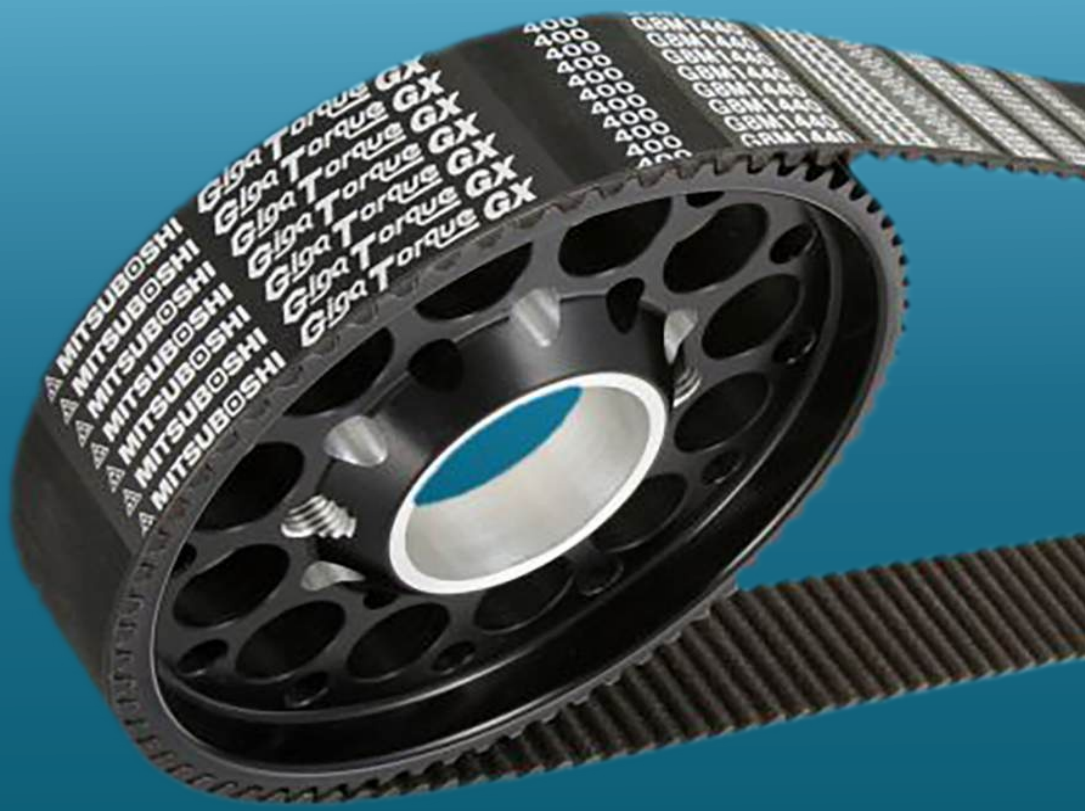
YES TO – FAST RESPONSE. CUSTOMER SATISFACTION

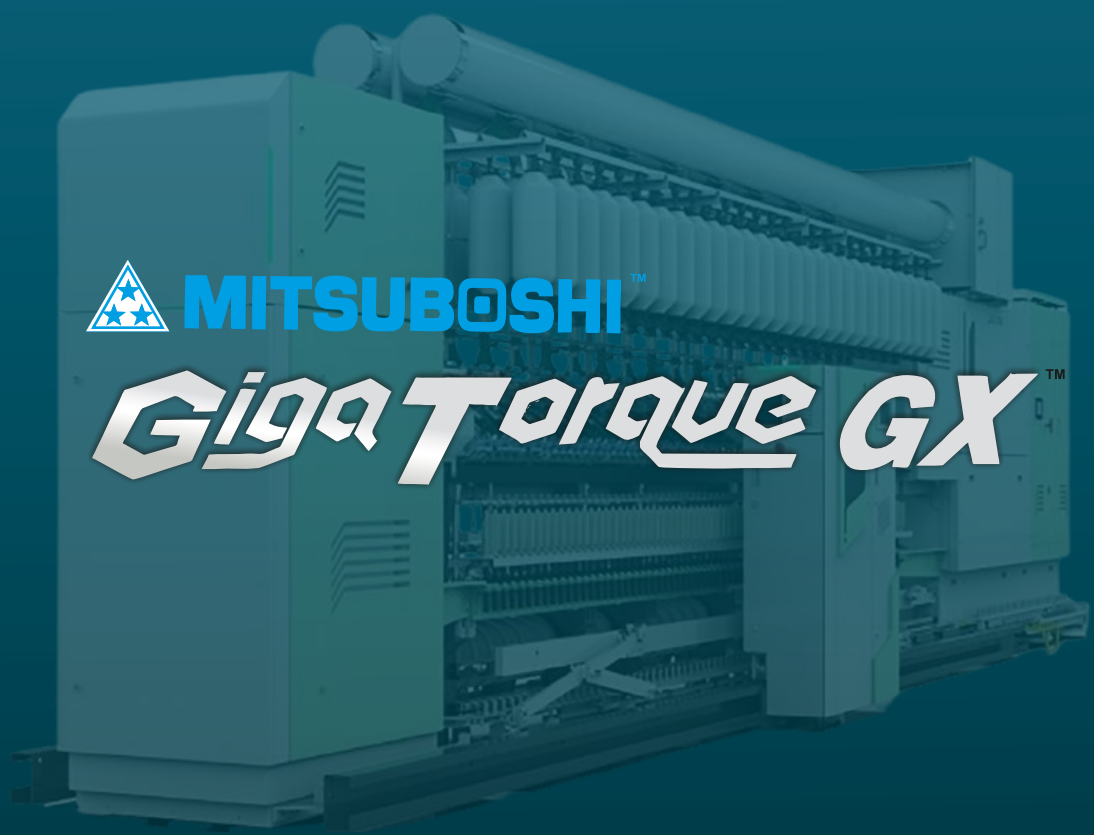
Mylon Metallics Pvt. Ltd.

(F):SF 38/2, Arasur, Near LMW Foundry Division, Coimbatore 641 407
(O):46, Bharati Nagar, Peelamedu, Coimbatore 641 004
T:+91 98947 56798 / 90470 22798 **E**: mylonmetallics@gmail.com

MSB

OEM Spec





MITSUBOSHI™

Giga Torque GX™

MANGAL SINGH BROTHERS PRIVATE LIMITED

Plot No. A33, TTC Indl. Area, MIDC, Thane-Belapur Road, Khairane, Navi Mumbai 400 710

Mobile : 9322804895 | Website: www.mangalsingh.com | E-mail: sales@mangalsingh.com

RINGMANN is a leading manufacturer and Exporter of Rings for Spinning, Doubling and Twisting frames for the past 30 years. Rings confirming to any profile is manufactured as per customers request.

RINGMANN is the foremost company to introduce **"STERLING RINGS"** with a Special Coating.
SIGMA EXCEL is a new generation ring developed through R&D.

SIGMA EXCEL

- Fine surface finish with low friction
- Low Running-In Period
- Instant start-up Speeds
- Longer Life
- Less Hairiness
- Fewer End-Breaks
- Less Pneumafil waste
- High Production of Yarn

EXCEL

BLACK DIAMOND

- A Simple rust Preventive treatment
- High Surface Finish
- Low Price and affordable by all
- Gradual Start-Up Speeds
- Normal Life for Higher Speeds
- Normal Production of Yarn
- Average End-Breaks
- Less Hairiness

SPICON RINGS

CONICAL RINGS

RING LIFE for Cotton above 50s NE

RINGMANN

S.F 192, Airy Garden, Kannampalayam Road, Ravuthur Pirivu,
Coimbatore - 641 402, Tamil Nadu, INDIA.
Mobile : +91 93626 41101, 93626 41102
Email : sales@ringmann.in | Web : ringmann.in

SIMTA JACOBI

SIMTA
Bobbin & Cone Transport System

INNOVATIVE PRODUCT AT GLOBAL STANDARDS

OHTC | Spindle Tapes | Flocked Clearer Roller | Auto - Cone Packing
BTS | CTS

Leap SIMTA

SIMTA GROUP OF COMPANIES

S.F No. 683 A, Railway Feeder Road,
Ravathur Post, Sulur Via
Coimbatore 641 103, INDIA
Ph : 0422 2680705 | +91 98422 31483
www.sales@simta.com | info@simta.com

INNOVATION SINCE 1991 35 TO INSPIRE

www.simta.com

aspire excel

Keep trust, We care rest

Delivering the Ultimate Perfection

Auto Doffer Retrofit

Bobbin Transport System

Autocone Packing System

EXCELspin Compact

Aspire Excel's understanding and relationship with customers has driven us to create products that add value to your business and increase in productivity. Our renowned, customised products offer Reliability, Flexibility, Space Saving and Low Maintenance.

OUR PRODUCTS OFFER:

- ✓ Saving in Man Power
- ✓ Increased Efficiency
- ✓ Reliability
- ✓ Best in Class After Sales Support
- ✓ Value for Money

ASPIRE GRAND EXCEL AUTOMATION

111/109A, Civil Aerodrome Road, SIHS Colony
Coimbatore 641014, Tamil Nadu, India

+91 97509 55133
+91 97509 55131

aspiregrandexcel@gmail.com
www.aspireexcel.com

CE

www.bharatbeams.com

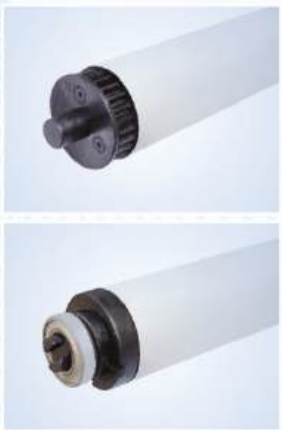
Warper Beams

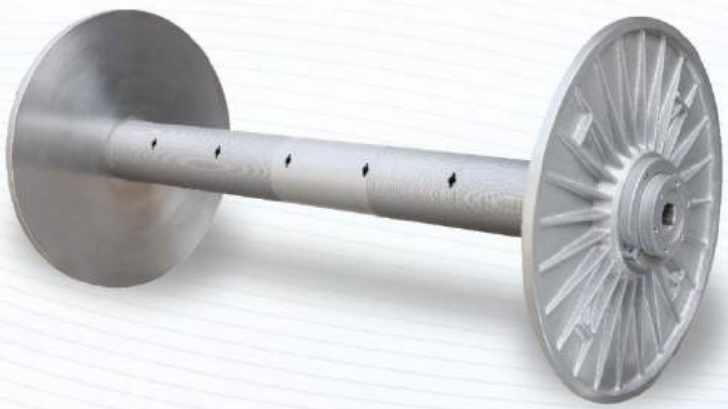
We offer dynamically balanced warper beams of flange diameter up to 1600 mm and warping width upto 2800 mm suitable for Karl Mayer, Benninger, Hacoba, Ukil, Ramallumin, Tsudakoma, Prashant West Point, Jupiter, Prism, Amritlakshmi and other high speed warping machines suitable for spun and filament yarn.

Chucks and Hubs

Weaver Beams

Weaver Beams for Picanol, Toyota, Tsudakoma, Dornier, ITEMA, SMIT, Sulzer and other types of Airjet, Rapier and projectile weaving machines in single section and double section construction with or without differential motions upto 1250mm flange diameter and 540cms working width.





Cloth Rolls

We also manufacture
Warper and Weaver Beams suitable for Synthetic Industry and for Technical Textiles.

Manufactured by :

BHARAT BEAMS
PRIVATE LIMITED
Manufacturers of Weaver's Beams
&
Dynamically balanced Warper Beams

Plot No. 10/3, Phase I, G.I.D.C., Vatva Industrial Estate, Ahmedabad - 382 445. INDIA.
Ph. : +91 79 29706768 / 40321148.
E-mail. : snehal@bharatbeams.com, jcpanchal@bharatbeams.com

Textile Trends

68TH YEARS OF PUBLICATION

INDIA'S WIDEST CIRCULATED MONTHLY ON TEXTILE & ALLIED INDUSTRIES

Single Copy : Rs. 60.00
Annual Subscription (Post Free) : Rs. 650.00
Overseas (Air Mail Post Free) : ST £ 75.00 / US $ 145.00
Bangladesh (Post Free) : US $ 60.00

Vol. LXVIII
No. 01
APRIL 2025

Publisher : Shri D. J. Dutta

Editor : Tapan Kumar Banerjee

Shri John C Nathan
Manager - Marketing
Ph. : +91 98940 14500

Bangladesh:

Subrata Aditya, CEO
Tradeway International
Eastern View, 10th Floor, Room No # 14/15,
50 D.I.T Extension Road ,
Dhaka -1000, Bangladesh.
Phone : +88 02 222220578
Mobile : +88 01711-287636
E-mail- tradewaybds@gmail.com

Published Monthly by

Eastland Publications Private Limited

44, Chittaranjan Avenue, Kolkata - 700 012, India
Phone : 91-33-2212-2233, 91-33-2212-1096, Fax : 91-33-2212-1096
E-mail : textrend58@gmail.com/textiletrendsindia@gmail.com | *Website : www.textile-trends.in*

LPT®

GLI-CLEAN

A OHTC for Spinning & Weaving

BUSBAR AND CHAIN DRIVE SYSTEM:

- Pioneer to install OHTC for Ring Frames with Auto-piecer by using a tilting mechanism.
- Travelling speed possible upto 22 mtrs/min.
- Conveniently suits upto 2400 Spindles/Ringframe and 280 Spindles/Speedframe.
- Achieve power saving through VFD for both traverse and blowing (optional).
- Improved blowing and suction.
- In house design and manufacturing of complete OHTC.

BELT DRIVE:

- Travelling speed possible upto 12 mtrs/min
- Patented design of self discharging (waste) unit
- Proven upto 1824 Spindles/Ringframe.
- In house design and manufacturing of complete OHTC.

LAKSHMI PRECISION TECHNOLOGIES LIMITED

(Formerly known as Lakshmi Precision Tools Limited)

Arasur- 641407. Coimbatore District, INDIA. Phone: +91 422 617 3500

Email: mktg_textile@lptindia.com | Website: www.lptindia.com

ISO 9001 ISO 14001 ISO 45001 BUREAU VERITAS Certification

CONTENTS

Textile Trends
R NI No. 2815/58
APRIL 2025

Editorial	----	19
World Economy and Trade Trends	----	20
Indian Economy and Trade Trends	----	23
In the world of fashion old turns into new	----	21
Cotton purchase at MSP hits 1 cr bales	----	22
India rapidly evolving into high growth luxury garment retail market with kidswear	----	23
Textile may not be impacted by the tariff needle	----	24
The simple versatile 'gamchha' turns into clothes	----	25
Legacy Apparel struggles with GeNext Rebellion	----	26
Sustainable Innovations in Crochet through up-cycling leftover yarn — *Dr. Anshu Sharma, Ms. Shama Shaikh*	----	27
Artificial Intelligence Restyling the Fashion Industry — *Rubaani Manrai, Radha Kashyap*	----	33
Scale down tariff with U.S., suggest textile exporters	----	36
Review on Analyzing the Mechanical Properties of Banana/Rayon Woven Hybrid Composites for Chin Guard — *T. Athees Kanna, L. Sabarinathan S. P. Arjunraj, Mr. P. Maheswaran*	----	37
Export Prospects and Markets	----	42
"A record breaking Catalogue Show hosted by ITAMMA at Erode on 22nd March 2025"	----	48
Corporate News	----	51
Textile Events	----	64
Propelling Excellence in Cellulose Yarn Production: V. Thangavel & Sons Success with LMW's Smart Machinery	----	68
India's Textiles mills to face tough challenges in the wake of World Tariff war	----	70
Science in Industry	----	72
Index	----	84

OM CORPORATION

A Leading Air Jet Spares Supplier Company in INDIA

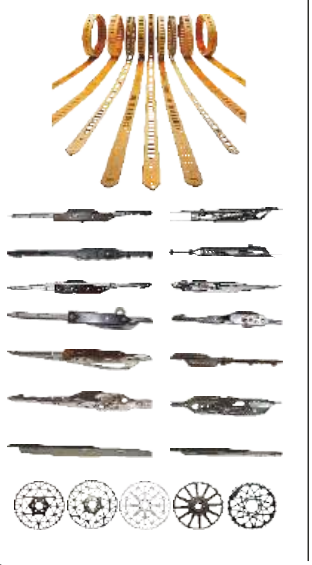
Manufacturer, Importer & Exporter of all kinds of Weaving Machinery Spare Parts i.e. Air Jet, Water Jet, Rapier etc. & Supplier of all kinds of Textile Second-Hand Machinery.

Since 1985 we, Om Corporation, have been concentrating mainly on producing the export quality textile weaving machines Spare parts. For all needs of modern weaving machines, Om Corporation produces a high quality spare parts by the qualified engineers and technicians. Professionalism is inbuilt at bottom of the sales & manufacturing strategic schedule. We are fully integrated & created a critical asset and committed to upholding spread out of the world wide customers network. We not only present our customers absolute better products but always believe in high time mind it to customers comments. Prompt respond to there current needs for anticipating to future demand. We serve a quality and confidence with fair price. We value your money. That's also creating a great Image for a sound future for our products, which together with best services of all makes Om Corporation. A reputed Company concerns its own wide sector. At last Om Corporation has played an important role for developing a global textile scenario.

AIR JET & WATER JET MACHINE PARTS

CAM & DOBBY PARTS

RAPIER MACHINE PARTS



OM CORPORATION

601-A, ABC-1, Behind Gala Business Centre, Nr. St. Xaviers College Corner, Off C. G. Road, Ahmedabad-380 009, Gujarat, India

Email: info@omcorporation.org / co.in | Web: www.omcorporation.org / co.in

EDITORIAL

India's textile sector to shine

India's textile sector is shining, it sees faster growth. Globally, the size of the textile trading industry is estimated at $ 800 billion, with India's share in export contribution $ 35 billion, still it is much less than China, Vietnam & Bangladesh. Recently Indian government announced a road-map of rising the exports of Indian textile products to $ 100 billion by 2030. It implies 90% CAGR (Compound Annual Growth Rate) over the next 6 years. Reaching this target entails investment close to Rs.2,00,000 crore, but also this heavy investment will generate direct employment for 3 million people.

India is emerging as a strong player in global trade. MNCs are looking to diversify their supply line away from China to India due to geopolitical tension with USA, UK and European Union as well as rising labour cost in China. These problems have led the potential shift of exports from China towards India. Some of the global brands have begun the reducing their exposure to China. We believe India can utilize this opportunity with diverse business friendly parameters. We know India's competency across factor cost and a well-established textile eco system (across cotton segment) will allow it to benefit from 'China + One' theme.

Apparels and home textiles play the leading role to strengthen India's textile sector. Within the textile sector, India remains most excited about garmenting and home textile space rather than commodity-based weaving, spinning and yarn manufacturers who are prone to cyclicality. The exciting matter is about garmenting what shows global retailers turn away from China and now also Bangladesh and move to India; certain large garment manufacturers will get disproportionate share in contracts, with Indian companies being already strategically positioned with retailers. Garment is a labour intensive industry and has been fragmented with no company with above $ 1.5 billion in revenue. To attract investment and generate employment, certain Indian states are providing labour subsidies to companies trying to provide a holistic eco system for manufacturers.

Currently India's does not have FTA with Europe and UK, due to higher import duty India's garment export is insignificant in those countries. India's FTA negotiation with UK is on final round, opportunity emerges as a whole new market opens up for home textile and garment players. With focus on manufacturing, especially on garments, home textiles, we believe the sector can grow faster.

Global Trade remains steady amid tariff uncertainty

Increased trade policy uncertainty and prospects of new tariffs could weigh on global trade in the medium term, even though for the first few months of 2025 it is expected to be steady, the World Trade Organisation (WTO) said recently. However, it hasn't made any revision of its forecst of growth in global merchandse trade volume for 2025, from 3% seen in last October. According to the Goods Trade Barometer of the global trade regulating body, global goods trade appeared to remain steady in the fourth quarter of 2024 and looked set to continue growing in the first months of 2025. "Ring trade policy uncertainly could have temporarily boosted trade (in last quarter of 2024) as businesses and comsumers front load imports ahead of potential measures, possibly reducing demand later in the year," the WTO said. Since assuming office US President Donald Trump has inaugurated a global trade war. With duty increases gradually being implemented, the countries impacted by these duties have related. In the third quarter of 2024 - the latest period for which WTO data is available - the volume of world merchandise trade continued to recover from the trade slump of 2023, growth 3.3% year-on-year. For 2025, the WTO had forecast a 3% growth in world trade volume. Developments in the first three quarters were in line with the WTO's trade forecast which predicted grade volume growth of 2.7% for the whole of 2024. "Although the global average has remained steady, there have been some significant regional disparities in goods trade growth. ❐

Tech titans, foreign leaders request trump to rethink AI

Senior Foreign Officials and major tech companies are pushing the Trump administration to rethink the country's global semiconductor strategy, as the US prepares a controversial framework for controlling artificial intelligence development around the world. The so-called Al diffusion rule, which restricts the number of Al processors that can be exported to most nations, prompted as outcry from tech giants like Nvidia after Biden officials unveiled it recently their in office. US allies such as Israel and Poland also have chafed at the rules, which they worry will threaten their supply of the precious chips or make their countries less attractive for Al investment. Now a slew of governments and many companies are trying to persuade President Donald Trump's team to loosen some of the regulations before the deadline for compliance arrives in less than two months. Administration officials are nowhere near a consensus of how to proceed, and it's still unclear which voices will carry the most weight in the debate. Spokespeople for the White House and commerce department, which oversees chip export controls, didn't respond to requests for comment on this story, which is based on interviews with more than a dozen people involved in or briefed on the negotiations. All of them requested anonymity to speak candidly and emphasised that the discussions are fluid. One option not currently being considered at the staff level, two people said, is a wholesale repeal. Whether more senior officials change course, however, remains to be seen. The goal in Washington is to ensure that Al development remains concentrated in the US and close partner nations. For data centers built elsewhere - from Malaysia to Brazil to India–American policymakers want Al infrastructure to align with US security standards. That includes things like implementing cybersecurity protocols and stripping Chinese hardware out of data center supply chains. To that end, the AI diffusion rule divided the world into three categories of chip access: Nearly 20 close US partners — located in Europe and East Asia — get mostly unfettered access to AI chips. At the other extreme, adversaries like China and Russia are still effectively barred from importing the technology. And, for a vast group of countries in the middle, the rule established caps on the total computing power available for export. Those restrictions affect nations with significant Al ambitions in the West Asia and Southeast Asia, many of which hadn't been affected by previous rounds of semiconductor rules. Companies seeking to build data centers in place like

the UAE or India can apply to bypass those national limits by agreeing to US guardrails. But there are still restrictions on how much capacity firms can put in any one country. ❐

New China Trade Deal 'Possible' inspite of having tension, Says Trump

US President Donald Trump said it would be possible to reach a fresh trade deal with China, signalling he is open to heading off a brewing trade fight between Washington and Beijing. 'It's possible, it's possible," Trump told reporters on Air Force One when asked if we would make a new agreement with China. Trump did not describe the parameters of a potential deal, and any agreement would face significant obstacles — some of the president's own making. Trump has ratcheted up pressure on China with an additional 10% tariff on all imports from the country, punishment for what he said are unfair Chinese trade practices and failure to stop the flow of fentanyl into the US. The president nonetheless heaped praise on Chinese President Xi Jinping, but once again did not say if or when they would speak directly. "There's a little bit of competitiveness, but the relationship I have with President Xi is, I would say, a great one." Trump said. Trump brokered what was billed as an initial trade deal with China in Jan. 2020, under which Beijing promised to crack down on theft of US trade secrets and technology, pledged to pruchase an additional $200 billion in American product by the following year and lower some trade barriers for US exports. But the relationship was derailed just weeks later when the coronavirus pandemic swept the globe, which Trump blamed on China. "They had about $50 billion worth of our product, and we were making them buy it. The problem is that Biden didn't push them to adhere to it." Trump said. referring to his predecessor : Trump's comments, made during Asian market hours, are the latest example of the president's ability to influence market sentlement with a few short words, forcing China-focused traders to parse scant details and tone for clues as to the future of the US-China relationship. ❐

Beijing unveils Plans to Boost Consumer Spend

Chinese government officials outlined steps they are taking to try to boost domestic demand by getting consumers to spend more as a tariff war launched by US President Donald Trump threatens to curb the country's exports. Che Shiyi from the People's Bank of China said that the regulator will study creating new tools to increase low cost funding for important consumption areas. On the spending side, the government has already provided a first tranche of 81 billion yuan ($11.2 billion) to local governments in January for a rebate program to boost auto and appliance sales, announced Li Chunlin, the vice chairman of the National Development and Reform Commission. The officials spoke at a news conference one day after the government, together with the ruling Communist Party, released a multi-faceted plan to try to boost consumer spending. The moves seemed designed to demonstrate that the government is committed to reviving a sluggish economy. ING Bank's chief Greater China economist Lynn Song, in a report on the plan, said, "While there are few new details on how the government will increase spending, the details of the plan show a greater determination to tackle China's consumption problem this year". New government data released of late showed signs of improvement in the first two months of the year, though housing market weakness remained a drag on growth. Retail sales were up 4% in January and February compared to last year, more than forecast. Industrial production rose 5.9%, the National Bureau of Statistics reported. The stronger than expected data helped buoy stock markets in Asia. A bureau spokesperson said the economy is moving in the right direction but cautioned that challenges remain in a home and abroad. Trump has imposed a 20% tariff on Chinese products, which could set back an economy with a high dependence on exports he reiterated his intention to push ahead with more tariffs in early April. "The external environment has become more complex and grim, domestic effective demand is insufficient, some companies are facing difficulties to production and operation, and the foundation for the continuous recovery of the economy is still unstable," Fu Linghul said at a conference. He added, though, that China's foreign trade has proven resilient. ❐

Trump to impose 25% tariff on nations buying Venezuelan oil

US President Donald Trump said he would seek a 25 per cent tariff on any nation purchasing oil and gas from Venezuela, citing migration and criminal gang members in the US. "Any country that purchases oil and/or gas from Venezuela will be forced to pay a tariff of 25 per cent to the United States on any trade they do with our country. All documentation will be signed and registered, and the tariff will take place on April 2, 2025," Trump wrote recently on his social media site. The potential move, reminiscent of an oil sanction, would particularly affect China, a major purchaser of crude from the South American country. Exports of Venezuelan crude had risen to a five-year high in February, before the Trump administration said it was forcing Chevron Corp to wind down its operations in the country by April 3. The move escalates tensions with the South American nation ruled by socialist leader Nicolas Maduro since 2022. Trump said he is imposing the move because, he said, Venezuela has sent "tens of thousands' of people to the United States who have a "very violent nature"."Venezuela has been very hostile to the United States and the Freedoms which we espouse," Trump wrote. Earlier this month, Trump issued a 30-day wind down of a license that the US had granted to Chevron since 2022 to operate in sanctioned venezuela and export its oil, after he accused President Nicolas Maduro of not making progress on electoral reforms and migrant returns. China, which already has been the subject of US tariffs, is the largest buyer of venezuela's oil, the OPEC member's main export. In February, China received directly and indirectly some 503,000 barrels per day (bpd) of Venezuelan crude and fuel, which represented 55 per cent of total exports. Spain, Italy, Cuba, and India are other consumers of Venezuelan oil. US imports of the oil are set to end in early April unless Trump extends the wind down. There was no immediate response from Maduro's government to a request for comment. Trump earlier this month invoked the 1798 Alien Enemies Act to justify the deportation of alleged members of Venezuelan gang Tren de Aragua without final removal orders from immigration judges. ❐

U.K. increases military spending, announces deeper welfare cuts

The U.K.'s Chancellor of the Exchequer, Rachel Reeves, announced that she would deepen previously announced cuts to disability and sickness benefits as part of a £14 billion package to fix the country's public finances. The chancellor, who emphasised higher borrowing costs and greater trade uncertainties in the world, also confirmed a previously announced increase in arms expenditures as part of the U.K. increasing its contributions to the defence of Ukraine and Europe. "The increased global uncertainty has had two consequences, first on our public finances, and second, on our economy," Ms. Reeves said as she unveiled her 'Spring Statement'–an update to the government's annual Autumn budget. The speech came on the same day the U.K.'s independent fiscal watchdog, the Office for Budget Responsibility (OBR), halved the U.K.'s growth rate for 2025, from 2% to 1%, but upgraded growth over the next few years. In the face of opposition from its own party, the government had announced welfare cuts of late which it claimed would result in savings of £5 billion. The OBR had rejected these numbers, estimating instead that the resulting savings would fall short by £1.4 billion, necessitating further welfare cuts. Ms. Reeves confirmed recently that the additional welfare cuts would save £4.8 billion. "If you can work, you should work ; but if you can't work, you should be properly supported," the chancellor said, suggesting the too many people were qualifying for 'Personal Independence Payments (PiP)' each day. Ms. Reeves also confirmed an increase in defence spending of half a percentage point of GDP to 2.5% in 2027 and a "down payment" of £2.2 bn in the next fiscal year, funded by cuts to foreign aid. The chancellor touted the increased defence spending as a catalyst for jobs in the defence sector. The increase in defence spending was first announced by Prime Minister Keir Starmer, in February, in response to pressure from U.S. President Donald Trump on European countries, to increase their defence expenditure and to fill funding gaps for Ukraine's defence as the U.S. steps back from assisting Kyiv financially and militarily. ■

INDIAN ECONOMY AND TRADE TRENDS

Indian & UK on the verge of free trade agreement after years of delays

India and the UK are "very close" to agreeing a long-awaited free trade agreement just weeks after the two countries restarted talks, a senior Indian diplomat said. "We are very close, and this agreement is going to be a gamechanger for both of us," Nidhi Tripathi, economic minister in India's High Commission in London, told delegates at the British Chambers of Commerce trade conference in London recently. "This will bring a lot of predictability and certainty for ourservices suppliers, and we are very hopeful." A spokesperson for the UK's department for business and trade declined to comment on the progress of the deal. Tripathi's remarks suggest envoys are finally homing in on a trade deal between the two nations more than three years after the dialogueg was launched under Britain's then Prime Minister Boris Johnson. The new Labour government's business and trade secretary, Jonathan Reynolds, travelled to India in February to restart the talks, which had been paused in 2024 due to elections in both the UK and India. One UK official close to the negotiations said in the aftermath of the visit that progress on the talks was more positive than they could remember at any point in the past. That was helped along by the fact that Reynolds appeared to genuinely get along with his counterpart Piyush Goyal, the official added. The two countries have held more than a dozen rounds of talks since they began in January 2022, and several self-imposed deadlines to conclude the negotiations were missed by Johnson and his successor Rishi Sunak, who had hoped to sign a deal before last July's general election in the UK. ❐

Industrial output growth climbes to 8-month high of 5%

Industrial output growth quickened to an eight-month high of 5% in January on expansion in manufacturing and mining sectors, according to data from the National Statistics Office (NSO) released recently. The Index of Industrial Production (IIP) had come in at 3.55 in December. January's growth was led by an expansion in manufacturing which rose 5.5% and mining and quarrying that expanded by 4.4% in reporting month. The sectors grew at a slower pace of 3.4% and 2.7% respectively in December. The faster pace of growth in the two sectors compensated for the slowdown in the electricity sector that expanded at a slower pace of 2.4% against 6.2% in December. Going by use-based classification, barring primary goods and consumer goods, most sectors experienced slowdown in output growth. Primary goods output growth quickened to 5.5% in January from 3.8% a month ago. Consumer goods sector output increased at a pace of 2.6%, as against December reading, when output had shrunk 2%. Output in consumer durables sector expanded at the slowed pace in three months at 7.2% against 8.3% in December and 14.1% in November. "IIP growth at 5% is impressive as it also involves manufacturing growing at 5.5%," wrote Madan Sabnavis chief economist, Bank of Baroda, in a note. "For the full year, growth can be expected to be between 5-5.5% if these trends are maintained." ❐

Feb trade gap narrows as imports fall more steeply than exports

India's goods exports in February fell 10.85 per cent (year-on-year) to $36.91 billion, the fourth consecutive month of decline, in the backdrop of the US' reciprocal tariff threat, volatility in global petroleum prices and sanctions affecting the gems and jewellery sector. But the trade deficit during the month narrowed to $14.05 billion, the lowest in over three years as imports dipped 16.3 per cent to $50.96 billion pulled down by gold and petroleum, per government data. "Although FY 25 has been a difficult year, we are definitely moving towards achieving $800 billion in combined exports of goods and services," Commerce Secretary Sunil Barthwal told a press briefing recently. "Importers from the US are holding back some of their orders because of the April 2 deadline (for reciprocal tariffs). If the voyage takes one and a half months, by the time the goods land, they will be tariffed. So, without knowing what kind of

tariffs that will be imposed, they don't want to import," an official source said. Despite the tariff hiccup, the US was the top export market for India in February with shipments increasing 10.37 per cent to $7.91 billion. Exporters say that some of the increase was due to certain consignments getting expedited in anticipation of the tariffs and that the actual impact will be clear when the reciprocal tariffs get imposed. India's nonpetroleum exports in February totalled $337.01 billion ($316.64 billion). Gem and jewellery exports dropped 20.74 per cent to $2.53 billion in February because of the sanctions effect (on Russian diamonds), Barthwal said. Imports declined more sharply than exports with a fall in gold buys to $2.3 billion and petroleum to $11.8 billion from $2.68 billion and $13.4 billion respectively the previous month. "While exports faced challenges, particularly due to the tariff war, the sharp decline in imports signals a reduction in demand for foreign goods, presenting opportunities for domestic industries to grow," said FIEO President Ashwani Kumar. Consequently, trade deficit in the goods sector narrowed significantly to $14.05 billion ($19.51 billion). According to Aditi Nayer, Chief Economist at ICRA, the narrowing of trade deficit is largely explained by a compression in imports of crude oil, gold and silver. "A portion of the y-o-y decline in merchandise exports can be attributed to the base year effect related to the leap month. The trade deficit was also significantly lower than the average of over $23 billion during the first 10 months of FY 25. We expect the current account to witness a surplus of ~$5 billion in Q4 FY2025, equivalent to ~0.5 per cent of the GDP, in the ongoing quarter," Nayar said.❐

Overseas direct investments in FY 25 surpass last fiscal's total by 15%

Amid the Indian equity market seeing massive outflows, Overseas Direct Investments (ODI) by Indian institutions and individuals during the April-January period of the current fiscal have exceeded the total ODI of the last fiscal by 15 per cent. Experts believe that besides displaying India Inc's strategic ambitions, this trend shows that the next growth cycle may not be led by emerging economies. Data from the Finance Ministry show that ODI in April-January touched $16.364 million against $14, 234 million recorded for the full fiscal last year. This growth was led by the financial, insurance and business services sectors (which accounted for 39 per cent of total outflows), followed by manufacturing (23 per cent) and wholesale trade. Among recipient countries, Singapore emerged as the top destination, followed by Mauritius and the US. "Increasing participation of Indian firms in cross-border M&A and expansion efforts indicates a maturing approach to globalisation supported by rising domestic capital availability and evolving strategic amibitions," he added. However, some experts had a different opinion. According to Mayank Arora, Director-Regulatory with Nangia Andersen LLP, given the hawkish interest rate stance of monetary authorities for the most of FY25, investors—both foreign and domestic — were attracted to safer investment options with decent return potential. "Additionally, growing expectations of ever-increasing nativist tendencies in the US led investors to believe that the next growth spurt may no longer, be led by emerging economies," he said. A similar trend was witnessed in China when, after decades of heady growth, domestic Chinese investors looked to diversify their portfolios by looking overseas investment norms in China. Hong Kong was used as a medium to spread Chinese investment abroad. "A similar route has now been opened through the operationalisation of Gift City in Gujarat, which is likely to act as a two-way door—facilitating both inbound and outbound investment," said Arora. Under the ODI mechanism, a company, body corporate, L.L.P, partnership firms or individuals can invest abroad. Financial commitment (comprising of quality, loan and guarantee issued) shall not exceed 400 per cent of the net worth or $1 billion in a financial year, whichever is lower. Any resident individual may make ODI by way of investment in equity capital or OPI (Overseas Portion Investment) subject to the overall ceiling under the Liberalised Remittance Scheme, i.e. $250,000 per annum. ODI is prohibited in real estate, gambling or dealing with financial products linked to the rupee without the approvals of RBI. ■

In the world of fashion old turns into new

In the narrow bylanes of Delhi's Nizamuddin West, close to the dargah, is the "Swiss watch repairer of Nizamuddin". Javed Khan. He repairs, homes and resells vintage watches. Delhi-based fashion consultant and writer Varun Rana has snagged two timeless time-keepers from him. His most prized possession, however, is a 1988 HMT Varun. His hunting grounds are watch repair shops which, he is sad to note, are fast disappearing.

Be it watches, jewellery, accessories, or clothes, what is old is new, thanks to a focus on fashion's wasteful ways. The retro is relevant. It's often said that a vintage shopper rarely divulges their sources. But spoke to second-hand shoppers and specialists to reveal the secrets of vintage shopping.

To know about vintage

"Vintage" is widel used in fashion to mean pre-loved, says fashion journalist and author Sujata Assomull: "Vintage clothing are pieces from the 1990s or before, and signify something about the time it lived in. Like an '80s YSL jacket at the time of power dressing. Or a '90s Abuand Sandeep piece that was about decadence. You buy a vintage piece because of its symbolism." Stylist Rin Jajo says, "Now, the '90s are the most distinguishable from our current time and anything from then and before can be considered vintage." Vintage usually refers to items that are at least 20-100 years old.

Feeling of Nostalgia

Ritwik Khanna, founder of Rkive City, a design house that works with vintage and dead-stock textiles, is himself a vintage hunter. He says, "Vintage is central to how I engage with clothig. I look for piece that carry a sense of history: archival military surplus, workwear and garments that showcase a particular era's construction techniques." He counts the 1960s Levi's denim as his best find, sourced from a sorting facility in Kandla, Gujarat. He adds, "Vintage forces you to engage differently. It teaches you about construction, fabric ageing and silhouettes that no longer exist."

Houston-based former architect Amanpreet Birgisson says mass-produced, generic clothing bores her. "Style-wise, I am a lone wolf — fiercely independent and never following trends." She looks for a unique item that offers quality, style, price — and vintage checks all the boxes.

Trust is hard-to-define

Arti Sandhu, associate professor of fashion design at the School of Design in College of Design, Architecture, Art and Planning, University of Cincinnati, US, says. "There was a time I was really into vintage, often '40s and '70s, dresses." A Comme des Garcons jacket from the 2000s and a Victorian quilted petticoat are her best finds. She says. "Trust is a hard-to-define concept. Something can be made to look old. Ultimately, it's about how it feels to you."

Agrees Khanna: "Over time, you develop an instinct for spotting real versus reproduction by checking tags, understanding stitching and when material ageing looks natural." In India, it's about forming relationships with vendors and physically examining pieces.

Chat with the seller

Gokul M, a Bengaluru-based publicist for River EV, keeps a lookout for lapel pins, watches, sunglasses, porcelain ashtrays and more. Like most vintage shoppers, he counts the hunt as the most exciting part. He has trawled antique stores, flea markets and chor bazaars. He says, "Always chat with the seller and if you click they offer you things that are not on the shelf."

Join a community

Rana advises to join a group of vintage buyers — online or offline. Agrees Gokul who hunted down an HMT Karthik through watch clubs: "With vintage watches, especially, the community is quite strong and have pages on social media." Rana says they also list authentic sellers and tell how to spot fakes. Priyanka Rajwar, founder of Vayaka India, a sari studio in Bengaluru, shops for vintage saris through a few trusted social media communities.

To bargain or not?

Sandhu say, "Bargaining in online spaces is hard but there are sites that ask you to make an offer." Gokul is all for bargaining — at least in flea markets. "Shop with a poker face," he says, "and compare prices online."

Birgisson makes a counter offer only if she feels she's being played. She says, "Indeed, part of the hook of vintage is getting something unusual at a great price. But that thrill-seeking needs tempering with the value of the item." Raman Chawla, founder of Samaaj Studio, which creates artisanal pieces from vintage textiles, says bargaining is fine in flea markets. "If a piece has minor wear or damage, or if you're buying multiple items, a polite negotiation might work online too," he says.

Make advance a vintage mindset

Birgisson says vintage shopping is intuitive, there's no method to madness. "I almost never ship for anything specific. I let the item reveal itself to me. Vintage shopping is a mindset." Her vintage wardrobe is full of delightful finds. Turkmen Chirpy, a robe, bought many decades ago, a kora Bansrasi sari, a French man's sleeping shirt and more.

Mix of online & offline shopping

Sujata Newar, Shillong-based founder of The Local Vintage, grew up shopping for vintage. She says, "Instagram shops are a great way to shop vintage in India. However, you have to be cautious while navigating the numerous thrift shops on the platform. Always read reviews, verify the store's authenticity and be mindful of potential scams."

In the world of fashion old turns into new

Khanna says while there's a tradition of passing down heirloom fabrics, the idea of second-hand clothing as valuable rather than disposable is still evolvign. His advice: "A mix of online and offline shopping is key. But some of the best finds are still offline, like in export-surplus markets, old tailoring shops, even industrial warehouses where deadstock fabric sits untouched." Be patient and research.

Shop physically

Rajwar prefers shopping in person because one can find rare items in old markets, like a silver chain she found in a shop in Landour. Her advice is to visit old jewellery shops and ask for pieces that are about to be melted. She says, "One cannot be sure about the authenticity online — at least with jewellery." Offline, you can also check for flaws.

Choose timelessness

Always question your purchases. Birgisson shares her checklist, "Craftsmanship and material will be the first thing to look for. Well-made clothes serve well. Versatility is also important. I almost never go for whimsy."

Dig in

Chawla says one of his best vintage finds is an Arc'teryx jacket he picked up for just ₹150 at the Majnu Ka Tila market in Delhi. It typically retails for $600-800. "I spotted it in a pile of jackets on one of my thrift trips. Recognising the logo and quality, I knew immediately it was a great piece."

Quality Checks

Chawla shares his quality checks: "Check the hardware — high-end designer garments often come with high-quality zippers and buttons that are branded with their logos. This is usually a reliable indicator of authenticity. Checking fabric quality, stitching and interior labels is also crucial."

Aparna Balaji, risk consulting, says there is a checklist one can follow. For saris, she advises looking for weave and craftsmanship, as handwoven saris have slight imperfections, and checking the texture and zari colour (real ones will show oxidisation). She says, "If the price seems too good to be true, it probably is because vintage silk saris in good condition are never dirt-cheap." She also likes to smell it — as old silk and cotton have a distinct, rich smell.

Look in your closet

Jajo says the best way to start is by looking in the closets of your parents and grandparents. He adds, "Since people didn't shop as often as we do now, clothes were meant to last." ■

Cotton purchase at MSP hits 1 cr bales

The progressive procurement of cotton by the state-run Cotton Corporation of India (CCI) at the minimum support price (MSP) has touched 1 crore bales (170 kg each) for the 2024-25 marketing season.

Telangana tops the list of States where maximum quantity has been procured, followed by Maharashtra and Gujarat.

"One crore bales have been purchased and it is still going on," said Lalit Kumar Gupta, Chairman-cum-Managing Director, CCI.

As of March 26, CCI had purchased 40.38 lakh bales in Telangana, followed by Maharashtra at 29.34 lakh bales, Gujarat at 14.1 lakh bales and 5.22 lakh bales in Karnataka.

In Madhya Pradesh, 3.95 lakh bales have been procured, while in Andhra Pradesh the progressive procurement stood at 3.83 lakh bales of 170 kg each.

In Odisha, 2.06 lakh bales have been procred, while in Haryana the purchased quantity stood at 0.61 lakh bales and 0.50 lakh bales in Rajasthan.

This year's cotton procurement by the CCI is the second highest since 2019-20, when the State-run agency procured over 1.05 crore bales.

With the procurement figures touching one crore bales of 170 kg each, the CCI has purchased over a third of the cotton produced in the country during the 2024-25 crop season.

The Committee on Cotton Production and Consumption (COCPC), in its recent meeting, reduced the crop estimates for the 2024-25 season at 294.25 lakh bales of 170 kg each from the earlier projections of 299.26 lakh bales in November last year.

As per the Cotton Association of India (CAI) data, the cumulative market arrivals during the 2024-25 marketing season till March 29 stood at 244.25 lakh bales. With this, over 82 per cent of the cotton produced during the year has arrived in the market so far. The daily arrival stood at 52,000 bales recently.

Raw cotton prices still ruled below MSP levels in some parts of Gujarat and Maharashtra recently.

"CCI faces the challenge of selling its raw cotton bales earlier and at better prices. There's no global support for cotton prices at the moment. Indian spinning mills will eventually need to buy from CCI to meet their annual requirements but they are not in a hurry to do so. Based on current international prices, exporting CCI cotton is not viable. It appears that once private market stocks are depleted, CCI may raise prices to align with imported cotton," said Anand Popat of Cotyarn Brokers in his weekly note recently. ■

India rapidly evolving into high growth luxury garment retail market with kidswear

Was Suri Cruise — the daughter of Hollywood actors Katie Holmes and Tom Cruise — the first bona fide celeb child style star? Probably. Back in the day, five-year-old Suri, now 18, was a paparazzi darling for her designer dresses and custom high heels. Many claim it was Suri's clothes that shaped the demand for premium childrenswear.

Since then, she may have passed the baton on to the current crop of chic children, led by North West, Kim Kardashian and Kanye West's daughter, and Blue Ivy Carter, Beyonce and Jay Z's daughter, but the era of premium kidswear is fully upon us. In India, Taimur Ali Khan (Kareena Kapoor Khan and Saif Ali Khan's son) led the charge. In 2019, in an interview to online platform MissMalini, Kareena said she didn't believe in buying him luxury brands: "I am very sorry. He doesn't earn his own money. His parents work really hard to buy his outfits and, you know, my parents never gave me branded clothes till I made my own money."

She is the typical desi parent, price-sensitive when it comes to children's clothes. But that is changing now, says Rehat Brar, founder of Sher Bache, a Jaipur-based, handmade, artisanal brand for children that was founded during the pandemic. Working only with handblocked, hand-embroidered ensembles for kids from 0 to 14 years, the brand starts at ₹4,000. She says, "Kids' clothes were always a bit ignored. But now parents, mostly mothers, have become self-conscious and see their kids as an extension of their identity."

The premium kidswear segment in India typically falls within the ₹1,500-10,000 range per outfit. A 2017 report by Business of Fashion said millennial parents are the driving force of the industry as they don't want to sacrifice their own aesthetic choices. They want their children to look cool — like a mini me.

Growing up

In India, with its large young population, it is the right time to enter the segment. So believe Samir Gadhok and Avani Raheja, co-founders of Burgundy Brand Collective (BBC), who have brought the French luxury kidswear brand Jacadi Paris to India. It opened its first store in Mumbai last recently. Gadhok says "India is rapidly evolving into a high-growth luxury retail market, and kidswear is no exception. While traditionally perceived as price-sensitive, Indian consumers today prioritise quality, exclusivity and brand heritage — especially when it comes to their children.

In their market study, BBC found a need for a premium, heritage-driven children's brand. A lot of people still rely on international travel or multi-brand boutiques to buy high-end childrenswear and there's a market for luxury gifting as well. They plan to open their second store soon in Bengaluru and launch an ecommerce site "to cater to modern parents who prefer online shopping," says Gadhok.

Ecommerce has been a gamechanger for most of the premium brands in the segment. According to a report by the online marketplace. The Baby Bo, the Indian ecommerce market for children's clothing had a 15% compound annual growth rate (CAGR) in the last five years, propelled by factors like rapid digitalisation and changing consumer preferences.

Swati Saraf, founder of Les Petits (part of the DS Group-owned Prive Luxury), agrees. The luxury retail brand opened its doors in Delhi's DLF Emporio in 2011 and has stores in Mumabi, Hyderabad and Bengaluru, housing brands like Dolce & Gabbana, Fendi and Versace. They started an ecommerce portal in 2020. "Since then, the brand has shown growth in high double digits. It's now 20% of the entire business," she says.

When sisters Dipti Ahuja and Dipna Daryanani launched Love the World Today (LTWT), a mindful kidswear brand, in 2015, they wanted to create something homegrown for children that is rooted in sustainability. A decade later, they say the segment has boomed, thanks to growth in double-income household, conscious parenting, more awareness about environment and growth in the direct-to-consumer (D2C) category. Daryanani says, "There's a surge in D2C brands, as if it's hygiene now to have a website to sell.' In fact, one of the biggest challenges, she adds, is how expensive it has become to reach a customer with ad spend.

They are, however, boosted by the rise in appreciation for artisanal work. A reason why many Indian designers have launched kids' segments. They include Karan Torani, Payal Singhal, Urvashi Kaur and Shubhika Sharma. This is pretty much in line with global luxury houses. After all, today's kids will grow up to be tomorrow's consumers.

Aneeth Arora, founder and designer, Pero, started the kidswear line, Chota Pero, along with the parent brand in 2009. Says Arora, "When we launched, the segment was more focused on thoughtfully designed, high-quality, unique pieces, which people found expensive. But our clientele has evolved since then." She adds, "It's true that Indian

consumers have traditionally been price-sensitive, but we are seeing a shift in this mindset, especially in the premium segment. There's a growing segment of parents who prioritise uniqueness, craftsmanship and the long-term value of well-made clothing for their children."

Ahuja says the premium kidswear market might still be niche, but that does not mean it is not lucrative. She says, "In our tenth year in business, the team has gone from 2 to 14 and the business has grown 40% in the current financial year." They plan to go global soon, just like Brar who is planning to open a store in Milan in 2025.

Brar says the entry of international brands helps to bring more awareness. "This segment is still very nascent. It will be 10 years before we actually peak," she says, adding how operating a kidswear brand has its own challenges for indie brands: you can't keep ready stock as most work on custom orders, and most sales are in the 0-5 years category. Ahuja says LTWT plans to invest in more community-building activities.

There's growing demand for aspirational fashion for children and that has made entry-level luxury a fast-growing segment. According to GlobalData's "Global Children's Market to 2028" report, childrenswear proved more resilient than adult clothing during the pandemic, due to its "essential nature and more frequent need for replacement". Saraf is excited about the growth opportunity. "While traditional, we target the high-net-worth individuals (HNI) and ultra HNIs, the rise in disposable incomes and aspirations means even the upper middle class wants to shop with us," she says. Everi Les Petits has now added more-entry-level luxury brands to its ecommerce at least like Kenzo Kids, Stella McCartney Kids and Paul Smith Junior that start at ₹4,000.

In 2017, David Park, a streetwear illustrator, launched a graphic alphabet book titled *ABC's for the Little G's*. It teaches ABC via sneaker graphics: A is for Airmax, B is for Bapesta, Y is for Yeezy... you get the picture. Bottom line: fashion is cool for children. ■

Textile may not be impacted by the tariff needle

The textile sector is unlikely to be impacted by the ongoing tariff discussions between India and the US, as neither country has a tariff advantage, industry experts said. With less than a month left for US President Donald Trump's reciprocal tariff plans to take effect, talks to reduce tariffs are in full swing. Several sectors could be affected if both nations fail to reach a consensus.

Of late, Trump had said that India has agreed to reduce its 'massive tariffs'. This comes at a time when textile hubs like Tiruppur are seeing a spike in orders from the US, The Indian industry witnessed a 14 per cent rise in revenue from exports to the United States in the April to December period of 2024-25 in ready-made garments (RMG). During the period, India's total RMG exports was $11.30 billion, compared to $10.13 billion during the April to December period of 2023-24. In 2024-25, out of the total exports in the segment, around 34 per cent or $3.79 billion came from the US, up from $3.34 billion in the last financial year. The UK is a distant second with exports of $974 million, up 9 per cent compared to the previous financial year.

In terms of tariffs on textiles and clothing,while India imposes a 10.4 per cent tariff on US imports, the tariff for Indian importers in the US is 9 per cent. "We don't have any differential advantage in textiles and garments. Definitely, we are in an advantageous position with regards to the US market after the Bangladesh crisis," said Sanjay Kumar Jain, managing director of textile producer TT Ltd.

Interestingly, the uncertainties over Trump's tariff measures come at a time when textile hubs like Tiruppur are weaving a success story. Between April and December, Tiruppur's exports reached ₹26,000 crore, almost eclipsing last financial year's total of ₹30,690 crore, according to sources in the Tiruppur Exporters' Association (TEA). The final tally for 2024-25, based on conservative estimates, could soar as high as ₹35,000-40,000 crore. Tiruppur accounts for 55 per cent of India's knitwear exports.

"We expect both governments to take positive steps to solve any possible crisis. I hope these tariff concerns will not affect us. We are getting more orders from the US market this year," said K M Subramanian, president of the TEA. The list of buyers from Tirppur includes global heavy-weights like Primark, Tesco, Next, Marks & Spencer, Warner Bros, Walmart, and Tommy Hilfiger. Australian brands like Target and Woolworths, along with European players like Duns, have also placed significant orders. ■

The simple versatile 'gamchha' turns into clothes

She doesn't have a specific memory of seeing a *gamchha* for the first time, but former Samata Party president Jaya Jaitly remembers being greeted at political meetings in West Bengal and Odisha with the cotton cloth woven with checks and stripes. "These were beautiful, colourful *gamchhas* with bright plain bodies or bearing *ikat* patterns and narrow borders with little temple spikes," recalls Jaitly, now president of Dastkari Haat Samiti. "They were long-lasting, bright and would go with so many of my saris," she says, explaining that she turned them into blouses. The politician, activist, author and crafts curator also became a collector of the *gamchha,* picking them up from weavers and artisans from various parts of the country.

In a bid to showcase the diversity of this fabric, Dastakari Haat Samiti is holding an exhibition, *Gamchha* : *From the Extraordinary in the Ordinary*, from 1-10 March at the National Crafts Museum and Hastkala Academy, Pragati Maidan, Delhi. It documents *gamchhas* from 13 states of India and from some South-East Asian countries, highlighting their regional diversity, unique craftsmanship and cultural symbolism. There will also be art installations, design interventions and live demonstrations, exploring the fabric's many uses.

This simple, coarse fabric, typically 70 × 35 inches in length and width, which traces its origin to the working-class communities' need for a practical, multipurpose cloth, has been around for a long time. Chances are that one might overlook the fabric when one sees it around the shoulders of the neighbourhood fruit seller who wipes the sweat from his brow with it or around the waist of a migrant labourer. Draped casually across the shoulders, tied around the waist or wrapped around the head, the *gamchha* is a constant companion.

According to the show's curator Suparana Bhalla, principal architect, Abaxial Design, a Delhi-based architecture and design practice firm, the *gamchha* is crafted with quality, shaped by toil, and upheld by perseverance. "In its simple weave lies the resilience of artisans, the essence of everyday utilty, and the quiet strength of tradition," she says.

Bhalla is also displaying a latticed bamboo and steel installation intertwined with the *gamchha* to reflect a dichotomy — the liberation felt when the weaver creates it and the oppression that the fabric's creator and/or wearer faces daily.

Architect and origami artist Ankon Mitra, who has created two spatial installations that reimagine the *gamchha* as multidimensional art, believes there's an innate beauty to the garment that needs to be given attention.

The *gamchha* has over the years evolved as a fashion statement in its own right, especially with celebrities and designers making it a fashion mainstay. Remember Amitabh Bachchan wearing it in *Bunty aur Babli* in 2005 or director Anurag Kashyap pairing the red-and-white indigenous stole with a Dior suit in 2012 at Cannes when he was promoting *Gangs of Wasseypur*? Or actor Dilip Kumar flaunting a bright-pink *gamchha* in the 1960s film *Gunga Jumna*?

The fabric is a favourite with several brands and designers for the versatility and diversity with which it can be used. In 2010, Rajesh Pratap Singh made a fitted red-and-white check jacket, now part of the permanent collection at London's Victoria and Albert Museum, from the *gamchha* fabric. In 2015, actor Kangana Ranaut wore a Péro *gamchha* dress. The design label continues to experiment with fabric-inspired checks, as seen in its Péro x Hello Kitty collaboration last year.

Saurabh Dwivedi, founding editor of The Lallantop, a Hindi media website, often talks about his *gamchha* collection on social media. He frequently wears a *gamchha* at his interviews.

According to designer David Abraham, co-founder of the brand Abraham & Thakore, it is the graphic simplicity of the design, either as a border or as a check, that makes the *gamchha* so versatile that it can be used as a base fabric that can be embellished. A&T used the *gamchha* as part of the *Sadak Smart* collection in 2018, mixing the classic red white check with a floral chintz. More recently, the brand used the check motif as an ode to the fabric in collaboration with Obeetee to create handwoven carpets.

Other boutique brands specialise in clothing, accessories and home décor inspired by the *gamchha*. Working closely with artisans, craftspersons and weavers, brands such as Chidiya, 145East, Good Earth, Rangila Dhaga and Johargram continue to find popularity on social media and e-merchandising sites for their trendy jackets, co-ord sets, crop tops, dresses, bustiers, saris, trousers, jewellery, bags and even dog collars.

However, Jaitly cautions, "Although he *gamchha* is appearing in some fashion brands, we must be careful not to harm the livelihoods of the original weavers by shifting the market away from them and potentially exacerbating class differences," she says. The *gamchha*'s future, according to her, involves maintaining the existing market while simultaneously exploring newer avenus for the fabric in other sectors such as fashion without making it exclusively a high-end product. ■

Legacy Apparel struggles with GeNext Rebellion

Crop tops, baggy clothes, pleated skirts and popcorn shirts for girls. Boxy shirts, Korean pants, oversized tees and cargos for boys. Gen Zs have a unique way of dressing up.

Some 20 brands launched in the past five years and aimed squarely at the social media generation — from Freakings and Bonkers Corner to Urbanic and Newme—are already nibbling into the sales of established rivals such as Zara and H&M in India.

Gen Z, the largest consumer cohort, isn't brand conscious or loyal either, which is hurting global labels. Its members, between the ages of 13 and 28 years, frequently experiment with attire, from head to toe. Also, money isn't a factor as most of these upcoming brands have price tags of ₹500-800, almost half that of their rivals.

"Gen Z wears clothes to express themselves. The same consumer is wearing three different outfits on the same day. They go for aesthetically driven clothes which are statement pieces," said Sumeet Jasoria, cofounder of Newme, a Gen Z-forced fashion brand.

With the generation joining the workforce in larger numbers and having money to spend, how they dress and where they shop for clothes is creating big shifts in the apparel and fashion industry.

International brands, generally priced at ₹1,200-1,500 and above on average, are losing steam.

For instance, sales growth slowed for top retailers and fast fashion brands, including Marks & Spencer, Zara, H&M, Levi's, Uniqlo and Benetton in FY24. Sales growth at H&M and Zara fell from 40% in FY23 to 11% and 8%, respectively. Levi's slumped to 4% from 54% in FY23. Uniqlo's sales expansion rate halved to 31% from 60%.

Retailers such as Myntra, Tata's Zudio and even ABFRL's Pantaloons are focusing on affordable fashion. But Gen Z's brand selection is not just driven by price.

"Brands that cater to the ongoing trends such as Freakins, BonkersCorner and Slyck continue to witness strong traction, resonating with this fashion-forward cohort," said a spokesperson at Myntra, which launched FWD in May 2023, a Gen Z-focused brand within its app.

"Gen Z today accounts for one in every three e-lifestyle shoppers in the country and Myntra has witnessed a remarkable 100% year-on-year user growth in this cohort on our platform — rising to 16 million Gen Z shoppers at the end of Q3 last year."

These youngster's choices are value-driven, with the current average selling price (ASP) on FWD hovering at around ₹500, the spokesperson added.

According to a recent report by Deloitte, Gen Z now comprises a cohort of 377 million, surpassing the total millennial population of 356 million in 2024. It's already influencing nearly $40-45 billion worth of apparel and footwear purchase choices in India, the report said.

Gen Z also is the first generation raised with the body positivity movement. The fit and design of clothes have nothing to do with size. Whether its crop tops, or ripped denims, Gen Z consumers want size inclusivity across the board.

"For the longest time, sizing in India for apparel was limited to S. M and L," said Vinay Singh, founding partner of Fireside Ventures. "This has now officially extended to include XS, XL and XXL with Gen Z shoppers taking over the market."

Unisex clothes are the go-to preference of these consumers. The men-versus-women's clothgn difference is blurring in a log of apparel categories such as shirts, pants, jackets and even shoes, say brands.

In fact, the more unique the brand and the design, the more likely they are to be attracted to it. Instagram brands, while still small in India, are the go-to option of Gen Z shoppers.

"Gen Z shops online. At least 70% of their shopping is online, especially for clothes. What they want to buy is driven by Instagram and global trends," said Anand Ramanathan, partner, consumer, at Deloitte India. "Most of these Instagram brands are not agile and could burn out as well. They are currently being run by design, customisation and investor money." ■

SUSTAINABLE INNOVATIONS IN CROCHET THROUGH UP-CYCLING LEFTOVER YARN

Dr. Anshu Sharma, Professor and HOD, **Ms. Shama Shaikh,** M.Sc. TSAD Student
PG Department of Textile Science and Apparel Design

ABSTRACT

In today's rapidly changing world, the environmental impact of consumer behavior is increasingly scrutinized, prompting a shift toward sustainable practices that prioritize handmade goods over mass-produced items. Crochet, an age-old craft that involves creating fabric by interlocking yarn using a hook, embodies this shift by offering a personal touch and artistic flair. This study aims to investigate the process of up-cycling yarns craps into attractive earrings, thereby demonstrating how crafters can repurpose what would otherwise be waste into desirable products.

The study involves preparing leftover yarn scraps, selecting suitable crochet products, and designing unique earring styles, followed by a survey to assess consumer satisfaction and market potential. The results reveal a significant inclination toward the crochet earrings, illustrating their aesthetic attractiveness and commitment to sustainability, thereby showcasing crochet as a commercially viable option that adheres to environmental principles.

Keywords: crochet, sustainability, up-cycling, leftover yarn, craftsmanship, innovation

Introduction

The Earth today is grappling with severe environmental challenges due to the reckless activities of human kind, pushing it into survival mode. Even the smallest irresponsible actions can result in irreversible damage, making the adoption of sustainable practices the need of the hour. In the pursuit of sustainability, prioritizing handmade goods over machine-produced alternatives, to the greatest extent possible, represents an insightful strategy. Handmade creations combine artistic expression with environmental responsibility, by lowering the carbon footprint of production. Remarkably, the global market has witnessed resurgence in handmade goods, fueled by consumers' growing preference for unique, artisanal products.

Crochet, an age-old technique of making fabric using a hook to interlock loops of yarn, has gained considerable popularity in this handmade revolution. Deriving from a French word which literally translates to 'a small hook', crochet has a rich history spanning centuries, evolving across cultures and eras. "The technique was known in Britain by the end of the eighteenth century, and the great variety of modern crochet stitches developed during the Victorian period" (Harris, 1993).

Entering the 21st century, crochet has flourished anew, dazzling with its timeless elegance now graced by modern sophistication. Social media platforms such as Instagram, You Tube and Pinterest are thriving as bustling centers for crochet devotees, playing a vital role in the revival of this beloved craft.

Crochet work typically begin with a foundational chain, initiated by placing a slip-knot loop onto the hook and subsequently drawing another loop through the preceding loop. This process is repeated to achieve a chain of desired length. Alternatively, a magic ring or simple folding over the yarn can be used as starting methods. The basic crochet stitches include chain stitch (ch st), slip stitch (ss), single crochet (sc), double crochet (dc), treble (tr), double treble (dtr) and triple treble (tr tr). Advanced stitches such as feather stitch, camel stitch, jasmine stitch, braid stitch, star stitch and angel stitch often incorporate combinations of these basic stitches (Gakuen, 2014).

Yarn choices for crochet are diverse, ranging from natural and synthetic fibers to dyed or un-dyed options, spun in various degrees from fully spun to partially spun or un-spun, and may feature novelty and metallic yarns. This versatility in techniques and materials create a wide array of items, from small amigurumi creations to large, intricately designed clothing pieces and accessories.

Annie Leonard, an American proponent of sustainability and a critic of consumerism, powerfully states, "There is no such thing as 'away'. When anything is thrown away, it must go somewhere" (Earth.Org, 2024). This notion highlights the critical issue of textile waste generated from crafting activities. The accumulation of yarn scraps from completed crochet projects may lead to ecological concerns.

Thus, the aim of this study is to explore the potential for reusing leftover yarns, which result from the production of larger crochet items such as bags and apparel, through up-cycling practices, presenting a sustainable strategy for waste reduction. By repurposing these colorful remnants creatively, crafters can substantially reduce their waste output while supporting suitable practices. This initiative promotes innovation and

resourcefulness within the crafting community, encouraging individuals to treat waste materials as precious assets for new creations. Ultimately, this transformation in perspective aligns with broader sustainability goals and promotes eco-conscious behaviors among crafters.

Methodology

Preparation of Yarn Scraps

The initial step involved winding all small yarn scraps into manageable balls. This process was essential for preventing tangling and ensuring a smooth crocheting experience. Although the hand-winding technique was employed, it is worth noting that a yarn ball winder could have been utilized, providing a more efficient means of transforming leftover yarn into organized balls. A variety of yarn ball winders suitable for this purpose are available in the market. Once wound, the yarn balls were stored in a container to keep them organized and easily accessible for crafting.

Selection of Products to be produced

A detailed assessment of the yarn quantities and color palette was conducted during this phase. This evaluation was vital for identifying the types of crochet products that could be realistically completed with the available materials. Based on the assessment results, a list of possible crochet products were developed, encompassing a variety of items, including coasters, key chains, coin purses, bookmarks, miniature amigurumi, headbands, potholders, scrunches, cable organizers, and earrings. After informal discussions and careful consideration of the materials and the potential for various products, earrings were ultimately selected as the final crochet product. This decision was shaped by the enduring appeal of earrings as a fashionable accessory for women.

Materials Required for Crochet Earrings

The creation of 10 pairs of earrings was executed, utilizing a 1.3 mm crochet needle and a six-ply tightly twisted cotton yarn, which were produced by the researcher while making larger products like bags. This yarn, traditionally referred to as tatting thread, is renowned for its versatility and is commonly used in creating edgings, laces, table runners, and various home décor items.

Design and Creation Process

During the design process, significant consideration was given to both the size of the earrings and the color combinations employed. This thoughtful approach resulted in unique pieces that were both functional and aesthetically pleasing, catering to a broad audience.

Plate 1: Crochet Earrings Development

Assessment of Developed Products

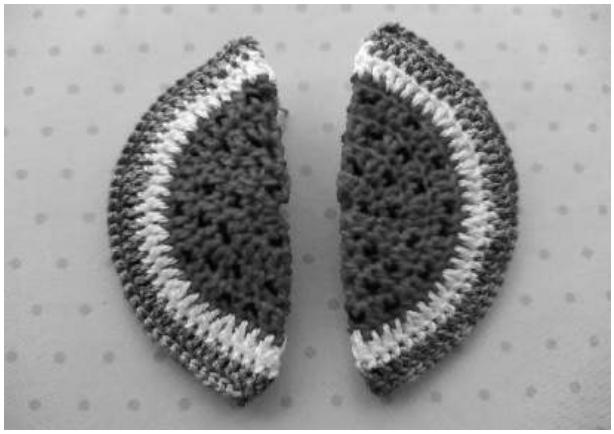
An offline survey was conducted using a closed-ended questionnaire to obtain feedback on the crochet earrings. The questionnaire focused on assessing the earrings' overall appearance, color combinations, size and finishing quality. The study involved a sample size (N) of 40 participants, primarily comprising college-going-girls, with 79% aged between 18 to 22 years and 21% between 22 to 35 years. The survey responses were collected on a 5-point rating scale, with 5 representing Excellent, 4 representing Good, 3 representing Average, 2 representing Poor, and 1 representing Very Bad. The purpose of the survey was to pin point strengths and opportunities for enhancement, providing essential insights to guide future design and production decisions for the earrings.

Results and Discussion

A total of ten pairs of uniquely designed crochet earrings were developed, each featuring a distinct design. Two of the earrings were inspired by sunflower; one was designed with traditional sunflower petals, while the other featured a granny square sunflower pattern. The third design incorporated a metal hoop adorned with five tiny flowers, each centered with a white pearl. The fourth and fifth pairs were characterized by a classic five-petal flower, and the sixth design offered a playful twist with a whimsical slice of watermelon. The seventh pair was inspired by mandala patterns, while the eighth pair was designed to resemble a strawberry. The ninth pair featured a lemon slice design, and the tenth pair was influenced by the overlapping patterns of swirling galaxies. This assortment exemplified creativity and aimed to resonate with various consumer preferences.

Table 1 Details of Earrings Developed

Sr. No.	Developed Earrings	Inspired from	Stitches Used
1		Sunflower	ch, sc, hdc, dc, tr, sl st
2		Sunflower	dc, ch, sl st
3		Flower	MR, ch, sc, hdc, dc
4		Flower	MR, ch, sc
5		Flower	MR, ch, dc, tr
6		Watermelon	MR, sc, dc
7		Mandala Patterns	MR, ch, sc, dc
8		Strawberry	MR, sc
9		Lemon	MR, sc
10		Galaxy Swirls	ch, dc, sl st

Plate 2 Developed Crochet Earrings	
	
Earring 1	Earring 2
	
Earring 3	Earring 4
	
Earring 5	Earring 6

SUSTAINABLE INNOVATIONS IN CROCHET THROUGH UP-CYCLING LEFTOVER YARN

Earring 7

Earring 8

Earring 9

Earring 10

Preference and Acceptance of Developed Earrings

The findings of the survey underscore the significant appeal and market potential of the crochet earrings developed from leftover yarn scraps. The survey results indicated a high level of satisfaction among participants, as shown in Table 1 below:

All participants rated products 1 and 3 as "Excellent", which highlights the effectiveness of the design and craftsmanship. Notably, aspects such as finishing, size, and color combinations received a remarkable 100% rating across all products, reflecting exceptional quality and alignment with consumer preferences. Products 4 and 5 also received high ratings of 97%and 99%, respectively.

Table 2: Ratings of Crochet Earrings

Earring Number	Product	Score Given by Respondents
1		200
2		195
3		200

Earring Number	Product	Score Given by Respondents
4		199
5		195
6		200
7		200
8		200
9		200
10		199

Cost Calculation

Following the survey, a cost analysis was conducted for each pair of earrings, concentrating on the time invested in their production and preference of deign by respondents. This analysis is crucial for setting competitive pricing that ensures profitability while remaining accessible to customers. The pricing for the earrings was determined as follows:

Table 3. Pricing of Crochet Earrings

Product	Time Consumed (Hours)	Price(₹)
Product 1	2.5	299
Product 2	1	199
Product 3	2	299
Product 4	1.5	199
Product 5	1.5	199
Product 6	2	299
Product 7	1.5	199
Product 8	2.5	299
Product 9	1.5	199
Product 10	1.5	199

Exhibition Performance

During the Kalakruti 2024 annual exhibition at SNDT Women's University, Juhu, the earrings were showcased for sale. Remarkably, all pairs of earrings were sold within one hour, affirming the high demand and marketability of the products.

Conclusion

The transformation of leftover yarn scraps into sustainable products highlights how creativity can contribute to environmental responsibility. By crafting functional items like bags, coasters, along with decorative pieces such as wall hangings, these scraps gain a second life. Embracing up-cycling practices minimizes waste and encourages a sustainable mindset within crafting communities .Each small act of repurposing materials serves as a drop that contributes to the ocean of sustainability, collectively fostering a healthier planet. Throughout the research, the strong attraction to crochet products was evident, with women of all ages showing enthusiasm for the species. This wide spread appreciation underscores crochets potential as a market able and sustainable product, combining both aesthetic appeal and eco-conscious values.

Bibliography

1. **Earth.Org.** (2024, November 20). *15 plastic pollution quotes to inspire you to go waste free*. Earth.org. Retrieved from https://earth.org/plastic-pollution-quotes/
2. **Gakuen, B.** (2014). *Stitch encyclopedia: Crochet: An illustrated guide to the essential crochet stitches*. Chronicle Books.
3. **Harris, J.** (1993). *5000 years of textiles*. British Museum Press. ■

ARTIFICIAL INTELLIGENCE RESTYLING THE FASHION INDUSTRY

Rubaani Manrai, Student Department of Computer Science, Birla Institute of Technology, Mesra,
Radha Kashyap, Head & Prof. Department of Fashion & Textiles, IIS (deemed to be University), Jaipur

Abstract

The world is consistently dynamic and evolving at a speedy rate. This dynamic nature has placed pressure on firms to initiate, collaborate and design business processes that best work for their business. Digital technologies bring each opportunity and challenges for the development of firms. With the deep integration of intelligent technologies, there has been a digital transformation that has modified the standard production and operations management methods that offers the potential for the development, production and client service. Digital technologies such as artificial intelligence, robotics and automation are transforming the world of work. Big data analytics, cloud computing and cyber physical systems enable operation of industries in a flexible, efficient, and sustainable. Amongst these Artificial intelligence (AI) is an integral part in restyling the fashion industry.

Introduction

AI refers to the ability of robot-based technology to carry out operations and produce outcomes that are comparable to those of intelligent beings. This is mostly employed to produce conclusions based on an intricate comprehension of numerous processes that have concluded, such as discovery, generalization, and the capacity to interpret them as an intellectual human characteristic.

AI is a combination of numerous computer-based and robot-based algorithms for problem-solving, decision-making, and reasoning, just as human intelligence cannot be defined in terms of a single attribute. Manufacturers and retailers regularly collect information of clients on attitudes and behavior across channels, touchpoints, devices, and platforms. This information is integrated from multiple sources and stored or warehouse, usually during a cloud-based environment. Then computer algorithms and programs are created for these models. These machine learning models are the backbone for the generation and development of AI-assisted decisions. In several cases, such choices are automated using systems like chatbots and robots. For instance, chatbots assist in client service and robots facilitate warehouse and sales outlet automation.

In other words, AI is a dynamic, from style design to manufacturing, logistic supply chain and marketing. These days AI in the fashion industry is playing a big role in transforming this industry and giving a new look to it.

Applications of AI

Fashion is one of the most important sectors globally. It has created a thoughtful revolution in the fashion industry. The most widely used applications are discussed below:

Fashion Design & Forecasting trends

AI plays a critical role and can detect the new trends. AI algorithms perceive designs through different images to copy popular styles. It is widely used in Fashion Design process. In 2018, a leading Italian e-commerce company, presented 8 by Yoox, the first fashion collection designed using AI. The software used images and texts from social networking sites and articles from online publications; then an AI predictive engine and consumer estimations create mood boards for production of fashion apparel and accessories (Mazza 2018; Marchetti 2019).

Customer Experience Enhancement In-store

Digital technologies are enhancing customer experience in stores and malls through smart mirrors. Now-a-days, fashion luxury brands are using smart mirror technologies along with their physical stores. Smart mirror is an electronic display hidden behind a mirror. It is a type of two-way mirror. They are computers enabled by a whole stack of technological components, starting from depth-sensing hardware to software with cutting-edge computer vision algorithms. The mirrors give users the ability to compare different outfits and accessories side by side as well as examine how they appear in a specific piece of clothing in numerous colors and clothing types. In this way, the customer's shopping experience is greatly improved and simplified.

Kering, for example, has created an algorithm that uses AI to identify customers who are most likely to respond to personalized marketing efforts. They have integrated smart mirrors that take measurements and suggest items that are in stock. It also creates avatar and show, how an individual look while wearing a particular garment. Alibaba and Taobao have adopted this technology.The tool, is named Fashion++. It uses visual recognition systems to analyze the colour, pattern, texture, and shape of the garments within an image. It offers several alternative outfits to the user.

Chatbots

The increasing scale of personalization in online fashion is apparently unmanageable without AI applications. Chatbots or AI smart assistants are the virtual machines that relate to shoppers via chat, respond to customer service inquiries, help users navigate apparel for both online and in-store. Additionally, fashion apparel and accessories best suit a particular consumer as if they were human shopping assistants working 24 hours a day. It is able to interpret human language and is capable of coming up with answers to queries that have not been predefined. Now-a-days, there are specialized chatbots available for retail applications. These chatbots use Natural Language Processing (NLP) that makes it possible to tailor marketing activities like linguistic context like email, social media posts, customer service contacts and product reviews. Dior also uses a chatbot to interact with customers via Messenger on Facebook through the platform which is called Dior Insider. This service offers the chance of using slideshows and link to the website, making the shopping experience much easier. ASOS, an online fashion company, has increased purchases by 300% using a chatbot, while Levi's, which is a pioneer in the use of chatbots and has partnered with AI firms such as mode.ai, assists customers to find the perfect pair of jeans.

Virtual search

It is a subset of reverse image search; it provides the chance of finding new items using an image. This, for example would analyze an image look for similar pair of shoes, accessories, costumes, etc. While computer vision makes seeing objects possible, machine learning and neural networks makes them recognizable. The combination of both computer vision and neural networks leads to different applications of AI in fashion. The online fashion retailer ASOS has created a visual search tool that turns the customer's smartphone camera into a sort of discovery tool. It enables the customer to take a picture of a product, and the ASOS tool can match the product's shape, color, and pattern with its own inventory to find similar merchandise. Google lens is another example of virtual search.

Fashion Design- Predicting Fashion Trends

The design and patterns with a proper colour combination are the key factor to design a costume and make it attractive among the customers. AI plays a critical role in this and it can help detect new trends. Trends in the fashion industry change very rapidly with new designs or patterns which come every day in the market and designers need to keep pacing with new styles every time. AI algorithms perceive designs through different images to copy popular styles. Retailer giants like Amazon and Walmart currently now have their own clothing brands and are using the machine learning systems and AI technology to identify the spot.

Fashion Styling

The application of AI in fashion also allows to find perfect outfits that suit the body type and fashion preferences. AI enabled clothes and outfits are not only tailored for different occasions and weather, but also for user's taste and demand such as style, body type, colors, and the latest fashion trends. ILUK is an AI-based personal stylist, that uses computer vision and 3D reconstruction technology which makes personal styling based on technology possible. For example, they can process large amount of data faster when learning about the users' style and memorizing the users' feedback. AI programs can also store descriptions of users' items and help them become more organized and efficient.

For instance, Fineryis awardrobe management application. It claims to be able to verify what apparel are already within the user's wardrobe. Using this data, the company claims that its algorithms can suggest looks using the user's existing pieces, and clothing recommendations that could match the user's current style. The Wishlist feature of the application identifies aspects of the wardrobe recommends items that could complete the user's wardrobe.

Applicationsof AI in Supply chain of apparel industry

Besides the above mentioned applications, AI can perform the task with a better accuracy and at a faster speed, reducing the extra cost on workers. AI for example, can stitch the fabrics with perfection while at the same time it can also detect various faults in fabric and give the assurance of best quality. AI has a lot of potential for tedious jobs which are commonly seen in apparel manufacturing. Applications of AI in supply chain are as follows:

Inventory

Using AI technology in supply chain management canspeed-up by improving routes, cutting the logistic supply and shipping cost. Also, visual perception based AI models are available which help store owners to take care of records of the inventory and also sort items in their store. This helps store owners to manage their inventory

with AI-backed automated solution. Using AI, companies automate the logistics and supply chain processes for faster delivery. For instance, finding alternative or completely different routes for traffic affected by unforeseen circumstances such as bad weather or road construction.

Fashion Retail

AI and machine learning in retail provides an automated solution to trace the customer's activities while shopping and visualize their sentiments and needs to know what kind of products they like to buy and what they ignore. AI can also find and trace footprints in retail shops or record the shopping experience of the customers with the option to get feedback on how their experience was while shopping at the retail shop with the aim to enhance the services of the stores.

Warehouse Management

Additionally, AI is used for warehouse management and the operational procurement process. Indeed, there are improvements in AI and navigation technologies which are letting automated guided vehicles (AGVs) move materials between buildings and different departments. Till recently, they needed a significant physical path guiding mechanism such as wires or tracks. Furthermore, chatbots are used in operational procurement as they help to reduce transaction costs and sales cycle time. Overall, the use of AI in supply chain management helps in reducing the 'click to ship' cycle time and also the dropout rate.

Quality assurance

Manufacturers and designers involve AI in their production methods. For example, quality assurance is enabled by a computerized method for detecting faults in the fabric and color of the textile. This helps in saving time. For example, CognexViDi is a vision-based platform designed for fabric pattern recognition in textiles such as weaving, knitting, printing, beading, and finishing. The company suggests that its platform requires no development period for integrating it into a manufacturing system, and it can be trained using predefined images of what a good fabric sample looks with this machine vision.

Manufacturing

AI is used by designers not only for quality control but also for garment production. Various technologies, including computer-controlled lasers, knives, water jets, plasma, and ultrasound, can be used to produce large quantities of material. It has also lead to automation of service. In 2019, ITMA Juki Advanced Network System (JaNet), combined software and supporting hardware to collect data on production processes involving interconnected sewing machines. As a result, digital sewing machines have become indispensable for detecting sewing errors in mass production.

For example, Datacolorclaims to develop an artificial intelligence pass/fail feature to assist and improve the accuracy and efficiency of instrumental tolerance. In their AI process, textile experts first visually inspect every individual batch produced. The operators enter the color measurements and tolerances for all the batches in the Datacolor software to help train the system. The AI P/F system can then be tested for new batches to automatically set AI tolerances, training the system to determine which samples pass and fail the color accuracy.

Operations automation

As per Luce (2019), the word robot is usually applied in the Fashion industry to define a robot as a programmable machine responsible for carrying out composite actions. In industry, a robot is typically defined as a programmed machine in charge of performing a variety of tasks. It is considered to be the physical representation of AI that functions in the real world.. Manufacturing robots are frequently employed in the fashion industry for both supply chain management and sewing. Sewing is done by robots in factories. Utilizing sewing robots may significantly reduce costs, re-shore manufacturing, cut waste and protect the environment while also boosting sustainability and manufacturing flexibility.

For example, Uniqlo is coming close to full automation at its flagship warehouse in Tokyo. According to reports, Uniqlo's parent company Fast Retailing has partnered with a Japanese start up that develops industrial robots to create two armed robots that pick-up t-shirts and box these up- a task that could previously be done only by humans. This is an important innovation as it could enable a factory which can replace 90% of its workers with robots to roll out a fully automated process.

Besides supply chain AI can also be used for recommending the prices of the manufactured products. AI can keep an eye on the prices of the competitor brands as well as serve with automated calculations algorithms that can get inputs in form of raw material product cost and even expected profit amount. It can be used as both small scale and large scale production units.

Conclusion

AI in fashion is transforming the way the industry works. It will keep the industry at the top of its game. It will allow designers and brands to create and deliver better products and services by analyzing and understanding the sentiments of their customers. It will also help fashion companies cut down on errors and improve the quality of their products. It will help in analyzing and predicting what will be in style.

Reference

- Bagai, S. NCFAT'20: Fashion & Textile Industry 4.0 - Opportunities & Challenges for Education 4 Fashion & Textile Industry 4.0, October(2020), 29-35.
- Csanak, E. AI for Fashion,13th international scientific professional symposium textile science and economy, September (2020),117-123.
- Fisher,M. I.Harvard Business Review, March-April (1997).
- Kampakaki,E.&Papahristou,E., Digital Intelligence as Prerequisite of Artificial Intelligence's Integration in the Clothing Industry 4.0,2844, September (2020), 36-41.
- Luce, L. Artificial Intelligence for Fashion: How AI is Revolutionizing the Fashion Industry, 2019, v- xxvi.
- Marchetti, F. How A.I. is shaping fashion. CNBC, March (2019).
- Mazza, V. Artificial Intelligence and Fashion: Between Innovation and Creativity, November (2018)
- McKinsey & Company, The State of Fashion 2019: A year of awakening, September (2018).
- Nallani, A. Artificial Intelligence in Fashion and Textiles, National Conference on Fashion Apparel and Textile (NCFAT'2020). October (2020), 36-38.
- Shankar, V. How Artificial Intelligence(AI) is Reshaping Retailing, Journal of Retailing, 94(4), 2018, vi-xi.
- Wei, X. The Application and development of artificial intelligence in smart clothing, International conference on Robotics and Mechantronics (ICRoM 2017).1-6. doi:10.1088/1757-899X/320/1/012017.
- https://www.bagaar.be/blog/digital-leading-the-way-to-a-more-sustainable-textile-fashion-industry/.
- www.geekplus.jp/wp-content/uploads/2020/01/AI-and-the-Business-of-Fashion.pdf. ■

Scale down tariff with U.S., suggest textile exporters

Most textile and apparel export associations have suggested to the government to go in for reduction of tariff or zero-for-zero trade agreement with the U.S.

The Apparel Export Promotion Council said the tariff levied by the U.S. on textiles and apparel ranges from 2% to 32%. Reduction in tariff will not affect Indian exporters, said AEPC's secretary general Mithileshwar Thakur.

According to the Confederation of Indian Textile Industry (CITI), the U.S. is the single largest export destination for Indian textile and apparel sector, contributing to 28.5% of the total T&A exports between January and November last year.

For the U.S., China remains the dominant supplier with a 25.6% share and India is the third largest supplier with 10.8% share. However, while the U.S. imports from China declined at a CAGR of 9.4% over the last five years, imports from India have grown at a CAGR of 9.1% during the same period. In 2024, the U.S. T&A imports from India stood at about $10.8 billion, whereas exports by the U.S. to India were worth $0.41 billion.

India should explore a zero-for-zero trade agreement with the U.S. for T&A products with necessary safeguards for sensitive products. This will create a level playing field for Indian exporters against Vietnam, which benefits from duty concessions. With reduced tariffs, India's T&A exports to the U.S. could surge to $16 billion within the next three years, the CITI said.

"The trade balance is in India's favour. Indian textles can gain a lot from reduction or zero-for-zero agreement. India is also exploring free trade agreement with the U.S. So, we need to wait and see," said Cotton Textiles Export Promotion Council Executive Director Siddhartha Rajagopal. ■

REVIEW ON ANALYZING THE MECHANICAL PROPERTIES OF BANANA/RAYON WOVEN HYBRID COMPOSITES FOR CHIN GUARD

T. Athees Kanna, L. Sabarinathan, S. P. Arjunraj, Mr. P. Maheswaran, Assistant Professor
Department of Textile Technology, K.S. Rangasamy College of Technology,
Tiruchengode-637215, Tamil Nadu, India

ABSTRACT

Biofiber composites are increasingly favored over Artificial fiber-reinforced composites. As a result of their minimal density, lightweight structure, cost-effectiveness, eco-friendliness, and excellent mechanical properties. This study focuses on the Development and evaluation of mechanical properties in woven composites using banana and rayon hybrid fibers, specifically for use in chin guards. The pseudo stem agricultural waste of the Nendran type of banana plants was utilized to extract the banana fibers, while rayon fibers were sourced from regenerated cellulose. A plain weave method was employed to create woven mats of banana and rayon fibers, enhancing mechanical characteristics without the use of chemicals. The hand layup method was used to fabricate the composites, with grade epoxy resin saturating the woven mats in a mold approved by ISI. This research Aims to offer a thorough study of the mechanical performance, manufacturing approaches, and practical applications of banana/ rayon woven hybrid composites, highlighting the synergistic effects achieved by combining these two fibers.

Keywords : natural fibers, hybrid composite, woven mat, epoxy resin, chin guard, mechanical properties.

INTRODUCTION

In recent years, the demand for sustainable materials has prompted a surge of interest in the development of environmentally friendly composites that utilize natural fibers as reinforcements. This shift is primarily Driven bythe reduction of fossil-fuel-based resources and the quest for materials with outstanding mechanical traits. While minimizing environmental impact. Among the various natural fibers, banana and rayon have gained recognition for their unique characteristics, offering a promising alternative in composite fabrication.

Banana fibers, derived from the pseudo-stems of banana plants, are valued for their high tensile strength and stiffness, making them a preferred choice for lightweight and robust material applications. Rayon, a semi-synthetic fiber derived from natural cellulose, enhances the mechanical properties of composites through its excellent flexibility and high tensile strength. The combination of these two fibers in a woven hybrid format presents an innovative approach to maximizing performance while maintaining eco-friendliness.

The integration of banana and rayon fibers into a composite matrix, particularly for applications such as chin guards, can yield significant improvements in impact resistance and overall structural integrity. Such applications necessitate materials that not only withstand mechanical stresses but also provide comfort and safety. The unique properties of the woven hybrid structure enable the distribution of loads more effectively, thus enhancing the composite's performance under dynamic conditions.

This research seeks to assess the mechanical characteristics of banana/rayon woven hybrid composites, particularly for chin guard purposes. By Incorporating an epoxy resin matrix with these natural fibers, our goal is to characterize the mechanical performance of the resulting composite material., evaluating aspects such as tensile strength, flexural strength, and impact resistance. Through this investigation, we hope to further the understanding of eco-friendly composite materials, exploring the feasibility of employing hybrid natural fibers in protective gear and other high-performance applications.

PROPERTIES OF BANANA AND RAYON

PHYSICAL PROPERTIES

Table 1
Physical attributes of Banana and Rayon fibers

PhysicalProperties	BananaFibre	Rayon Fibre
Diameter(µm)	80-250	10-30
FibreLength (mm)	1000-3000	100-1200
Aspect Ratio (l/d)	140-160	300-400
MoistureContent(%)	10-12	10-12

Table 1 Displays the physical attributes of the fibers. When it comes to reinforcement, fibres with a greater aspect ratio will have the best tensile properties and a large surface area.

CHEMICAL PROPERTIES

Table 2
Chemical Properties of Banana and Rayon fibres

Chemical properties	BananaFiber	Rayon Fiber
Cellulose(%)	62-65	90-95
Hemicellulose(%)	10-24	3-7
Lignin(%)	5-7	0.5-1.5
Pectin (%)	3-6	0-1
Ash(%)	1-3	0.5-1
Extractives(%)	4-6	1-2

Table 2 Displays the chemical composition and characteristics of banana and rayon fibers., It has been observed that the primary component of plant fibres is cellulose, which is followed by hemicelluloses, lignin, and pectin, respectively. Additionally, cellulose serves as a reinforcement for pectin, hemicelluloses, and lignin.

MECHANICAL PROPERTIES

Table 3
Mechanical characteristics of banana and rayon fibers

Mechanical properties	Banana fibres	Rayon fibres
Tensile Strength (Mpa)	530-760	300-600
Tensile Modulus (Gpa)	7-11	10-20
Elongation(%)	1-3.5	10-30
Density(g/cm3)	1.35	1.5-1.6

Table 3 Shows the mechanical behavior of banana and rayon fibers, enhancing the strength and performance of composite materials through fiber reinforcement.

SEMIMAGE (Scanning Electron Microscope)

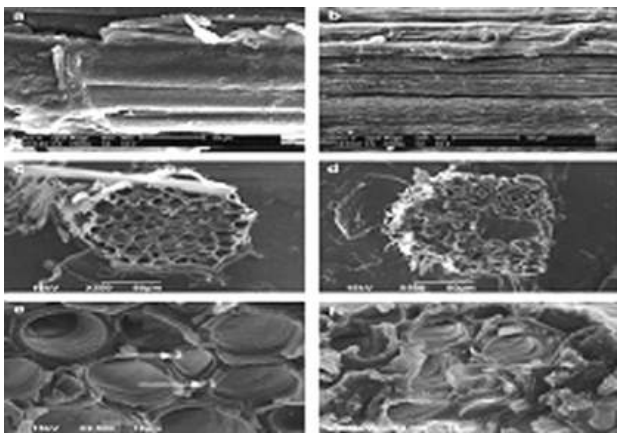


Fig1. SEM image of Banana fibres

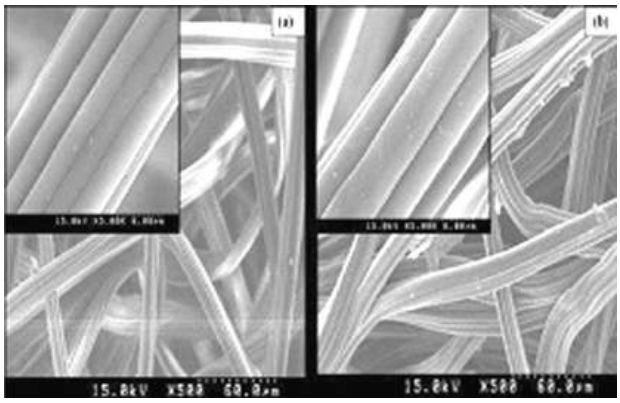


Fig2. SEM image of Rayon fibres

FIBRE SURFACE CHEMICAL TREATMENTS

Fiber surface treatments enhance mechanical strength and facilitate better adhesion with the matrix. in natural fibre-reinforced composites like banana and rayon woven hybrids. Common treatments include alkali (removes impurities, increases roughness), silane (enhances bonding), and acetylation (reduces moisture absorption). Benzoylation and permanganate treatments increase hydrophobicity and create active bonding sites, improving mechanical strength. Maleic anhydride grafting and ozone treatment further enhance surface characteristics for better adhesion and durability. These treatments improve tensile strength, moisture resistance, and overall composite performance, making them essential for enhancing hybrid composite properties in applications requiring strength and dimensional stability.

Banana and rayon woven hybrid fibres undergo chemical treatments to enhance surface properties. Banana fibres are Treated with a 5% NaOH solution for 2 hours to cleanse the fibers of impurities., followed by a sodium lauryl sulfate (SLS) treatment to improve wettability. Rayon fibres receive mild NaOH and SLS treatments for enhanced matrix bonding.

For banana and rayon woven hybrid fibres, after alkali treatment, fibres are thoroughly washed with water for 2 hours to remove sodium hydroxide. The final wash uses acetic acid-diluted water to neutralize the fibres.

STRUCTURE OF COMPOSITE IN LAMINATION

The structureof composites in lamination for banana and rayon woven hybrid fibres consists of various plies, primarily using woven fabric and tape. The woven fabric ply employs a bi-

directional configuration, with fibres woven at 90-degree angles, incorporating both longitudinal and transverse orientations. This method produces a lightweight composite with reduced resin void sizes, enhancing flexibility for complex shapes. Two types of woven fabric are used: plain and satin. The plain weave features horizontal fibres crossing over and under longitudinal fibres, resulting in a stronger, less distorted material with a crimp pattern that adds strength and flexibility. Conversely, the satin weave has fewer fibre intersections, offering a smoother surface but sacrificing some strength compared to the plain weave. The tape ply consists of unidirectional fibres aligned in a parallel arrangement, providing exceptional strength in a specific direction, making it ideal for applications requiring high tensile strength. The high specific strength of tape composites enhances the overall mechanical performance of the hybrid laminate. Together, the combination of woven fabric and tape plies creates a versatile material with improved strength, flexibility, and reduced weight, suitable for various applications.

COMPRESSION MOULDING

Compression molding is a widely used technique for forming composite materials in this process, the mold cavity is first filled with the molding material. The material is forced into contact with every mold area by applying pressure, and the mold is sealed with a top force or connect member. Pressure and heat are maintained untilthe molding material has dried. The procedure uses partially cured thermosetting resins in the structure of preforms, putty-like masses or particles. Compression molding is an effective high- volume, high-pressure molding technique for complex, extremely durable fibre glass reinforcements...Additionally, woven fabric matts, chopped fibres, unidirectional tapes, and randomly oriented fibre mats can be compression moulded into advanced composite thermoplastics. The benefit of compression molding is that it can be used to create large, complex parts. In comparison to other molding techniques like transfer molding and injection molding, it is also among the least expensive; additionally, it wastes comparatively little material, which is advantageous when handling pricey compounds.

ADVANTAGES OF USING EPOXY

Epoxy resin belongs to the thermoset category of polymeric materials. Polymers are large compounds formed by the repeated linkage of one or more monomers, which can occur with or without the loss of substances. Epoxy resin is frequently employed as the matrix material in advanced composite materials due to its beneficial properties. It can tolerate temperatures up to 175°C and works well with different types of standard reinforcements. When a curing agent or hardener is incorporated, epoxy resin undergoes a cross-linking process that cures it, effectively eliminating all volatiles and byproducts.

The molecular structure of epoxy resins is derived from a group of ether homologues, characterized by An oxygen atom linked to two distinct carbon atoms from separate hydrocarbon groups. Compared to typical thermoplastic or thermoset resins, epoxy resins offer several advantages, such as minimal shrinkage during curing, relative affordability, and widespread availability. They also exhibit improved mechanical and fatigue strength, exceptional resistance to chemicals and moisture, and superior electrical properties. Additionally, epoxy resins contain no volatile organic compounds (VOCs), possess non-magnetic qualities, and adhere well to various substrates. They have an extended shelf life, excellent damage resistance, and are also impact- and corrosion-resistant, making them anticorrosive as well.

FABRICATION PROCEDURE FOR COMPOSITES

The fabrication process begins by applying a release agent to the walls As well as the upper and lower surfaces of the mold. Allowing it time to dry. The topand bottomplates serve dual functions: they cover and apply pressure to the fibres once the epoxy is applied and prevent debris from contaminating the composite parts during the curing process. Using the hand layup technique, two distinct combinations of natural fibre composite laminates are created: banana + rayon + banana and rayon + banana + rayon. Before the epoxy is applied, the resin and hardener are mixed in a 10:1 ratio, ensuring that the mixture does not cure prematurely in the mixing pot.. The dimensions of the manufactured laminate can reachup to 400 × 400 × 10 mm. After layering the laminates into the mold, epoxy adhesive is poured, and the laminates are compressed inside the mold for 24 hours. Once this period is complete, the woven laminated composite is removed from the mold, now in its compressed form.

Mechanical property evaluation

TENSILE CAPACITY EVALUATION

Tensile testing was conducted in accordance with ASTM D638 on an EMIC universal testing machine, utilizing a 20 kN load cell. The test speed was setat 5 mm/min, inaccordance with the ASTM standard. Displacement measurements were taken using the Digital Image Correlation (DIC) method. For each composite type, five specimens, each measuring 165 mm (length) × 19 mm (width) × 3 mm (thickness) weretested. All tests were performed at room temperature (23°C). and 50% relative humidity to ensure consistent conditions across the experiment.

IMPACT TEST

The toughness of composite specimens was determined using an ASTM Charpy Impact Test, following the principles of ASTMD-256. The equipment used included a Charpy Impact Testing Machine (Model 6703, 25 Joules) and Rockwell Hardness Testing Machine (F-scale, Model DFH-100). a Monarto Tensiometer, and a Houghton Universal Testing Machine with a 100 kN capacity. These instruments were employed throughout the study to assess the material properties accurately.

Flexural performance evaluation

The flexural strength of the composite material was evaluated through a 3-point bending test, following ASTM D790 standards. Test samples were prepared accordingly, and a Universal load testing machine (UTM) was employed for the bending tests. The load was applied gradually at a rate of 5 mm/min, as described in Flexural testing was performed using an ASTM D790-compliant machine, equipped with Series IX software and a 10 kN load cell, With a load applied at a rate of 2.8 mm/min. During the test, the load was centrally applied to the sample, which was freely supported by a beam on both ends. All tests were conducted under controlled conditions, With the testing environment set at 27°C and 50% relative humidity to ensure consistency.

HARDNESS TEST:

The hardness of the hybrid composite was determined using the Rockwell hardness scale, Following the ASTM E 18-07 guidelines, the Rockwell hardness testing machine used in this research had a weight capacity of 60-150 kgf and featured a 1/16-inch steel ball indenter. For water absorption testing, the initial dry mass (Wd) of the composite specimen was recorded. The specimen was then submerged in distilled water at room temperature for 24 hours, after which its weight (W1) was measured. The same procedure was repeated, measuring the weight after each 24-hour interval until a stable, consistent weight (W1) was achieved. The water absorption percentage at equilibrium was then calculated using the formula provided in ASTM D570, ensuring that the weight differences before and after immersion were accurately accounted for. This process allowed for the precise determination of the composite's water absorption properties, following standardized guidelines.

CONCLUSION AND FUTURE WORK

In addition to about 35 references, this study gives an outline of the hybrid composite and its mechanism. This paper explains several composites made of natural fibers. This study's objective is to discuss a hybrid composite knee guard. The hybrid composite material for knee guard construction is created during the research using the hand lay-up and weaving methods.

REFERRENCES

1. Saheb, D. N., & Jog, J. P. (1999). Natural fibre polymer composites: a review.Advances in Polymer Technology: Journal of the Polymer Processing Institute, 18(4), 351-363.
2. M.R. Sanjay, G.R. Arpitha, P. Senthamaraikannan, M. Kathiresan, M.A. Saibalaji, B. Yogesha, The hybrid effect of jute/kenaf/e-glass woven fabric epoxy composites for medium load applications:impact, inter-laminar strength, and failure surface characterization, J. Nat. Fibres 16 (2019) 600–612
3. B. J. Mohr, N. H. El-Ashkar, and K. E. Kurtis, "Fibrecement Composites for Housing Construction: State-ofthe-art Review", pp.112-128, Proc. NSF Hous. Res.Agenda Work, 2004
4. Bhatnagar, R., Gupta, G., & Yadav, S. (2015). A review on composition and properties of bananafibres. International Journal of Scientific & Engineering Research, Volume 6, Issue 5, May-2015
5. Kumar, K., Gokuleshwar, K. J., Ranganathan, S., & Thiagarajan, C. (2018). Fabrication and mechanical property study on glass/sisal/banana naturalfibres. International Journal of Pure and Applied Mathematics, 119(12), 15637-15645.
6. M Rajesha , Jeyaraj Pitchaimania*, N Rajinib.2015. Free Vibration Characteristics of Banana/Sisal Natural Fibres Reinforced Hybrid Polymer Composite Beam, Procedia Engineering 144 (2016) 1055 – 1059.

7. J Naveen, M Jawaid, P Amuthakkannan, M Chandrasekar Mechanical and physical testing of bananafibre-reinforced composites and hybrid composites, 427-440, 2019
8. Badrinath, R., & Senthilvelan, T. (2014). Comparative investigation on mechanical properties of banana and sisal reinforced polymer based composites. Procedia materials science, 5, 2263-2272.
9. Naidu, A. L., Jagadeesh, V., &Bahubalendruni, M. R. (2017). A review on chemical and physical properties of natural fibre reinforced composites. Journal of Advanced Research in Engineering and Technology, 8(1), 56-68.
10. Gupta,A., & Kumar, A. (2012). Chemical Properties of Natural Fibre Composites and Mechanisms of Chemical Modifications. Asian Journal of Chemistry, 24(4).
11. LeBourhis, E., &Touchard, F.(2021). Mechanical properties of natural fibre composites. Reference Module in Materials Science and Materials Engineering.
12. Brahmakumar, M.Pavithran, C.Pillai (2005), "Coconut fibre reinforced polyethylene composites: effect of natural waxy surface layer of the fibre on fibre/ matrix interfacial bonding and strength of composites " Volume 65, Issues 3–4, Pages 563-569.
13. Satish Pujari, A. Ramakrishna, M. Suresh Kumar (2014), "Comparison of Jute and BananaFibre Composites" Volume 2, Pages : 121-126.
14. Alavudeen, A., Rajini, N., Karthikeyan, S., Thiruchitrambalam, M., &Venkateshwaren, N. (2015). Mechanical properties of banana/kenaf fibre-reinforced hybrid polyester composites: Effect of woven fabric and random orientation. Materials & Design (1980-2015), 66, 246-257.
15. Appelt, B.K., Gotro, J.T., Schmitt, G.P., Ellis, E.T., & Wiley, J.P.(1986).Composite lamination— analysis and modeling. Polymer composites, 7(2), 91-95
16. Paris, I., Minguet, P. J., & O Brien, T. K. (2003). Comparison of delamination characterization for IM7/8552 composite woven and tape laminates. ASTM Special Technical Publication, 1436, 372-390.
17. Kim, J. K., & Sham, M. L. (2000). Impact and delamination failure of woven-fabric composites. Composites science and technology, 60(5), 745-761.
18. Bello, S. A., Agunsoye, J. O., Hassan, S. E. A., & Kana, M. Z. (2015). Epoxy resin based composites, mechanical and tribological properties:Areview. Tribology in Industry, 37(4), 500.
19. Dumont, P., Martoïa, F., &Orgéas, L. (2023). Compression moulding. In Design and Manufacture of Structural Composites (pp. 273-300). Woodhead Publishing.
20. Abdullah,D.K., &Daik,R.(2012).Fabrication of agar/ biopolymer blend aerogels in ionic liquid and co-solvent mixture. Cellulose Chemistry and Technology, 46, 45-52.
21. Shamsuri,A.A. (2015). Compression moulding technique for manufacturing biocomposite products. International Journal of Applied, 5(3).
22. Kumar, T.K., Ponnala, R.P., & Ravi,S. Behavior of Natural Fibre-Polymer Composites using Compression Moulding Process. vol, 7, 175-177.
23. S. Bradly (2004). Epoxy/ClayNanocomposites: Effect of Clay and Resin Chemistry on Cure and Properties, M. SC. Thesis, School of Science and Applied Chemistry, Queensland University of Technology.
24. Harke (2006): Epoxy Resin Systems for Composites, Harke Chemical GmbH, Thailand, pp1-20.
25. J. A. Brydson (1996): "Plastic Materials", Published by Butterworth Heiman Linacre House , Jordan Hill, Oxford, 7th edition, pp 1-916.
26. Sun D and YaoY. Synthesis of three novel phosphorus-containing flame retardants and their application in epoxy resins. PolymDegrad Stab 2011; 96: 1720–1724.
27. Aggarwal LK, Thapliyal PC and Karade SR. Anticorrosive properties of the epoxy-cardanol resinbased paints. Prog Org Coatings 2007; 59: 76–80.
28. Jawaid M and Abdul Khalil HPS. Cellulosic/Synthetic fibres reinforced polymer hybrid composites: a review.CarbohydrPolym 2011; 86: 1–18.
29. Mishra V and Biswas S.Physical and mechanical proper-ties of bi-directional jute fibre epoxy composites. Procedia Eng 2013; 51: 561–566.
30. Narayanan, S.R., Aravindhan, R., Arunprabhakaran, S., Thiyagu, K., Rajaram, S., & Radhkrishnan, K. (2023, October). The experimental investigation and fabrication of sisal and bananafibre with tamarind seed powder reinforced composites. In AIP Conference Proceedings (Vol. 2912, No. 1). AIP Publishing.
31. Mursalin, R., Islam, M. W., Moniruzzaman, M., Zaman, M. F., & Abdullah, M. A. (2018, February). Fabrication and Characterization of Natural Fibre Composite Material. In 2018 International Conference on Computer,Communication,Chemical, Material and Electronic Engineering (IC4ME2)(pp.1-4). IEEE.
33. Obele, C., &Ishidi, E. (2015). Mechanical properties of coir fibre reinforced Epoxy resin composites for helmet shell. Industrial Engineering Letters, 5(7).
34. Natsa, S., Akindapo, J. O., & Garba, D. K. (2015). Development of a military helmet using coconut fibre reinforced polymer matrix composite. European Journal of Engineering and Technology, 3(7).
35. Raja, T., & Anand, P. (2020, December). Mechanical investigations on Neem/Banyan fibres reinforced with ceramic powder particulates hybrid polymer composite helmet. In IOP Conference Series: Materials Science and Engineering (Vol. 988, No. 1, p. 012090). IOP Publishing. ■

Textile, apparel units demand for zero-duty trade

With the US planning to impost reciprocal tariffs on imports from its trade partners from early April. The domestic textile and apparel industries want New Delhi to strike a "zero for zero" tariff deal with the country formost products, with special carveout to safeguard" strategic products".

Interestingly, the push for reciprocal tariffs by US President Donald Trump is being looked at as an opportunity by the Confederation of Indian Textile Industry (CITI) as it will further strengthen the growth of exports to the US. "We are looking forward now since the scenario has changed and the US is looking for new partners," Chandrima Chatterjee, secretary-general at CITI, said.

The proposal for zero-duty textile and clothing trade has been conveyed by the industry to the government in the recent stakeholder consultations.

The US imposes duties ranging from 2.5% to 7.4% on Indian apparel imports, while India's duties range from 5% to 12% depending on the price, an analysis by Apparel Export Promotion Council (AEPC) said.

"Indian has a golden opportunity to expand its footprint in the US market, especially in light of US increasing tariffs on key competitors like China, Mexico, and Canada," CITI said. With reduced tariffs, India's textile and apparel exports to the US could surge to $16 billion in the next three years from $10.8 billion in 2024. "Currently, India has only a 6% share in US apparel imports. Even if we grow another 4%, it is a 25,000 crores opportunity," Prabhu Damodaran, convener, Coimbatore-based Indian Texpreneurs Fedration, said.

India is the third-largest supplier of textile and apparel products to the US after China and Vietnam. Its share is 10.8% of total imports of these products by the US of $118.4 billion.

China remains the dominant supplier with a 25.6% share. However, US imports from China has declined at a CAGR of 9.4% over the last 5 years (2020-2024), while imports from India have growth at a CAGR of 9.1%. "There is a window of opportunity for India to strengthen its position in the US market," CITI said.

In 2024, US textile and apparel imports from India stood at approximately $10.8 billion, whereas US exports to India ware limited to just $0.41 billion. India primarily imports fibre products from the US, with cotton making up 50.6%.

"There isn't enough cotton available in India this year due to crop failures. Mills are already facing shortages, so this tariff move should be leveraged to India's advantage," K Venkatachalam, chief adviser of Tamil Nadu spinning Mills Association, said.

China has already imposed retaliatory duties on US cotton Compared to China, India now holds an advantage, While India currently imposes an 11% duty on cotton, it charges only 5.5% on imports from some African nations due to bilateral pacts. "We can extend that same benefit to the US and, in return, seek preferential treatment for India apparel," Damodaran said.

The industry is also of the view that while focussing on bigger contributors to the export basket, the Centre should not lose sight of sectors like manmade fibres where India is emerging as a supplier. ❐

Falling prices of US cotton will bring China's pain & India's gain for Textiles, Yarn

Falling prices of the US cotton due to China's retaliatory tariffs could boost export demand for Indian garments, textile and yarn. The industry expects increased availability of the superior quality US cotton at cheaper rates and reduced competitiveness of Chinese textile exports due to the retaliatory tariff would help India increase its share in the US and European markets, the industry expects.

US cotton prices fell to their four-year lows after China imposed retaliatory tariffs of 10-15% India ranks number one in the export of cotton yarn and has a global market share of 31% for its cheaper cotton.

According to trade estimates, India's cotton imports have increased by more than 62% in 2024-25 over the previous year due to fall in local production.

"Most of India's imports of cotton from the US is in the ELS (extra-long staple) category and if US cotton prices decline due to reduced demand from China, Indian textile manufacturers might find it economically viable to increase imports of US cotton," said Siddhartha Rajagopal, executive director, the Cotton Textile Export Promotion Council (Texprocil) an autonomous body set up by the government of India.

While India is predominantly self-sufficient in cotton production, it does import certain quantities of ELS cotton and clean & contamination free Cotton to meet specific quality or buyer requirements. From April 2023 to March 2024, India imported

raw cotton worth $570 million from the world, of which $221 million worth of imports were imported from the US; 38.7% of the imports, industry data showed. "With restricted access in the Chinese market, the US with its superior Extra Long Staple Cotton (ELS) will also seek to diversify its cotton exports and look towards India as a strong trade partner," said Rajagopal.

The tariffs are likely to impact the competitiveness of Chinese textile products in international markets, offering Indian exporters an opportunity to capture a larger market share, especially in regions like the US and EU.

"This shift could lead to a rise in demand for Indian cotton yarn, fabrics, and garments, increasing export volumes. As demand for Indian cotton products grows, exporters will experience better profit margins," said Rajagopal.

Additionally, if global prices of US cotton decline due to reduced Chinese demand, Indian textile producers could source US cotton at more competitive rates.

As per available data from January to December 2023, India with exports of $34.2 billion, accounted for around 3.9% of the global trade in textiles and apparel, making it the sixth-largest exporter worldwide.

India has a 5.5% share of the global textile exports at $19.73 billion. India is a major exporter of garments with exports of US$ 15.5 billion worldwide, accounting for around 3% of the world's apparel exports. Currently, raw cotton with staple length of over 32 mm (ELS) is allowed to be imported duty free in India while cotton of staple lengths below 32 mm are taxed at 11%.

However, there is also a possibility that US cotton exporters might redirect their focus to other markets, possibly intensifying competition for Indian exporters in those regions, said the industry experts. ❐

US tariff war with Mexico, Canada may be a impetus for India's textile industry

The tariff war between the US and its two neighbours—Maxico and Canada — could cheer up the Indian textile industry. There is a possibility that some of the large clients may source more apparel from India due to the tariff on materials from Mexico and Canada.

In the last year, the political unrest in Bangladesh and Sri Lanka led to some diversion of apparel business to India.

The current situation involving the US, Mexico and Canada could help Indian companies further. However, scaling the operations at a short notice would be the biggest challenge, said industry sources.

Primary Hub

The US is the world's single largest apparel importing country, primarily sourcing from Asia. In 2024, apparel exports to the US were $5 billion, an 11 per cent growth over the previous year. Even 1-2 per cent diversion from both Mexico and Canada will be incremental over what is being planned, they say.

Prabhu Dhamodharan, Convenor of the Coimbatore-based Indian Texpreneurs Federation (ITE), said Mexico exports around $3 billion worth of apparel and $2 billion worth of nonapparel textile products to the US. Within the apparel segment, $2 billion worth of cotton apparel and $1 billion worth of man-made fibre (MMF) apparel are exported to the US from Mexico.

In additional, small parcel exports are being re-routed from China to Mexico to reach the US, taking advantage of concessions available for small parcel e-commerce exports. The imposition of duties on Mexican exports would benefit competing nations like India. India stands to gain particularly in cotton apparel due to the similarity of product offerings.

India to Gain

Further, India could explore the possibility of addressing reciprocal tariffs by reducing the import duty on US cotton from 11 per cent to 5 per cent, while seeking concessions on US tariffs on apparel and home textile products. "This strategic move could be a game changer in the new and evolving trade dynamics. This will also help India increase its market share in US Apparel imports from the current 6 per cent to double digits, adding an additional $4 billion in exports from India," he said.

Raja M Shanmugham, former president of the Tiruppur Exporters Association, said the disruption would witness lots of repercussions and fallouts ; some might be advantageous, and some might be disadvantageous too. "It might bring some additional business for the future provided we too are not charged with additional tariffs. We have to wait and see. Moreover, we also need to get equipped by developing all required infrastructure support in the existing clusters in our country like labour housing and upskilling," said Shanmugham, who is Managing Director of the Tiruppur-based Warsaw International, a leading garment exporter.

The Indian textile industry is today in a good place to grow but the biggest challenge is to

upgrade the capacity on fabric and apparel, said Rajkumar Ramasamy, Managing Director of Best Corporation, a major exporter of knitted garments from Tiruppur. Mexico and Canada have good expertise, he added.

A source said it would be difficult for Indian companies to immediately upgrade infrastructure at short notice. Also, after investing huge sums of money on machinery, there is no visibility for the next year, said an industry source in Tiruppur. "It is a wait and watch situation with clarity expected in the next 2-3 months," the source said.

Every year, garment exports to the US happen between May and August to ensure that the goods are on the shelf in time for Christmas and New Year, the source said. ❐

India's retail apparel market fastest growing one in the world

Earlier this year, global fashion solutions firm PDS picked up a 55 per cent stake in Knit Gallery, a Tirupur-based apparel exporter, for an equity consideration of ₹41 crore. For the ₹10,373 crore PDS, a listed entity that emerged out of Pearl Global Group's womb, the acquisition would be its first manufacturing facility in India; its other units are in Bangaldesh and Sri Lanka.

At Bharat Tex 2025, the textile trade show in Delhi, PDS has a large pavilion to showcase its work with brands and retailers in the textile space.

Also present was knit Gallery's founder A Vijay Anand, who, beaming with pride, explained how the deal with PDS would help the company scale up faster. He described how, with no background in textiles and purely entrepreneurial zeal, he had built up Knit Gallery to nearly ₹300 crore in FY24, snagging prestigious clients like UK retailer Primark, the German Ernstings's Family, and American retailer TJ Maxx. "I would love to see more big names in my billings book. I think Knit Galery's growth will help Tirupur, too, as it will create more jobs in the town," he said.

As for PDS, the controlling stake in Knit Gallery would help it diversify its sourcing footprint, disclosed Sanjay Jain, group CEO of the company.

"We like to have some skin in the game in the geographies we source garments from for out customers," he explained. "I believe India has huge potential. Buyers are also looking at India and we have our own strengths in design here," he added.

PDS' business, he says, is to sell to its customers—retailers in the UK, the US, and Europe both garments and services such as design, compliance, factory management and so on. "Customers want an efficient and compliant supply chain. So we take the responsibility of getting the clothes manufactured, buying from the manufacturers, and ensuring they are compliant."

Jain says PDS is mostly an asset light operation but also runs a few of its own manufacturing facilities to prove to the customer that it understands the challenges inherent in producing garments. "Why should the customer believe that PDS can do this job of sourcing garments? Because we have 250 designers, 140 compliance professionals located close to the factories where the garments are manufactured, and 800 quality control professionals and merchandisers working with the factories. We have actually invested in manufacturing facilities and in creating an ecosystem," he said.

"We set up two manufacturing units in Bangaldesh, one doing tops and one doing bottoms. And these factories do a turnover of $100 million but we buy garments worth more than $800 million from Bangladesh," he added. Similarly, in Sri Lanka, PDS' manufacturing unit does about $50 million business, but the company exports more than $100 million worth garments sourced from other factories.

How it started

The PDS story is pretty fascinating. It began life as PDS Multinational, a subsidiary of the Pearl Global Group, and end-to-end clothing vendor and garment supplier set up by the redoubtable Deepak Seth. Then in 2014, the business was hived off, with one son, Pallak, taking charge of PDS, while the other son, Pulkit, is MD and Vice-Chairman at Pearl Global.

An agile operator, PDS' corporate headquarters in Mumbai, while customer headquarters is in London. "Our design hub is in London. "Our design hub is in Gurgaon, banking is run from Hong Kong and Dubai, customer relationship is our of Germany and Milwaukee in the US, and finance and taxation out of Bengaluru," Jain stated.

Apart from sourcing garments for retailers such as Tesco, Primark, Walmart, Sainsbury and s.Oliver, PDS also offers other services. "I ask garment retailers what their pain points are, and solve them," Jain said. PDS can manage factories for a service fee." "And if you are a retailer like Tesco or Primark and have a lot of insights into what customers are buying, you could easily curate a new brand for them. We could create that for you,"

he explained. And there is a growing demand for private labels.

Global Sourcing

The sourcing game is very complex, Jain said. The risk element increase as you move up the fashion chain. He described how PDS deals with 60 factories in Turkey and 100-plus factories in China. "If you want a highly fashion-oriented product with a short lead time, Turkey is ideal, given its proximity to Europe. On the other hand, if you want low-cost, basic garments, then Bangaldesh or China is the place to source from."

But the global sourcing strategy, he added, must factor in a lot of elements. "Commercial considerations are just one part. Stability, predictability are another – that your supply chain will not get disrupted. Duty access in another. Certain countries enjoy duty-free access."

At Bharat Tex, the Indian garment manufacturing sector's intent to scale up exports is laudable, he said, but all these considerations must be kept in mind. "The FTAs (free trade agreements) will be a catalyst for growth. It is up to the Indian government to sew more FTAs. Though, to be but also how efficient you are in manufacturing."

Indian Buyers

Does PDS have any customers in India ? Myntra, Red Tape and Aditya Birla Fashion are customers, Jain said. For Myntra, PDS sources from China and Bangladesh. "Since I have offices in China, for smaller MOQs (minimum order quantity) I can easily fulfil."

"We provide supply chain solutions to Indian retailers," he said.

As he pointed out, India's retail (apparel and footwear) consumption will cross $100 billion by 2028 as it is the fastest growing market in the world. "We should see scale ; already large orders are coming from here," Jain said.

So is PDS setting its sights on other manufacturing facilities in India? "There is a land parcel in Coimbatore. But our business model is not to just keep adding capacity and wait for customers to come in," he responded. "Knit Gallery is doing approximately ₹300 crore turnover right now and there is potential to extract 20-25 per cent more. The inquiries that are coming in are very encouraging," he said. ❐

Global cotton market continues to exhibit bearish sentiment on higher output, low offtake

The outlook for the global cotton market is bearish on hopes of higher production in key producing regions and fears of a drop in consumption, analysts have said.

"We believe that positive outlooks for harvests in large producing markets for 2024-25, coupled with downbeat expectations for consumption, will maintain a cap on prices," said research agency BMI, a unit of Fitch Solutions.

The International Cotton advisory Council (ICAC) said in a statement that cotton farmers in both the Northern and Southern Hemispheres are currently facing a daunting task—how to make critical planting decisions during a time of extreme uncertainty.

US Imports from China Halved

Pointing to the ICAC's World Textile Demand Report 2024, which said cotton's market share in global fibre consumption has dropped below 25 per cent, the US Department of Agricuture (USDA) said this limited the potential growth for cotton product imports, despite record consumer demand for apparel and home textiles.

"Competition with MMF (man-made fibres) is especially challenging with respect to Chinese MMF exports."

"US cotton product imports from China have nearly halved since peaking in 2010, while MMF product imports have risen more than 30 percent during the same period," it said. For the 2024-25 season, the USDA has raised the cotton production estimate by 5,00,000 bales (226.8 kg) to 121 million bales.

This is because of a 7,50,000-bale incease in China more than offsetting reductions for Pakistan and Argentina.

6.3% Production Surge

BMI said it is forecasting year-on-year higher global cotton production in 2024-25 by 6.3 per cent from 113.2 million bales to 120.3 million bales, driven by higher productivity in a series of key markets.

According to forecasts by ICAC, yields will increse by 5.4 per cent year-on-year in 2024-25.

"We expect abundant harvests in China, Brazil and the US, which we expect will post year-on-year increases of 13.3 per cent. 15.3 per cent and 17.6 percent respectively. We believe this will result in a market surplus of 4.5 million bales in 2024/25," said BMI.

Cotlook a Index

The resarch agency said it lowered its 2025 cotton price forecast for ICE-listed second-month cotton futures from an annual average of 80 US cents a pound to 72.2 cents.

The USDA lowered the US season-average farm price for 2024-25 to 63 cents.

ICAC has forecast the season-average Cotlook A index for 2024-25 between 92 cents and 97 cents, with a midpoint at 94 cents per pound.

Currently, the Cotlook A Index is at 79.25. May cotton futures on the Inter-Continental Exchange, New York, are currently ruling at 66.62 cents.

ICAC said growers particularly in the US, India and China face a complex set of factors influencing their cotton planting decisions.

"Climate variability and water availability play a crucial role, as increasing unpredictability in weather patterns — including prolonged droughts, and excessive rainfall — necessitate a reliance on advanced climate models to determine optimal planting windows," it said.

BMI said average monthly prices had decreased for three consecutive months between November 2024 and January 2025.

"The market continues to exhibit bearish sentiment, with the latest data from the US CFTC Commitment of Traders Report indicating that the net position held on February 11, 2025, was a short position of 60,481 contracts," it said, adding that it was the largest net short position since June 2024.

However, the USDA said CFTC data show the net long (buy) position for both non-commercial and index participants (as of March 4, 2025) falling. ❐

Govt plans to amend Khadi Act to Boost Exports

The government is planning to amend the Khadi and Village Industries Commission (KVIC) Act, aiming to make Khadi products more marketable, connect with the youth and promote exports of desi clothing.

The changes proposed include revamping the khadi supply and delivery ecosystem, focussing on their digitalisation and helping market khadi as a low-carbon footprint clothing.

"The KVIC amendments under consideration focus on marketability, promoting exports and popularising khadi with the youth. These changes in the act will make khadi products in sync with the current trends, including sustainability in fashion" said an official.

These amendments will also ensure a steady stream of the latest fashionable khadi products and a wider range in the market. "Presently, we don't have sustained production of khadi products, leading to empty shelves in khadi outlets which create a poor shopping experience for consumers and weaken the khadi brand," said an official.

KVIC, the nodal body associated with making key decisions related to khadi policy, has signed memorandum of understanding (MoU) with the National Institute of Fashion Technology to leverage the institutions' expertise in fashion for a better understanding of the market trends and launching products tailored to the taste and preferences of youth.

The KVIC portal is also being revamped, the official said. The government also through these changes is targeting boosting khadi exports as it will facilitate the setting up of export promotion facility centres for the fabric. ❐

Textile industry in Bangladesh in worst crisis

The textile industry in Bangladesh — the country's biggest foreign exchange earner — is staring at its worst crisis in recent years exacerbated by abysmal support from the interim regime in Dhaka.

Ananta Jalil, a prominent Bangladesh entrepreneur dealing in readymade garments, alleged recently that the Bangladeshi economy might collapse soon, as chief adviser Md Yunus is forecfully shutting down the garment sector.

Addressing a public forum, Jalil claimed that millions of workers have been rendered jobless and that Bangladesh's garment-related businesses are losing their market worldwide.

Jalil claimed that Yunus is eliminating all incentives for the garment industry, particularly during the Ramadan period and ahead of Eid. This was one of the rarest outbursts from a leading Bangladeshi businessman since the ouster of Prime Minister Sheikh Hasina last August.

Bangladesh's garment industry contributes as much as 84% of its foreign exchange earnings annually. The industry is also a major employer — more than 4 million people directly and nearly 15 million indirectly — with a major share of women. ■

ELGI ELECTRIC

A world-class solution provider at the forefront of Innovation and Dependability

ELGI Bobbin Transportation System

Running Successfully in **300+** Installations Across the Globe

- Customised Design Linking Speed-Frame to Ring-Frame
- Manual / Closed Loop / Automated System with Reserve Station / Fully Automated with Creel Change System
- Exchanger for Auto-Doffer Speed-Frame (Single / Twin)
- Effective Stripping of Roving through Blowing and Suction

OHTC | BTS | FPS | MDS | YCS

vsbala@eeh.saraelgi.com 9842272511

"A record breaking Catalogue Show hosted by ITAMMA at Erode on 22nd March 2025"

- 28th in series Product-cum-Catalogue Show at Parimalam Mahal, Erode organized by ITAMMA on 22nd March 2025 received a tremendous response from 64 + exhibitors and 900 +Visitors
- Also during the event 4 companies were given a platform for presenting their products and services through power point presentations which was attended by 75 + delegates
- Grasim Industries Limited was the lead sponsor delivered the role of connecting many of its customers using Aditya Birla Viscose Fibres with the exhibitors to know the new developments taken place in textile machines and accessories for enhancing the performance of Viscose yarn production in about 80% textile industries of Erode. The other Sponsors were SIMTA & CELLCON.

Inauguration of 28th Product-cum-Catalogue Show at Parimalam Mahal, Erode on 22nd March 25 to promote the Growth of Textile Industry of Erode

RIBBON CUTTING CEREMONY inaugurated by the Chief Guest SHRI. V.S.PALANISAMY, Chairman PALLAVA GROUP, M/s. Pallava Textiles P. Ltd., Erode

MR. RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode as the Guest of Honour & MR BHAVESH PATEL, PRESIDENT, ITAMMA & MC MEMBERS FROM COIMBATORE

MEMENTO OFFERING TO Chief Guest SHRI. V.S.PALANISAMY, Chairman PALLAVA GROUP, M/s. Pallava Textiles P. Ltd., Erode

MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode BY MR BHAVESH PATEL, PRESIDENT, ITAMMA & MC MEMBERS FROM COIMBATORE

WELCOMING Chief Guest SHRI. V.S.PALANISAMY, Chairman PALLAVA GROUP, M/s. Pallava Textiles P. Ltd., Erode

MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode BY SHAWL BY MR BHAVESH PATEL, PRESIDENT, ITAMMA & MC MEMBERS FROM COIMBATORE

A record breaking Catalogue Show hosted by ITAMMA at Erode on 22nd March 2025

EVENT ROUND BY CHIEF GUEST SHRI. V.S.PALANISAMY, CHAIRMAN PALLAVA GROUP, M/s. Pallava Textiles P. Ltd., Erode & MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode BY SHAWL BY MR BHAVESH PATEL, PRESIDENT, ITAMMA & MC MEMBERS FROM COIMBATORE

RELEASE OF ITAMMA VOICE NO 15 BY CHIEF GUEST SHRI. V.S.PALANISAMY, CHAIRMAN PALLAVA GROUP, M/s. Pallava Textiles P. Ltd., Erode & MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode BY SHAWL BY MR BHAVESH PATEL, PRESIDENT, ITAMMA & MC MEMBERS FROM COIMBATORE

The event was inaugurated by the Chief Guest SHRI. V.S.PALANISAMY, Chairman PALLAVA GROUP, M/s. Pallava Textiles P. Ltd., Erode & MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode as the Guest of Honour and thereafter all the dignitaries released "ITAMMA Voice" Volume No. 15 based on the theme 'Market Trends in Textile Industry".

Felicitation of ITAMMA President by Office Bearers of ITMAA and vice versa

FELICITATION OF MR BHAVESH PATEL, PRESIDENT, ITAMMA BY MR K R KANAGARAJAN , PRESIDENT, INDIAN TEXTILE ACCESSORIES MANUFACTURERS ASSOCIATION WITH A SHAWL

FELICITATION OF MR K R KANAGARAJAN , PRESIDENT, INDIAN TEXTILE ACCESSORIES MANUFACTURERS ASSOCIATION BY MR BHAVESH PATEL, PRESIDENT, ITAMMA WITH A SHAWL

Technical Presentations Session

PRESENTATIONS BY EVOLVE GREEN ENERGIES PVT. LTD.

PRESENTATIONS BY INDO TEXNOLOGY PVT. LTD.

A record breaking Catalogue Show hosted by ITAMMA at Erode on 22nd March 2025

PRESENTATIONS BY SIEGER

Inviting Guest of Honour through a courtesy visit in his Mill

Inviting Guest of Honour through a courtesy visit in his Mill –OFFERING ITAMMA CTB TO MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode BY MR N D MHATRE, DIRECTOR GENERAL (TECH)

PRE-EVENT DISCUSSIONS WITH MR.RAMESH NATARAJAN, EXECUTIVE DIRECTOR, AGT MILLS, Erode , MR N D MHATRE, DIRECTOR GENERAL (TECH) & MS NANTHINI (LIAISON OFFICER-COIMBATORE)

For further information, please contact :
N. D. Mhatre, Director General (Tech)
Indian Textile Association & Machinery Manufacturers Association
Bhogilal Hargovindas Building,
18/20, K. Dubash Marg,
Kala Ghoda, Mumbai-400001
Tele : (022) 40121421/40124828/8928144886,
Fax : (022) 2287 4060
e-mail : info@itamma.org/admin@itamma.org
accounts@itamma.org, Web : www.itamma.org ■

Textile Machinery : Italian Companies on Display at IGATEX Pakistan

From April 24 to 26, Karachi will host IGATEX, the International Garment & Textile Machinery Exhibition & Conference, the leading trade fair for the textile machinery sector in Pakistan. After many years, ACIMIT, the Association of Italian Textile Machinery Manufacturers, together with Italian Trade Agency, is once again organizing an Italian collective participation. A total of 11 companies will take part: 3 in the spinning hall and the remaining 8 in the finishing section. All participating companies are ACIMIT members, including: Audaces, Biancalani, Brazzoli, Danitech, Fadis, Ferraro, Mcs, Pinter Caipo, Pozzi Leopoldo, Zanfrini

'In Pakistan, the textile sector, after a long period of strong investments In plants and machinery, has experienced & significant downturn due to a worsening macroeconomic situation in recent years," commented Marco Salvade, president of ACIMIT. The trend in Italian textile machinery exports to Pakistan reflects the decline in demand. The value of textile machinery sold to Pakistan dropped from 134 million euro in 2021 to 44 million euro in 2023. However, in the first nine months of 2024, Italian sales rebounded to 34 million euro, marking a 27% increase compared to the same period in 2023.

"Despite the challenges faced by Pakistani textile companics in rccent years," Salvadé concluded, "the recovery of our exports confirms the validity of ACIMIT and ICE's decision to organize an Italian collective participation at IGATEX 2025. I believe it is crucial to maintain a presence in the local market, where we are also active with a technological training center at the National Textile University in Faisalabad, established in collaboration with PISIE - the International Polytechnic for Industrial and Economic Development - and Italian Trade Agency. Innovation and quality, which define Italian machinery, remain key factors in further enhancing the international competitiveness of Pakistani textile companies."

For further information, please contact:
Mauro Badanclli,
ACIMIT Economics & Communication
Tel. +39024693611
Email: cconomics-press@acimit.it ■

LIVA Miss Diva 2024 Grand Finale marks Beauty, Fashion, and Innovation

The LIVA Miss Diva 2024 Grand Finale, held on 7th March 2025, was a spectacular celebration of beauty, fashion, and digital influence, bringing together India's most talented individuals for a night of glamour and empowerment. LIVA, the 100% natural-origin fabric brand from Birla Cellulose, reaffirmed its commitment to supporting independent, confident, and versatile women. This year, LIVA marked a historic milestone with the introduction of two new categories—LIVA Miss Diva Fashion Designer and LIVA Miss Diva Content Creator—expanding the platform beyond the runway and redefining fashion's creative landscape.

The grand event witnessed the crowning of Ayushree Malik as LIVA Miss Diva Supranational 2024 and Vipra Mehta as LIVA Miss Diva Cosmo 2024. These exceptional women will represent India globally at Miss Supranational 2025 and Miss Cosmo 2025, carrying forward the country's rich legacy in international pageantry.

From L to R : LIVA Miss Diva Content Creator 2024 Ananya Praveen, LIVA Miss Diva Content Creator 2024

Sudhruti Padhiary from Odisha won the title of LIVA Miss Diva Fashion Designer 2024, while Ananya Praveen from Bihar was titled LIVA Miss Diva Content Creator 2024. Their victories highlight the evolution of LIVA Miss Diva, recognizing excellence in fashion craftsmanship and digital storytelling.

The grand finale, hosted by Nehal Chudasama and Tanuj Virwani, saw 24 finalists competing across categories, captivating the audience with their confidence and talent. The event opened with a stunning fashion showcase by renowned designer Mandira Wirk, setting the tone for an evening of elegance and sophistication.The jury panel featured esteemed industry stalwarts, including mentors Ritika Khatnani, Sonaakshi Raaj, and Bhavana Singh, alongside celebrity designer Mandira Wirk, actor Fardeen Khan, Miss Cosmo 2024 Ketut Permata Juliastrid, and Miss Supranational 2023 Andrea Aguilera.

L to R : LIVA Miss Diva Content Creator 2024 Ananya Praveen, LIVA Miss Diva Supranational 2024 Ayushree

The evening also featured an electrifying performance by rapper Pho and a mesmerizing musical act by Sa Re Ga Ma talents Pragati Nagpal and Arjun Tanwar. The finalists took the stage in breathtaking ensembles, with the LIVA Miss Diva Fashion Designer contestants showcasing regal ethnic creations crafted from LIVA's eco-friendly fabric portfolio, including Livaeco, Liva Modal, and Liva Excel.

Speaking about the association, Mr. Sree Charan, VP Marketing, Global Head – Brands, Birla Cellulose, Aditya Birla Group, said, "At LIVA, we celebrate innovation, creativity, and individuality. Our partnership with Miss Diva for the fifth consecutive year reflects our commitment to empowering women who embody fluidity, confidence, and sustainability. This year's winners represent the future of fashion and beauty, and we are proud to support them on their transformative journeys."

The LIVA Miss Diva 2024 Grand Finale was more than just a competition, it was a celebration of talent, diversity, and purpose-driven innovation. As the winners embark on their new journeys, they inspire future aspirants to break barriers and chase their dreams.

For further information, please contact:
Nidhi Desai, White Marque Solutions
Creative Strategy, Public Relations,
Digital Outreach,
Liva, Aditya Birla Group
Landline: 022-26335094-98, Extension: 13
Cell: +91 9167688918
Email: nidhi@whitemarquesolutions.com
Office No: 422/423, 4th Floor, Laxmi Plaza
Laxmi Industrial Estate,
Andheri (West), Mumbai-400053
Website: www.whitemarquesolutions.com ❐

Hon'ble Minister Giriraj Singh & Colorjet Chairman delivered a speech on sustainability & 'Make in India' in Textile Printing

At Bharat Tex 2025, one of India's most significant textile industry events, Mr.M.S. Dadu, Chairman of ColorJet Group, had a meeting with Hon'ble Union Minister of Textile Minister, Shri Giriraj Singh to discuss the sustainable future of textile printing and India's leadership in manufacturing technology under the 'Make in India' initiative.

M.S. Dadu Chairman of ColorJet met Shri Giriraj Singh, Minister of Textiles highlighted ColorJet's commitment to sustainable and eco-friendly textile printing solutions, emphasizing the company's latest innovations in digital textile printing that reduce water and energy consumption. He also reiterated ColorJet's role in supporting India's textile industry with advanced indigenous technology, aligning with the government's vision of Atmanirbhar Bharat.

Hon'ble Minister Shri Giriraj Singh emphasized the value of sustainable solutions in textiles and the need for development in India. He admired ColorJet as India-origin company delivering Sustainable digital printing technology and appreciated Color Jet's` contributions to the industry. The discussion also focused on India's growing potential as a global textile hub, and export to other leading nations like Europe, Indonesia, and more. Today Digital printing technology contributes to meeting modernized designs and patterns along with the increased production capacity while minimizing environmental impact.

ColorJet delivering excellence for three decades continues to drive advancements that support both sustainability and cutting-edge technology, reinforcing India's position as a global powerhouse in textile production.

For further information, please contact:
Abhijeet Kumar
Marketing Manager, Colorjet Group
Ph : 09811992462
A 607, Sector-81, Noida
Uttarpradesh-201305 ❐

Uster hosted panel discussion of Textile Industry Leaders

Uster Technologies brought textile industry leaders together to discuss the currentissues in using recycled raw material. A delegation of spinners from India met experts from Rieter, Säntis-Textiles, Otto Yarns, Gherzi Textile Organization and TVUat Uster headquarters in Switzerland. This article summarizes the challenges and opportunities of recycled yarns from both sustainability and business aspects.

The ideas and solutions of the panelists diverge on the subject how to be successful with recycled yarns. They see different approaches to achieve the goal.The quality of recycled yarn could be improved withan additional step between mechanical opening and the spinning process, according to Michael Will (Head Textile Technology & Process Analytics) from Rieter. The pre-opening or carding does not necessarily have to be in the responsibility of the spinners. It could also be done by the fiber suppliers. Andreas Merkel (CEO) from Otto Yarns anticipates better results with pre-consumer fibers. Post-consumer waste remains a difficult raw material – although readily available in large quantities. He forecasts great future opportunities, but it will take some time.

Stefan Hutter, Owner of Säntis-Textiles, also believes in the recycling business, and that recycled

material will become a standard. He expects two segments growing: one based on industrial and the other on post-consumer waste. A lot of groundwork has been done, but it's still a good time to jump in on this business.

Looked at from a trading and dyeing perspective, the quality and sourcing of recycled yarns are challenges. Thomas Franz (Sales and Purchasing Manager) at TVU states that yarn properties are not comparable with virgin fibers – and more difficult with cotton than polyester – and so neither dyeing results nor process efficiency are the same.

Who pays for sustainable yarns?

Producers agree that there will always be a disadvantageous difference compared to virgin fibers. The question is, could consumer expectations be corrected in terms of quality and price regarding garments made from recycled raw material?

Giuseppe Gherzi, Managing Partner at Gherzi Textile Organization, makes clear that the problem is not the consumer expectations, but that retails and fashion brands are not ready to pay more for recycled garments. The power for change lies in legislation. But there's a lot of uncertainty.In the end, regulations generate costs as they need a control system.

How to prove recycled yarn?

Technology to secure, that recycled products are genuine are available and also Uster Research & Development team is working on this subject. It is possible to verify the lifecycle of recycled items, such as denim, from their first to third use. However, the cost and whether brands are willing to pay for traceability remain concerns.

Can traceability beaddressedin spinning? Michael Will says: "With innovative technology in combing a 50/50 blend could become a 40/60 but is it necessary to declare this change?" The result of the further discussion of spinning practices was that using a certain percentage of less expensive recycled fibers should be a common standard in the future as long as quality requirements are met – without the need for information or proof.

Of course, the certification also adds to the cost for yarn producers. Plants, as well as raw material shipments and shipments to the customer, need to be certified. Only when the complete chain is certified can, for example, a GRS (Global Recycled Standard) logo be applied. With a required minimum of recycled content in the product a certification system is a must. Merkel could imagine two markets in future: a mass market for cost-effective yarn production with recycled cotton fiber but no certification; and a smaller market with certificates required. There's a crucial fact that lower prices are expected for recycled, but that's not the case in reality.

How to make it profitable?

Making good money with recycled yarn will be possible by optimizing and shortening the processes in yarn production. Hutter believes that the costs will come down as soon the market picks up and grows and there's more material in the market. This happened with polyester and will also follow with cotton. The market wants recycled products.

Spinners are advised to start at some point – meaning with a certain blend of recycled material– to develop recycled yarn further. It's crucial to learn bytesting and analyzing over some years finally to achievethe required product at a much better quality.

For further information, please contact:
Edith Aepli
On behalf of Uster Marketing Service
Uster Technologies AG
Sonnenbergstrasse 10
8610 Uster , Switzerland
Phone +41 43 366 38 80
Mobile +41 79 91 602 91
edith.aepli@uster.com ❐

Jakob Müller Group carries out strategy 2030 with concrete measures

The Jakob Müller Group (JMG), a global leader in narrow fabric machinery, is pushing forward with the implementation of its JMG 2030 strategy. This strategy aims to solidify the company's market leadership, respond more agilely to the dynamic

industry landscape, and align even more closely with customer needs. The current measures focus specifically on the company's core competencies and include, among other things, simplified corporate structures, adjustments and expansions of the product portfolio, a new acquisition, and targeted customer initiatives. With this, JMG strengthens its position in the market and lays the foundation for sustainable growth for the long-standing Swiss company.

The Swiss industrial landscape is changing – as is the global textile machinery industry, for which JMG manufactures machines and system solutions. As part of its JMG 2030 strategy, the world's leading machine manufacturer has now presented a series of measures designed to secure its market leadership and enable long-term growth.

JMG is investing specifically in strengthening customer focus and modernizing both its product portfolio and global internal processes. This includes the creation of innovative customer collaboration platforms, the expansion of the product portfolio in the volume segment, the optimization of the service offering, as well as the simplification of corporate and management structures.

JMG's Group Management Team (from left to right): Fabian Voser (COO), Hanspeter Weilenmann (CFO), Andreas Conzelmann (CEO),

Focus on core competencies and operational excellence

As part of its strategic realignment, JMG will increasingly focus on its core segments of Weaving, Label Production Systems, Warp Crochet Knitting, as well as Dyeing and Finishing. At the same time, the Winding & Making-up and Warping Systems segments at the JMG site in Schwelm, Germany, will be discontinued, with essential technologies and products being transferred to other areas. In addition, the Finishing segment will be relocated from Kadan, Czech Republic, to JMG's sister company Benninger in Pune, India. These measures will lead to structural adjustments at the locations in Germany and the Czech Republic, where production will be gradually reduced.

"Even though these decisions were not easy for us, they are necessary to secure the future viability of the Jakob Müller Group. Our resources must be specifically directed where we see the greatest growth potential," says owner Stephan Bühler. Andreas Conzelmann, CEO of JMG, adds: "By focusing on our core segments, we are strengthening our innovative power and competitiveness – and ensuring that we can continue to offer our customers the best solutions in the future."

Unifying JMG's brand identity and strengthening the global market position

COMEZ, the leading manufacturer of crochet and warp knitting machines in Italy, will be fully integrated into JMG and will operate under the name Jakob Müller Italy in the future. With investments in research and development – including the acquisition of MEI International, a renowned Italian manufacturer of label weaving machines – JMG will drive next-generation solutions and expand its product portfolio to include innovative air-jet technology. Further information regarding the acquisition of MEI will be provided in a separate announcement.

Sustainably improving customer experiences

Creating outstanding customer experiences is at the heart of the JMG 2030 strategy. The strategic investments in innovation and operational excellence enable JMG to offer state-of-the-art solutions, faster turnaround times, and an enhanced customer experience. A key element of this customer-centric approach is the opening of the new Customer Center and of the LAB1887 in Frick, Switzerland, in late summer 2025. This innovation factory serves as a development center where customers, together with JMG, can explore new technologies and develop novel applications for narrow fabrics.

"Our JMG 2030 strategy underscores our company's commitment to long-term stability, sustainable growth, and maintaining our position at the forefront of the narrow fabric industry," says Andreas Conzelmann. "The changes we are implementing will enable us to become a more agile, customer-focused company – ready to seize future opportunities."

About Jakob Müller Group

Jakob Müller Group (JMG) is a leading global provider of narrow fabric weaving machines and solutions. With a presence in 82 markets and 11 locations worldwide, JMG leverages its 138 years of experience to deliver innovative, high-quality solutions. The dedicated team of skilled and motivated employees is the foundation of JMG's success. The company fosters a culture oftrust and personal responsibility. Solution-oriented thinking and action, as well as employee well-being through health promotion initiatives, are given high priority. JMG drives innovation with state-of-the-art technology, focusing on core competencies and maintaining a competitive edge by developing and producing key components in-house or through exclusive partnerships.

For further information, please contact:
Media contact Jakob Müller Group
Luca Guarda
Marketing & Communications Manager,
Jakob Müller Holding AG
luca.guarda@jmh.swiss
+41 62 865 56 00

Jeanologia celebrates its 30th anniversary with a key event shaping the future of the textile industry

Jeanologia strengthens the next generation of textile leaders at the NextGen Summit

- **At this global gathering, major industry challenges such as digitalization, automation, new regulations, and the circular economy were addressed.**

In 2025, Jeanologia celebrates its 30th anniversary, marking three decades of innovation and leadership in transforming the textile industry. The Spanish company commemorates this milestone with a pioneering event, the NextGen Summit, bringing together for the first time the world's leading denim manufacturers under one roof. With a significant representation of global production, the summit has served as a platform to inspire, motivate, and empower the next generation of leaders from family-owned businesses in the denim industry, equipping them with the necessary tools to tackle future challenges with a sustainable, technological, and collaborative vision.

Held at Jeanologia's headquarters in Valencia and other key textile industry locations in Spain, the event has been a pivotal meeting point where future leaders exchanged ideas and knowledge with brands and industry experts. For the first time, the sector's leading companies gathered to discuss the industry's future, addressing key challenges such as sustainability, digitalization, and automation.

The NextGen Summit program included diverse formats designed to maximize learning and interaction, featuring inspirational talks where industry leaders shared their experience and vision, with a special focus on generational transition; interactive workshops exploring innovative

solutions for industry challenges; and open debates fostering dialogue among key players in the sector.

One of the standout moments of the event was the keynote by Bart Sights, Head of Innovation at Levi's, who inspired attendees with his disruptive vision and industry trajectory. From his early days working alongside his father as a supplier to his current role leading innovation at one of the most influential denim brands, Sights emphasized the importance of bringing bold ideas to the table. His message encouraged participants to embrace change and leverage new technologies to accelerate transformation.

Additionally, a visit to Mango's headquarters was one of the most emotional and inspiring moments of the program, as it paid tribute to the memory of its founder, Isak Andic. During the visit, Andrés Fernández, Head of Sustainability & Sourcing, shared Mango's vision, objectives, and action plans for sustainability, sparking a highly enriching discussion for both parties.

An inspiring session was also held at another major Spanish retailer, where participants not only gained insight into its strategic approach and vision for the future of the industry but also engaged in an open debate on the challenges and opportunities facing the sector.

A collaborative and digital future

Beyond learning, the NextGen Summit has been a catalyst for collaboration, creating a space where the industry can learn, share, and evolve together.

Through this event, young leaders have established lasting relationships and made concrete commitments to advance toward a more responsible and efficient model. The community formed at this summit will continue to stay connected and exchange ideas beyond the event itself, reinforcing Jeanologia's mission to build a more collaborative and transparent textile ecosystem.

The beginning of a global movement

"The NextGen Summit is just the beginning of a global movement. We have built a community where the next generations openly share challenges and solutions, motivating each other to accelerate change in a disruptive, responsible, and collaborative way. Now, it is up to us to take on the challenge of transforming the industry with a new mindset, new ways of working, and a commitment to a better future," stated Pepa Silla, who represents the young leadership guiding Jeanologia's vision toward a more innovative and sustainable model.

Jeanologia is firmly committed to empowering the next generation of leaders, who will play a crucial role in the industry's transformation. With the NextGen Summit as a starting point, the company plans to continue organizing future editions of this event and positioning it as a benchmark in the transition towards a more digital, automated, and sustainable industry.

Jeanologia: 30 years leading the transformation of the textile industry

Since its founding, Jeanologia has been on a mission to transform the textile industry into a more ethical, sustainable, and efficient model. The company works closely with brands, retailers, and suppliers on this transformative journey, offering disruptive technologies, innovative software, and a new operational model. Their groundbreaking solutions, including laser technology, G2 ozone, Dancing Box, e-flow, H2Zero, and ColorBox, have redefined garment design and finishing standards, eliminating polluting processes and significantly reducing the use of water, energy, and chemicals. Thanks to these advancements, Jeanologia has saved millions of liters of water and eliminated harmful substances, turning its vision of a truly sustainable textile industry into reality.

In 2025, Jeanologia celebrates its 30th anniversary, marking a legacy of three decades of sustainable innovation. From the introduction of its laser technology in 1999, which revolutionized denim finishing, to its current challenge of implementing a revolutionary sustainable garment dyeing process, the Spanish company has pioneered solutions that not only benefit the environment but also optimize operational costs. Looking ahead, Jeanologia remains committed to creating an eco-efficient and ethical textile future, encouraging all industry stakeholders to join its Mission Zero initiative: dehydrate and detoxify the textile industry. No more water and toxic chemicals used in garment finishing around the world.

For further information, please contact:
DÉCOM
Patricia Aguilar, Jeanologia
paguilar@agenciadecom.es
+34 96 353 04 81

Lenzing Redesigns Textile Innovation at Bharat Tex 2025, Strengthening India's Global Footprint

Lenzing Group, a global leader in wood-based specialty fibers, successfully concluded its participation at Bharat Tex 2025, reinforcing its commitment to India's evolving textile landscape. The event served as a pivotal platform for

collaboration, bringing together stakeholders from spinners to brands and highlighting the integration of the entire supply chain.

At Bharat Tex 2025, customers explored the innovative world of TENCEL™ and LENZING™ ECOVERO™ fibers at the Lenzing booth, experiencing firsthand how these fibers are setting new standards in sustainability and performance. Visitors engaged with a comprehensive selection of products crafted withTENCEL™ Lyocell A100, TENCEL™ Lyocell LF, TENCEL™ Lyocell x Micro, TENCEL™ Lyocell Fill, and LENZING™ ECOVERO™ Black. These fibers enhance fabric versatility, blend ability, insulation, and color fastness, making them ideal for applications across fashion, home textiles, and performance wear.The response from Indian garment makers, mills, brands, and designers was overwhelmingly positive, reflecting the growing demand for eco-conscious and high-performance fibers in categories such as denim, home textiles, intimate wear, and traditional Indian apparel like sarees and kurtis.

Jayaraman, Vice President – Global Sales- "Bharat Tex 2025 has been a phenomenal platform that truly reflects the dynamism and innovation of India's textile industry. The engagement we've seen—from mills to brands, from emerging designers to global buyers—underscores India's pivotal role in shaping the future of sustainable textiles. At Lenzing, we are proud to support this transformation with cutting-edge fiber technologies, and the strong collaborations here reaffirm India's growing role in responsible textile manufacturing"

Avinash Mane, Senior Commercial Director – AMEA & NEA, Lenzing Fibers, echoed these sentiments, stating, "Bharat Tex 2025 has once again proven to be a remarkable platform for collaboration and knowledge exchange. Our innovations continue to align with the diverse needs of the Indian textile industry, combining sustainability with advanced fiber solutions. We look forward to strengthening our relationships and driving the future of responsible textiles in India."

Additionally, Bharat Tex 2025 facilitated meaningful discussions with international buyers, signaling new opportunities for Indian-made

textiles featuring Lenzing fibers in global markets. This trend is set to strengthen India's position as a key player in sustainable textile manufacturing.

Bharat Tex 2025 has once again proven to be a landmark event, uniting the entire textile value chain and showcasing India's growing influence in the global textile industry. This platform has sparked invaluable collaborations, fostered innovation, and reinforced the industry's commitment to sustainability. As we conclude this edition, Lenzing celebrates the meaningful conversations, partnerships, and progress made toward a more responsible and resilient textile future. The success of Bharat Tex 2025 is a testament to India's dynamic textile ecosystem, and we look forward to continuing this journey together, driving sustainable growth and innovation for years to come.

About the Lenzing Group

The Lenzing Group stands for the ecologically responsible production of regenerated cellulose fibers based on cellulose and recycled material. As an innovation leader, Lenzing is a partner to global textile and nonwoven manufacturers and drives many new technological developments. The Lenzing Group's fibers are the raw material for a wide range of textile applications – from functional, comfortable and fashionable clothing through to durable and sustainable home textiles. A range of LENZING fibers is also certified by TÜV AUSTRIA for the following properties: biodegradable in soil, fresh water and marine environment as well as compostable in home applications and industrial facilities.

The Lenzing Group's business model extends far beyond that of a conventional fiber producer. Together with its customers and partners, Lenzing develops innovative products along the value chain, creating added value for consumers. The Lenzing Group strives for efficient utilization and processing of all raw materials used and offers solutions for the transformation of the textile industry from the current linear economic system to a circular economy. In order to reduce the rate of global warming and thereby also support the goals of the Paris Agreement and the EU Commission's Green Deal, Lenzing has a clear, science-based climate action plan that aims for a significant reduction in greenhouse gas emissions by 2030, and a net-zero target (Scopes 1, 2 and 3) by 2050.

Key Facts & Figures Lenzing Group 2023

Revenue: EUR 2.52 bn

Nominal capacity (fibers): 1,110,000 tonnes

Employees (full-time equivalents): 7,917

For further information, please contact:
Reeti Mehta, Senior Account Executive
Lenzing Group
M: +91 9098373180
Reeti.Mehta@sixdegrees-bcw.com

A deal between Köksan Group and Oerlikon Barmag Huitong Engineering (OBHE) signed contract

Köksan invests in China having trust on Oerlikon Barmag Continuous Polycondensation Technology

Oerlikon Barmag Huitong Engineering (OBHE), has signed a comprehensive cooperation agreement with Köksan Group, one of the leading PET producers in Türkiye, for a Continuous Polycondensation (CP) production capacity of 400,000 tons per year. This will accelerate the global expansion of the Köksan Group's production capacity.

As part of this comprehensive cooperation agreement, Köksan will invest a high triple-digit million Chinese Yuan amount in the coming years. The new plant will be in the Yangkou Chemical Industrial Park, Rudong County, Nantong, China. Köksan will be setting up its plant with a production capacity of 2.2-million-tons-per-year green polyester new materials for the packaging industry. The first phase of this project has now been officially launched. Production is scheduled to start in mid-2026.

"We are convinced that this investment will be a major step for our company's future. It is our first investment in China and one of the largest industrial investments by a Turkish company in this area of industry in China. Upon the completion and full operation of this project, Köksan will become one

TECCHNO'S NEW LAUNCHES

- "TECCHNO" COMPACTOR PROTECTION
- "TECCHNO" WARE HOUSE FIRE PROTECTION SYSTEM
- "TECCHNO" FIRE AND BREAKDOWN INFORMATION SYSTEM
- "TECCHNO" SINGLE SPINDLE MONITORING SYSTEM
- "TECCHNO" DIGITAL FIBRE BUNDLE STRENGTH TESTER WITH COMPUTER INTERFACE

TECCHNO®

CE

27th ANNIVERSARY
1996 - 2023
TECCHNO GROUP

SPECIALIZED TESTING INSTRUMENTS

Snarl Index Testing Device with Yarn & Hook

Cone Crush Tester - With Printer

Automatic Splice Strength Tester - SPLICE MONITOR

FABRIC/GARMENT TESTING INSTRUMENTS

Crockmeter (Motorised)

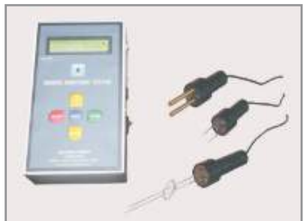
Bursting Strength Tester - Automatic

Offering The Complete Range of Testing Equipments

- GINNING
- SPINNING
- WEAVING
- KNITTING
- APPARELS

COTTON TESTING INSTRUMENTS

Trash Separator - Electronic Table Top Model with External Blower



Digital Moisture Tester with Probes

Handy Mic

STELLO Meter

YARN TESTING INSTRUMENTS

Automatic Yarn Appearance Board Winder with 24x10x5 Tapper Board

Automatic Wrap Reel with Cope Stand

CSP System Table top Auto reverse

TECHNO ELECTRONICS & INSTRUMENTS.
TECCHNO QUALICON SOLUTIONS (P) LTD.

Address : S F No. 690/2A, 691/1A, S & P Industrial Area, Madukkarai Market Road,
Sidco industrial Estate Post, Coimbatore 641 021
Phone : +91 422 4518158, 81220 73158
Mobile No.: +91 98422 19650, 98422 21415
Email : sales@technotesting.com, contact@technotesting.com

www.technotesting.com

of the global giants in polyester production for the packaging industry", said Murat Kökoğlu, CEO of Köksan. "We are very pleased that Köksan has chosen our innovative CP technology. This is further proof of our capabilities in the field of polymerization technologies", said Zhong Ming, General Manager of Oerlikon Barmag Huitong Engineering.

Martin Oruc Kutuk, General Manager of Köksan, and Zhong Ming, General Manager of Oerlikon Barmag Huiting Engineering (OBHE) at the signing ceremony of the contract.

Latest CP technology from Oerlikon Barmag Huitong Engineering

The project adopts the advanced five-reactors process and tailor-made equipment of Barmag's joint venture partner OBHE. Using purified terephthalic acid (PTA) and ethylene glycol (MEG) as raw materials, it produces high-viscosity chips through the direct esterification and continuous polycondensation process technology route. Combined with Köksan's experience & knowledge, high-quality bottle-grade polyester chips are finally obtained.

As one of Türkiye's leading companies in the PET and plastic packaging sector, Köksan exports to more than 100 countries and maintains its investments abroad. Köksan is an international investor with operations in China, Senegal, Libya, and Iraq. After over 50 years of development, the company has realized a diversified development model integrating chemical production and processing, logistics, warehousing, international trade, hotel and real estate development.

About Barmag

Since 2025, the Swiss Oerlikon Group has continued its manmade fiber business as a subsidiary under the traditional name Barmag. This includes the established product brands Oerlikon Barmag, Oerlikon Neumag and Oerlikon Nonwoven. As a future-oriented company, research and development are focused on energy efficiency and sustainable technologies (e-save).

Barmag is one of the leading suppliers of filament spinning systems for man-made fibers, texturing machines, BCF systems, staple fiber systems and solutions for the production of nonwovens. Together with its range of polycondensation and extrusion systems and their key components, Barmag thus covers the entire manufacturing process - from monomer to textured yarn - and supports it with customer-oriented engineering services. The product portfolio is rounded off by automation and digitalization solutions. In addition, Barmag offers high-precision gear metering pumps for the textile industry and other sectors, including the automotive, chemical and paint industries.

The main markets for the Barmag product portfolio are in Asia, particularly in China, India, Turkey and the USA. Barmag employs around 2,500 people worldwide and is represented by production, sales and service organizations in 120 countries. In the research and development centers in Remscheid, Neumünster (Germany) and Suzhou (China), highly qualified engineers, technologists and technicians develop innovative and technologically leading products for the world of tomorrow.

Oerlikon (SIX: OERL) is a global leader in surface technologies. Headquartered in Pfäffikon, Switzerland, the Group has over 12,000 employees at 199 locations in 38 countries with sales of CHF 2.4 billion in 2024.

Further information at: www.barmag.com

About Oerlikon Barmag Huitong Engineering (OBHE)

OBHE focuses on providing complete plant engineering solutions for textile-grade PET, bottle-grade PET, film-grade PET, r-PET, PBAT/PBS, PETG, PBT, PTT, TPEE polymers, PA6 and supporting businesses. OBHE also offers customized engineering complementation plant based on customer's process package. With over 30 years of engineering experience, OBHE has developed various advanced and mature polymer production technologies with remarkable core advantages and increasing global competitiveness. The company is one of the world's leading polymerization technology companies.

For further information, please contact:
André Wissenberg, Barmag Marketing Corporate Communications & Public Affairs
Phone +49 2191 67 2331
andre.wissenberg@barmag.com
Jeremy Liu, OBHE Sales & Marketing
Phone +86 514 8789 2634, Jeremy.liu@barmag.com

CORPORATE NEWS

American Classics Apparel, Inc. plays leading role in the Digital Revolution in Licensed Music, Movie, and Gaming Apparel with On-Demand Technology from Kornit Digital

- Trailblazing licensed wholesaler embraces Kornit Apollo to boost production efficiency, overcome labor challenges, and deliver top-quality apparel faster than ever before
- Transition from traditional screen printing to cutting-edge digital production positions American Classics to better meet growing e-commerce and retail demands

Kornit Digital Ltd. (NASDAQ: KRNT) ("Kornit" or the "Company"), a global pioneer in sustainable, on-demand digital fashion and textile production technologies, today announced that American Classics Apparel, Inc., a top wholesaler of licensed music, movie, and gaming apparel, is adopting the Kornit Apollo platform. This next-generation direct-to-garment powerhouse accelerates the company's shift from traditional screen printing to high-speed digital production – ensuring it can keep pace with the surging customer demand and rapid growth of the e-tailer marketplace.

Headquartered in Hanceville, Alabama, American Classics has been a trusted name in licensed apparel for nearly three decades – offering iconic designs from beloved brands in music(AC/DC), movies (Rocky) and television (Cheers). Sold through retail giants like Walmart and online platforms such as Amazon, their products define fan gear excellence.

With the addition of Kornit Apollo to its arsenal on top of Kornit Atlas MAX POLY production and range of earlier Kornit direct-to-garment systems – the company is ready to deliver faster,more efficiently and with unmatched quality.

Setting a New Standard for Licensed Apparel

"For years, our partnership with Kornit has empowered us to integrate cutting-edge, on-demand digital production into our operations," said Greg Brown, Vice President at American Classics Apparel, Inc. "Now, with skyrocketing demand for our licensed apparel and ongoing labor shortages, Kornit Apollo is arriving at the perfect moment. This innovative platform gives usspeed, flexibility, and efficiency we need to scale while maintaining the superior quality of ourcustomers expect. It's truly a gamechanger for our business."

The Future of Licensed Apparel Production

"In the world of licensed apparel, speed to market is everything – yet quality must remain paramount," said Ronen Samuel, Chief Executive Officer at Kornit Digital. "American Classics has consistently set the bar for fan-driven apparel, and their adoption of Kornit Apollo represents a bold step forward. With this powerful system, they're poised to deliver industry-leading turnaround times and unparalleled quality while addressing regional labor challenges. We're proud to help them usher in this next chapter of innovation and growth."

To learn more about Kornit Apollo and how it's revolutionizing the transition from screen to digital production, visit www.kornit.com.

About Kornit Digital

Kornit Digital (NASDAQ: KRNT) is a worldwide market leader in sustainable, on-demand, digital fashion, and textile production technologies. The company offers end-to-end solutions including digital printing systems, inks, consumables, software, and fulfillment services through its global fulfillment network. Headquartered in Israel with offices in the USA, Europe, and Asia Pacific, Kornit Digital serves customers in more than 100 countries and states worldwide. To learn more about how Kornit Digital is boldly transforming the world of fashion and textiles, visit www.kornit.com.

For further information, please contact:
Kornit Digital
Craig.librett@kornit.com ■

ITMA ASIA + CITME, Singapore 2025 Launches online visitor registration

Over 770 exhibitors have been allocated stand space

Online visitor registration for ITMA ASIA + CITME, Singapore 2025 which will be held from 28 to 31 October 2025 is now open with early registrants enjoying a 50% discount from the onsite rates.

Visitors who purchase their badge online will enjoy early bird rates of S$50 for a four-day badge and S$25 for a one-day badge. These attractive rates are available until 28 September at www.itmaasiasingapore.com.

After the early bird phase, visitors can register with standard online rates at S$60 for a four-day badge and S$30 for a one-day badge. Onsite rates during the exhibition are S$100 and S$50 for a four-day and one-day badge respectively. All rates include the Goods and Services Tax (GST).

Billed as The Leading Textile Technology Exhibition Driving Regional Growth, ITMA ASIA + CITME, Singapore 2025 is expected to attract visitors from the surrounding textile and garment production hubs.

Mr Alex Zucchi, president of CEMATEX said: "Textile manufacturers from South Asia, Southeast Asia and the Middle East are anticipating the exhibition as a strategic platform to source advanced machinery solutions to help them optimise production efficiency, increase output volumes, and enhance product quality to meet growing market demands."

Mr Gu Ping, president of the China Textile Machinery Association (CTMA), elaborated, "As a premier trade exhibition, ITMA ASIA + CITME, Singapore 2025 highlights cutting-edge textile production solutions by leading technology owners. By facilitating targeted business discussions, it enables textile machinery manufacturers and industry professionals to forge regional collaboration opportunities, working together to shape a smarter future for the textile industry."

The chairman of the Indonesian Textile Association (API) Jemmy Kartiwa Sastraatmadja who also serves as chairman of the ASEAN Textile Industry Federation (AFTEX), agreed: "The joint exhibition in Singapore is a useful platform for the textile industry in ASEAN. The modern technology on display will help contribute to the competitiveness of the textile and garment industry."

Mr Jemmy added, "It is important for exhibitions such as this to be held regularly. Updating technology and global trends must be a consideration for the sustainable future of the textile and garment industry. In line with the global textile industry that increasingly prioritises environmentally friendly production methods, there must also be a focus on how to overcome production waste and garment waste."

The exhibitor list will be available on the website and mobile app in June. For the latest updates, visit www.itmaasiasingapore.com.

For further information, please contact:
Daphne Poon, ITMA Services
Tel: +65 94789543, Email: daphnepoon@itma.com
Christine Tang
Beijing Textile Machinery International Exhibition Company
Tel: + 86 10 85229646, Email: tangrong@ccpittex.com ❐

The Leading Textile Technology Exhibition Driving Regional Growth

Turning Wastewater to Your Advantage

The textile industry is one of the largest wastewater contributors, but innovative solutions are transforming this challenge into an opportunity. From non-contact spray applications to sustainable chemical replacements, manufacturers are rethinking the dyeing and finishing processes. However, wastewater treatment remains crucial not only in minimising environmental impact but also for reducing costs and improving efficiency.

Read on to find out more about cutting-edge technologies such as membrane bioreactors and water-saving systems that are revolutionising wastewater treatment and recycling in textile manufacturing. These advanced technologies will be showcased at ITMA ASIA + CITME, Singapore 2025.

Source Cost-effective and Sustainable Technologies

As the textile industry faces increasing pressure to adopt circular, sustainable practices and meet global sustainability standards, staying ahead of evolving regulations is critical. Discover cost-effective solutions to future-proof your business.

Join industry leaders at ITMA ASIA + CITME, Singapore 2025, the region's premier business-driven exhibition for textile and garment technology. Spanning across 19 exhibit sectors, the exhibition features sector-focused displays and live machinery demonstrations from leading technology owners and manufacturers, helping you source the right solutions efficiently.

Unlock Exclusive Rates as Our Supporting Partner

As a valued trade association or overseas travel agent, enjoy exclusive preferential rates on visitor badges and extend the benefit to your network. Expand your reach and enhance your offerings by partnering with us for ITMA ASIA + CITME, Singapore 2025.

Book Your Accommodation

Enjoy special rates and shuttle bus service from a selected list of hotels to Singapore Expo if you book with our official travel agent, Burnaby Solutions.

TEXTILE EVENTS

Grow Your Business with Cutting-edge Textile Technologies

Adapt to growing sustainability demands by exploring cost-effective, energy-efficient machinery and eco-friendly processes. Discover tailored solutions to enhance efficiency, reduce costs, and ensure compliance with international standards.

Visitor registration is now open. Plan your visit to the region's leading textile and garment technology exhibition!

Don't Miss This One-stop Textile Technology Showcase

ITMA ASIA + CITME, Singapore 2025 delivers a unique exhibition experience.

- See live demonstrations of cutting-edge technologies in action.
- Meet technology manufacturers to customise solutions for your needs.
- Stay informed on the latest technologies driving higher value-added production.

Source the Entire Textile and Garment Manufacturing Value Chain

Discover the comprehensive range of textile and garment manufacturing technologies at ITMA ASIA + CITME, Singapore 2025. Featuring over 770 exhibitors from 33 countries and regions, this exhibition is your one-stop platform to source machinery, equipment, and solutions across the industry's entire value chain.

Plan Your Visit to Visa-friendly Singapore

Visa

With Singapore's visa-friendly policy, visitors from over 150 countries can easily explore this vibrant city. Check if you need a visa here and request an invitation letter to support your visa application.

Enjoy Best Rates for Accommodation and Flight

Promotional rates are available through the official travel agent, Burnaby Solutions, and official airline, Singapore Airlines.

Join Mailing List

Subscribe to our mailing list and be the first to receive updates on exhibitors, events and industry trends at ITMA ASIA + CITME, Singapore 2025.

For further information, please contact:
info@itma.com ❐

Technologies bring about big changes in the Future of Technical Textiles at HIGHTEX 2026 Exhibition

The HIGHTEX 2026 International Technical Textiles and Nonwoven Exhibition, the first and only exhibition in Turkiye on its subject, will open its doors at the Tüyap Fair and Congress Center between June 9-13, 2026. The exhibition will bring together leading technical textile and nonwoven technology manufacturers from all over the world and will host revolutionary innovations, especially in the fields of nonwoven fabrics and smart textiles, shaping the future of the industry.

Revolutionary Developments in Nonwoven Fabric Production

Nonwoven fabric production, a pioneer of innovation in the textile sector, has seen significant technological advancements in recent years. Unlike traditional weaving and knitting methods, these fabrics, created by directly bonding fibers, are revolutionizing various industries, from automotive to medical, hygiene to agriculture.

Artificial Intelligence and Automation Supported Nonwoven Production Technologies to be Exhibited

HIGHTEX 2026, one of the most prestigious technical textile and nonwoven exhibitions in the world, will focus on the latest technologies used in nonwoven fabric production. Next-generation nonwoven production techniques, designed with sustainability-focused innovations to minimize environmental impact, smart production systems integrated with Industry 4.0 that enable faster and more efficient production of nonwoven fabrics, and AI-supported quality control and automation solutions will take center stage at HIGHTEX 2026.

Fabrics of the Future The Latest Trends in Smart Textiles

The integration of technology into the textile industry takes on a new dimension with the rise of smart textiles. Among the innovative production technologies for smart textiles are nanotechnology, embedded sensors, heat- and pressure-sensitive fibers, and wireless-connected fabrics. HIGHTEX 2026 will be a great discovery space not only for designers and manufacturers but also for technology enthusiasts. The exhibition will feature cutting-edge materials developed for the geotextile, medical textile, aerospace, and automotive industries, as well as special textile solutions for hygiene products and the agriculture and food sectors, providing professionals the opportunity to closely explore the latest technologies.

New Trade Networks and Investment Opportunities for Industry Professionals

HIGHTEX 2026 will not only offer participants the opportunity to showcase their products but will also provide opportunities for new collaborations and networking. The leading manufacturers and suppliers in the sector will meet with professional visitors during the exhibition, creating a chance to establish

permanent and productive business connections. B2B meetings held during the exhibition will allow companies to strengthen their commercial relations on a global scale. With the opportunities offered by HIGHTEX 2026, both the technical textile industry in Turkiye and worldwide will experience significant growth momentum through machine sales and new investment decisions.

A Unique Opportunity to See the Latest Technologies Up Close and Get Insights from Experts

HIGHTEX 2026 will bring together industry professionals from all over the world in Istanbul. Visitors from different regions, from America to Asia, Europe to Africa, will have the opportunity to discover the latest innovations and technologies in the sector during the exhibition. Those visiting this global meeting point will also have the chance to gain in-depth knowledge of technical textiles and nonwoven industries and receive strategic advice from experts.

For further information, please contact :
Beylikdüzü O.S.B.
Mermerciler Sanayi Sitesi 3
Cad. No. 8 Corner Office Kat: 4
Daire No. 67-68 34524
Beylikdüzü - Istanbul/Turkey ❐

The Right destination for Investing in Future Technologies in the Garment Industry: Garment Tech Istanbul Exhibition

Garment Tech Istanbul Exhibition, where the latest technologies in the garment and ready-to-wear industry will be exhibited, is preparing to open its doors between June 25-28, 2026. The exhibition, which will host professional visitors, investors, and global buyers from Turkiye and around the world, will offer unmissable opportunities for those who want to renew their machines, increase their capacity, and get ahead of the competition with the latest innovations.

The countdown has begun for Garment Tech Istanbul Garment, Embroidery Machinery Spare Parts, and Sub-Industry Exhibition, Turkiye's only and most comprehensive meeting point in its field. Garment Tech Istanbul Exhibition, which will host the leading manufacturers of garment and ready-to-wear technologies at the Istanbul Expo Center (IFM) for 4 days, will introduce the latest technologies in the sector from sewing to embroidery, cutting to ironing systems, packaging to printing.

Contributing to the Growth Process of the Ready-to-Wear and Garment Sector

Increasing consumer demand in the ready-to-wear industry and growing interest in sustainable and smart production solutions require the industry to reach higher capacity. Garment Tech Istanbul Exhibition is preparing to contribute directly to this growth process of the sector with both machinery sales and international collaborations. Companies participating in the exhibition, which will be equipped with innovative machinery and production systems, will have the chance to increase their export volumes and gain a stronger position in global markets.

Announcing Turkiye's Leadership in the Ready-to-Wear and Garment Sector to the World

Garment Tech Istanbul Exhibition will announce Turkiye's leadership in garment and ready-to-wear to the whole world and will be the center of innovation. Garment Tech Istanbul Exhibition will not only bring together industry professionals but also shed light on the garment technologies of the future in all aspects from production to design, software solutions to digitalization. Innovations that shape the future of the industry such as artificial intelligence-supported production systems, automatic sewing, embroidery, cutting and laying machines, digital printing technologies, and sustainable production solutions will be exhibited at the exhibition. Professional buyers and investors who will visit the exhibition will have the opportunity to discover the latest technologies in the sector, while at the same time establishing strategic collaborations and getting detailed information about new machines.

Opportunity to Communicate Directly with Suppliers

Garment Tech Istanbul Exhibition will host professional visitors, investors, and trade delegations not only from Turkiye but also from all over the world. Industry professionals from Europe, Asia, the Middle East, and the Balkans will have the opportunity to establish international business connections while witnessing the latest technologies up close. Especially for companies aiming to invest in machinery and expand their facilities, the exhibition will offer the perfect platform to choose the right equipment and communicate directly with suppliers. Investors will purchase new machinery to strengthen their production processes and increase their productivity.

For further information, please contact:
Teknik Fuarcilik
T: +90 212 876 7506
E: info@teknikfuarcilik.com
sales@garmenttech.com.tr
www.teknikfuarcilik.com ■

Propelling Excellence in Cellulose Yarn Production: V. Thangavel & Sons Success with LMW's Smart Machinery

Innovation and Sustainability at the Core: The Success Story of V. Thangavel & Sons Pvt Ltd (VTS)

V. Thangavel & Sons Pvt Ltd (VTS), a third-generation family-run enterprise, has built a strong legacy rooted in trust and reliability. Over the years, the company has achieved significant milestones in modernization and innovation by adopting LMW's advanced smart machinery for cellulose yarn production. With cutting-edge automation and digitalization, the company has enhanced productivity, improved quality standards, and excelled in producing superior high-strength yarns.

Founded with a visionary entrepreneurial spirit, VTS began its journey producing household textiles such as dhotis, lungis, and towels as FOX Brand Fabrics. Under the stewardship of three generations, the company has transitioned into a leading name in premium yarn manufacturing FOX Brand Yarns. This remarkable evolution was bolstered by their collaboration with LMW, whose state-of-the-art machinery and dedicated support played a crucial role in driving productivity and quality improvements.

(Mr. Karthikeyan Thangavel, Whole Time Director, V. Thangavel & Sons Pvt Ltd)

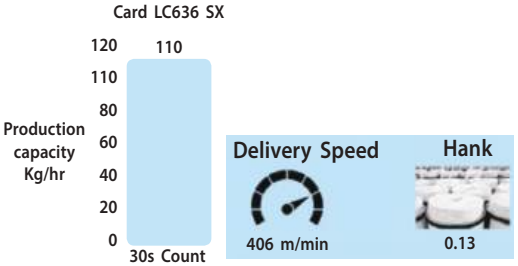
With its legacy of trustworthiness, the company has established an impeccable reputation among textile players in Tamil Nadu. The adoption of LMW's smart machinery has not only enabled them to remain at the forefront of the industry but also reinforced their commitment to innovation and sustainability, setting new benchmarks in the textile sector.

"LMW has played a pivotal role in our growth journey. Their support team visits our factory every three days, ensuring seamless operations. Their state-of-the-art machinery, coupled with 24/7 support for both our floor-level staff and management, truly distinguishes them. We are grateful to have such a reliable and innovative partner," said Mr. Karthikeyan Thangavel, Whole Time Director of V. Thangavel & Sons Pvt Ltd (VTS).

Driving Technological Excellence in Cellulose Yarn Production

V. Thangavel & Sons has long been a leader in the textile industry, with a firm commitment to excellence in cellulose yarn production. With a daily output of 25 tons of 100% cellulosic yarn, the company specialises in Viscose, Micro Viscose, Bamboo, Eucalyptus, Sustainable Viscose Fibres like Liva Eco, Eco Vero, FSC, Modified Viscose like Modal, Micro Modal, Lyocell like Tencel Standard, LF, A100 & Excel, Recycled Cellulose like Liva Reviva, Circulose & Refibra and many more. Their dedication to eco-friendly materials is matched by an unwavering focus on quality and efficiency, ensuring that every product meets the highest industry standards.

At the heart of their success is a blend of innovative technology and meticulous processes that prioritize consistency and minimize imperfections. The integration of LMW's Smart machinery, including the Card LC636 SX with CDS attachment, has played a pivotal role in enhancing both productivity and yarn quality. This cutting-edge equipment allows VTS to consistently deliver premium yarns, reinforcing their position as a trusted name in the global textile market. They give all kinds of yarns like Ring, Ring Compact, Siro Compact, TFO, Slubs, High Twist and Airjet Yarns.



Strategic Collaboration with LMW: A Path to Excellence

LMW has played a crucial role in the growth story of V.Thangavel & Sons by equipping their facility with our cutting-edge machinery.

Today, they are equipped with Smart Machinery of LMW which are Card with CDS attachment, Drawframes with Autoleveller and Non Autoleveller, and SPINPACT with SIRO Compact attachment. These machines have delivered unparalleled

Propelling Excellence in Cellulose Yarn Production: V. Thangavel & Sons Success with LMW's Smart Machinery

performance, enabling the company to achieve remarkable efficiency and quality.

V. Thangavel & Sons Pvt Ltd	
Department	**Model**
LMW Blowroom	LA21
LMW Card	LC363
	LC636 S
	LC636 SX
LMW Draw Frame (Breaker)	LD2
	LDB3
LMW Draw Frame (Finisher)	LDF3
	LDF3 S
LMW Speed Frame	LF 4200/A
	LF 4280/A
LMW Ring Frame	LRJ 9/AXL
	LRJ 9/SXL

Mr. Karthikeyan Thangavel shared his thoughts, stating, "LMW's training programs are truly remarkable, benefiting not just executives but the entire industry. I dream of an LMW School of Excellence to educate and empower entrepreneurs with knowledge on machinery, yarn, and fabric applications."

Expanding Horizons: Market Reach and Future Plans

V. Thangavel & Sons serves a wide array of domestic markets, supplying high-quality yarn to major textile hubs such as Surat, Mumbai, Erode, Salem, Tirupur, Palladam, Somanur, Coimbatore, Madurai, Ludhiana, Delhi and Kolkata. Looking ahead, the company has ambitious plans to broaden its footprint by extending its reach to new regions, including Uttar Pradesh, with a particular focus on areas like Panipat and Varanasi.

Future Goals: Innovation and Expansion

V. Thangavel & Sons has set ambitious future goals, including the blending of Poly cellulose and Cotton cellulose yarns to create innovative products. The company is also planning significant investments in weaving and knitting facilities to further enhance value addition. As part of its growth strategy, V. Thangavel & Sons aims to double its spinning capacity and install 100 looms, positioning itself for long-term diversification and market leadership.

Commitment to Sustainability and Innovation

Sustainability is at the heart of V. Thangavel & Sons' operations as a 100% cellulosic yarn producer. By utilizing eco-friendly fibers and incorporating LMW's energy-efficient machinery, the company reduces its environmental footprint while upholding high-quality standards. Additionally, V. Thangavel & Sons primarily sources its energy from renewable sources, reinforcing its commitment to both sustainability and innovation.

"Scan here to visit our website".

For further information, please contact
LMW, Periyanaickenpalayam, Coimbatore-641020
Phone : +91 73976 88873, Email: info@lmwtmd.com
Website: http://www.lmwtmd.com/ ■

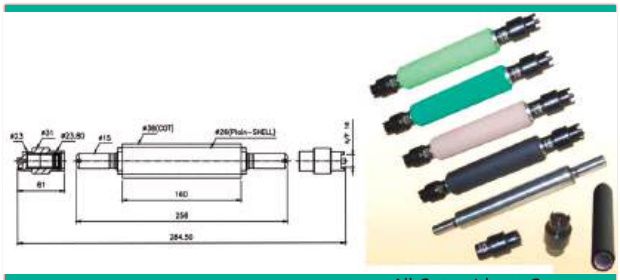
India's Textiles mills to face tough challenges in the wake of World Tariff war

VETRI TOP ROLLERS Fitted with "Accotex® Cots"

The current crisis in the Textile industry on account of USA's Tariff tension with global countries including India has made Indian Textile industry's urgent need to prove its strong existence and survival for which it is high time all our INDIAN Textile mills must produce highly COMPETITVE with supreme quality yarn and textile products both for the domestic and export market.

Yes, in the spinning mill, the main product output is the high quality but competitively priced yarn which should meet the respectful requirements for any textile end products for both domestic and export market.

For the spinning mill, Vetri Engineers, based in Coimbatore, India, manufacturer of VETRI TOP ROLLERS for Textile Preparatory Machinery (Draw Frame, Comber and Lap Former) is providing "VETRI TOP ROLLERS" using AccotexCots from Germany for the past 32 years.



All Cots without Groove

Vetri Top rollers specializewith Accotex Cotsand used in all major machine manufacturers like Rieter, Lakshmi (LMW), Trutzschler, Zinser, Vouk, Marzoli, Toyoda, Hara cherry, Howa and many others textile preparatory machines.

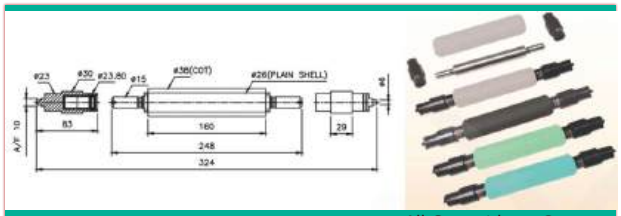
VETRI ENGINEERS with its expertise in Top Rollers using Accotex rubber Cots always assuring quality sliver output suitable for spinning preparation production for the last 32 years.

High quality, economical production costs, consistency and dependability are the key factors of successes in today's competitive textile industry. This in line continues providingour VETRI Top rollers and its allied components along with Accotex Cots.

Vetri Top Rollers with global textile industry recommended Accotexrubber cots are synthetic compositions vulcanized to an Aluminium core. When pressed onto a roller, these cots run virtually tensionless for long-lasting service, ensuring a secured fit on the arbour, achievable near-zero stress on the outer surface, which eliminates the fibre splitting.

So far Vetri have developed 222 types of top rollers for the textile preparatory machines of past and present models of global machines makes, the only company in the WORLD developed such varieties.

We maintain large stocks of ACCOTEX Cots for Rieter, LMW, Trutzschler, Howa, Texmaco, Vouk, Haracherry, Zinser, Toyoda, Marzoli & some Chinese / Taiwanese make machines.



All Cots without Groove

We are glad to share that one of our USA customers experienced the best performance of Sliver Quality from our Vetri Top Rollers from our Vetri Top Rollers with Accotex cots, gaining repeat orders for draw frame top rollers. Similar way, many Indian large group of mills and global mills consider VETRI TOP ROLLERs as the non-original replacement import substitution to OEMs.

Vetri Top Rollers fitted with Accotex cots are "AVAILABLE AT SHORT NOTICE" WITHIN 24 hrs TO 72 hrs from its vast stock . We have Top Roller components to the quantity of 15, 000 to 20,000 nos which Vetri only has such huge inventory stock in India and with 32 years' experience, we have ensured the best SLIVER QUALITY in the preparatory machines.

No wonder, Vetri Top Rollers is the best choice for Quality yarn performance and Profitability

As a special consideration in the present textile crisis and to compensate the Tariff tensions, we, Vetri Engineers, continue to extends support with flat 20% special discount for our Vetri Top Rollers.

VETRI TOP ROLLERS is A LAND MARK for QUALITY AND PERFORMANCE IN YARN MAKING BUSINESS. You can reach Vetri at "Banu 9944451900 / 9894450900".

For further information, please contact:
Vetri Engineers
348, Sri Lakshmi Nagar II,
Thaneer Pandhal, Peelamedu, Coimbatore-641004
Mobile: +91 9629911900
Phone: 0422-2513350

■

TEXTILE RECESSION ?

NO MORE....

YES ! EVERY INDIAN AFFORDS TO BUY

"INDIAN MADE"

TEXTILE WOVEN FABRIC "ONE" METER EXTRA IN

A YEAR, WE CAN ASSURE **NO MORE**

TEXTILE RECESSION !

LET US INCREASE THE PURCHASE POWER OF OUR

"INDIANS"

COURTESY :

VETRI ENGINEERS

TECHNOLOGY- QUALITY - VALUE - RELATIONSHIP

BUREAU VERITAS
ISO 9001 Certified

Oerlikon

Sustainable and innovative - Barmag's technologies to be showcased for the Vietnamese textile industry at Saigon Tex 2025

At SaigonTex from 9 to 12 April 2025 in Ho Chi Minh City, Vietnam, Barmag, a subsidiary of the Swiss Oerlikon Group, will be presenting comprehensive end-to-end solutions from a single source for its Oerlikon Barmag, Oerlikon Neumag and Oerlikon Nonwoven product brands. At the Saigon Exhibition and Convention Center, the experts from the manmade fiber technology provider will be explaining their sustainable machine and system solutions at the Illies Engineering Vietnam Co., Ltd. stand (Hall A, Stand 1J01).

Trade visitors will have the opportunity to get a comprehensive picture of the complete solutions on offer, which range from polycondensation systems to spinning and texturing through to digital solutions. The provision of all process steps from a single source ensures a harmonized technology whose design guarantees the high quality of the yarn produced.

The eAFK Big V multi-spindle texturing machine is part of Oerlikon Barmag's efficient solution for the production of excellent quality high-titer yarns.

Another focus is on sustainability. Together with partners such as Oerlikon Barmag Huitong Engineering (OBHE) and BB Engineering (BBE), the company presents specific concepts that include mechanical and chemical technologies for bottle recycling as well as for textiles, biopolymers and the circular economy. With the sustainability label e-save, the company has been offering innovative solutions for the textile industry for 20 years, hence setting standards for a more environmentally friendly future.

Recycling - the path to a sustainable future

OBHE's homogenizer enables the thermomechanical recycling of polyester waste. The well-known and commercially available raw materials such as bottle flakes, post-industrial waste and film waste are processed into high-quality PET products. The OBHE Homogenizer ensures constant polymerization conditions with an optimized residence time spectrum. Hence, the desired increase in viscosity can be specifically influenced and an excellent and homogeneous melt quality can be produced. The production of high-quality and defined rPET products with further processing of the melt to POY and FDY in the direct spinning process or for the production of PET chips is thus guaranteed and has already been proven by installed systems on the market. The OBHE homogenizer provides the customer with a flexible system for thermomechanical recycling of polyester waste.

With the flexible compact spinning system VarioFil® R+ from BBE, PET bottle granulate and PET waste produced during start-up can be recycled and processed directly back into POY. The sustainable machine concept allows a high degree of product flexibility, including the production of spun-dyed yarn. The turnkey spinning line is also ideal for producers who manufacture small batch sizes or specialized products.

"From Waste to Value" - this is what BBE's VacuFil PET recycling system achieves. It is specially designed for the high-quality processing of textile waste. The patented technology is unique and is based on years of experience in extrusion, filtration and spinning: it combines gentle large-area flitration with targeted IV regulation for consistently excellent rPET melt quality, comparable to virgin material. A wide range of input materials can be processed: in addition to the usual bottle flakes, VacuFil is particularly suitable for production waste from the spinning mill, from start-up lumps and yarn to unmixed fabrics, which can also include post-consumer waste. The patented key component Visco+ , a liquid-state polycondensation system, quickly and reliably removes volatile impurities and automatically regulates the IV. There are also various options for further processing of the treated melt. For example, the melt can be fed into the main melt stream, processed into chips

via palletization or flow directly back into the spinning mill. The VacuFil recycling system can therefore be designed modularly and flexibly to meet customer requirements.

DTY yarns - maximum flexibility and uncompromising quality

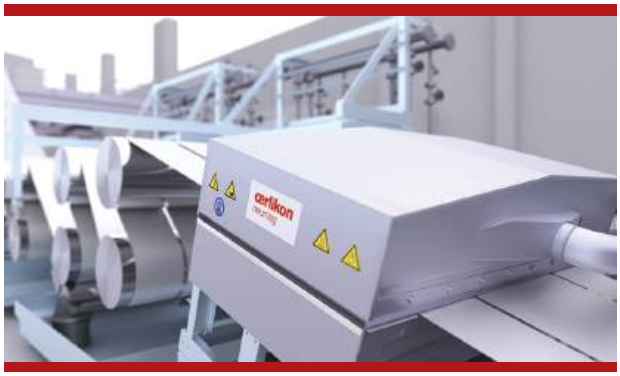
Whether for home textiles, in the clothing industry or in the automotive sector - the possible applications for texturized yarns are virtually unlimited. Oerlikon Barmag offers a wide range of DTY machine configurations for the efficient and sustainable production of high-quality textured yarns from various polymers such as polyester, polyamide, polypropylene, PLA and PTT. Thanks to sophisticated components, comprehensive know-how and tried and tested technology, the modular DTY machines - whether manual or automatic - produce texturized yarns that are ideal for downstream processes and ensure optimum OPEX costs.

The JeTex air texturing system from BB Engineering ensures both gentle yarn treatment with reliable texturing effects and efficient production.

JeTex® Air texturizing from BBE enables a broad and flexible product portfolio

The Oerlikon Barmag subsidiary also offers a solution for texturing. The JeTex air texturing system perfectly complements the Oerlikon Barmag DTY system and enables the customer's product portfolio to be expanded to include high-quality ATY based on POY and FDY for a wide range of textile applications. The centerpiece of the system is the texturing box specially developed by BB Engineering. Alongside many other state-of-the-art components from Oerlikon Barmag, it ensures gentle yarn treatment with reliable texturing effects as well as production efficiency in terms of OPEX, handling and speed.

Particularly smart: JeTex® is not only available as a complete system, but also as a retrofit variant for existing DTY systems from Oerlikon Barmag. This allows customers to expand or convert their product portfolio to include ATY at comparatively short notice and at low cost.



The Oerlikon Neumag EvoSteam staple fiber process is now bluesign® verified.

Bi-shrinkage yarns - from niche to standard

Bi-shrinkage yarns (BSY/ITY) have established themselves from a niche product to a standard yarn with a relevant market share in further processing, be it knitting, weaving or flax. The special yarn properties are visible in the end product, e.g. in crêpe or georgette fabrics or in ladies' outerwear. Oerlikon Barmag offers one- or two-stage solutions for the production of these specialty yarns. The single-stage solution is based on the tried and tested Barmag WINGS FDY concept, while the two-stage solution is based on eFK texturing machine technology. Both score over conventional technologies in terms of energy savings, production speed, process flexibility and quality.

EvoSteam - innovative production of staple fibers

The innovative EvoSteam process from Oerlikon Neumag is the future of more sustainable staple fiber production. It impresses with considerable savings in energy, water and raw material consumption and thus leads to a significant reduction in operating costs (OPEX) and the CO2 footprint - while at the same time providing excellent fiber qualities for downstream processes.

About Barmag

Since 2025, the Swiss Oerlikon Group has been operating its manmade fibers business as a subsidiary under the traditional name Barmag. This includes the established product brands Oerlikon Barmag, Oerlikon Neumag and Oerlikon Nonwoven. As a future-oriented company, the

research and development of Barmag is driven by energy-efficiency and sustainable technologies (e-save).

Barmag is one of the leading providers of manmade fibers filament spinning systems, texturing machines, BCF systems, staple fibers systems and solutions for the production of nonwovens. Together with its range of polycondensation and extrusion systems and their key components, Barmag caters to the entire manufacturing process – from the monomer all the way through to the textured yarn – and supports it with customer-oriented engineering services. The product portfolio is rounded off with automation and digital solutions. In addition, Barmag offers high-precision gear metering pumps for the textile industry and other sectors, including the automotive, chemical and paint industries.

The main markets for the Barmag product portfolio are in Asia, particularly in China, India, Türkiye and the USA. Worldwide, Barmag – with round about 2,500 employees – has a presence in 120 countries with production, sales and distribution and service organizations. At the Research and Development centers in Remscheid, Neumünster (Germany), and Suzhou (China), highly qualified engineers, technologists and technicians develop innovative and technologically leading products for tomorrow's world.

Oerlikon (SIX: OERL) is a global leader in surface technologies. Headquartered in Pfäffikon, Switzerland, the Group has a global presence with over 12 000 employees across 199 locations in 38 countries, achieving sales of CHF 2.4 billion in 2024.

Further information at: www.barmag.com

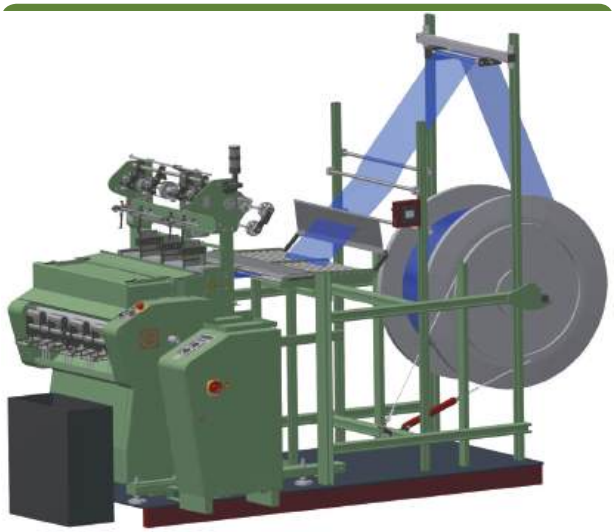
For further information, please contact:
André Wissenberg
Barmag Marketing, Corporate Communications & Public Affairs
Phone: +49 2191 67 2331
Fax: +49 2191 67 1313
andre.wissenberg@barmag.com
Ute Watermann
Barmag Marketing, Corporate Communications & Public Affairs
Phone: +49 2191 67 1634
Fax: +49 2191 67 1313
ute.watermann@barmag.com

Crealet AG

Custom Solutions for Selvedge and Ribbon Spools

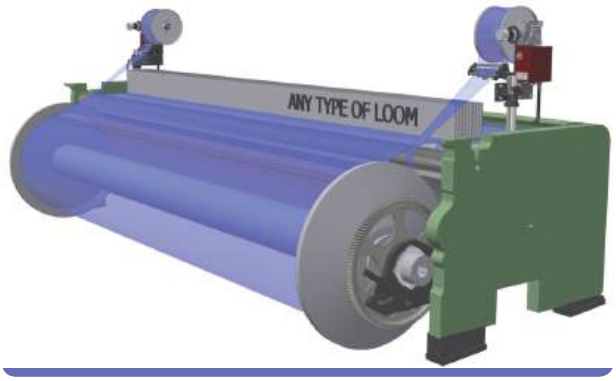
Custom Winding and Unwinding Solutions for Selvedge and Ribbon Spools

In textile production, especially on weaving machines, selvedge spools and ribbon spools play a central role. Both types of spools are used for the winding and unwinding of warp ends, but they serve different functions and applications.



Precision in warp feeding and spool winding

To ensure precise warp ends feeding, we offer various warp ends feed systems that guarantee reliable and flawless material supply. These warp ends are crucial for the structure and stability of the fabric. Not only are the accurate feeding of the warp ends important, but also the quality of the spool winding.

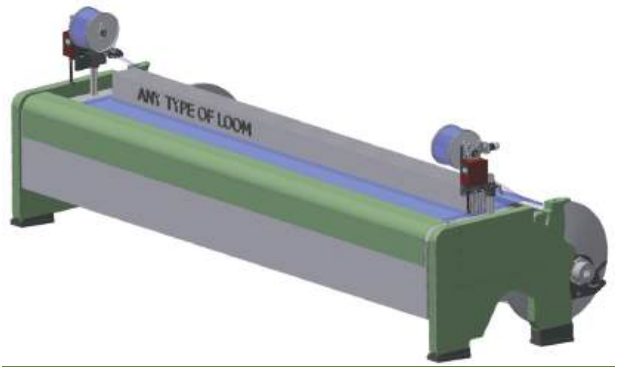


Two improvements to power up your process: ECR Warp Let-off

SCIENCE IN INDUSTRY

Enhancing process, effciency, and quality

The precise manufacturing and winding of selvedge spools and ribbon spools is crucial to ensure optimal thread delivery during weaving. An exact and even winding prevents interruptions and tangling, ensuring the smooth flow of the entire process.



This careful winding not only guarantees trouble-free thread unwinding but also enhances the effciency of the weaving process and significantly contributes to the high quality of the final product.

Flexibility for various sizes and shapes

Winding machines must be sufficiently flexible to handle various spool sizes and shapes, as

selvedge spools and ribbon spools vary in dimensions depending on the application. This is particularly important in narrow fabric weaving, where ribbon spools are required in different sizes based on the product.

Additionally, the winding process demands gentle handling of delicate materials, such as those often used for selvedge threads, to prevent damage during processing.

What are your requirements?

We work closely with various suppliers of ribbon and selvedge spool winders, as well as the corresponding creels and thread brakes. This enables us to offer you customized solutions tailored precisely to your requirements.

Whether you are looking for reliable winding systems or high-quality accessories, we ensure that you receive the right equipment for your specific needs.

For further information, please contact:
Crealet AG
Hüeblistrasse 41 8636 Wald, Switzerland
info@crealet.ch
Skype: info_crealet
Tel: +41 (0) 55 286 30 20
Fax: +41 (0) 55 286 30 29

Jeanologia

Jeanologia showcased innovative technology at Egypt Stitch & Tex fair held from 21 to 23 February 2025 in Cairo with advanced laser and G2 Indra technologies

- These innovations empower Egyptian manufacturers with the tools to drive automation, improve resource efficiency, and enhance sustainability.

At the Egypt Stitch &Tex fair, held from February 20 to 23 in Cairo, Jeanologia, a global leader in textile technology innovation, showcased its groundbreaking solutions that are set to revolutionize textile finishing in Egypt and beyond.

At Egypt Stitch & Tex, Jeanologia highlighted the synergy between some of its most advanced technologies, including laser, G2 Indra, eFlow + DB 420, and H2 Zero. These solutions are making a significant impact on global textile production and are essential to the future of Egypt's textile sector.

Jeanologia's pioneering laser technology—refined over 25 years—now offers a fully automated process that replaces harmful traditional techniques. By eliminating dangerous practices for workers and the environment, this innovative laser

not only ensures safer operations but also unlocks endless creative possibilities, enhances design quality, and boosts productivity for manufacturers.

Complementing the laser is the G2 Indra technology, the perfect partner in achieving a sustainable finishing process. Instead of washing with water and chemicals, G2 Indra uses air, significantly reducing chemical usage and water consumption. Today, the combination of these two technologies has permanently eliminated the need for PP spray and the stone wash process, marking a decisive shift toward cleaner, more efficient production.

These innovations empower Egyptian textile manufacturers to drive automation, optimize resource efficiency, and meet international sustainability standards.

"Egypt's textile market is evolving rapidly, and our advanced laser and G2 Indra technologies are designed to meet the growing demands for efficiency, safety, and environmental responsibility," said Mahmoud Hassan, Jeanologia Area Manager in Egypt. "We are proud to offer solutions that not only improve production quality and design possibilities but also set a new benchmark for sustainable practices in the industry."

Jeanologia: 30 years leading the transformation of the textile industry

Since its founding, Jeanologia has been on a mission to transform the textile industry into a more ethical, sustainable, and efficient model. The company works closely with brands, retailers, and suppliers on this transformative journey, offering disruptive technologies, innovative software, and a new operational model. Their groundbreaking solutions, including laser technology, G2 ozone, Dancing Box, e-flow, H2Zero, and ColorBox, have redefined garment design and finishing standards, eliminating polluting processes and significantly reducing the use of water, energy, and chemicals. Thanks to these advancements, Jeanologia has saved millions of liters of water and eliminated harmful substances, turning its vision of a truly sustainable textile industry into reality.

In 2025, Jeanologia celebrates its 30th anniversary, marking a legacy of three decades of sustainable innovation. From the introduction of its laser technology in 1999, which revolutionized denim finishing, to its current challenge of implementing a revolutionary sustainable garment dyeing process, the Spanish company has pioneered solutions that not only benefit the environment but also optimize operational costs. Looking ahead, Jeanologia remains committed to creating an eco-efficient and ethical textile future, encouraging all industry stakeholders to join its Mission Zero initiative: dehydrate and detoxify the textile industry. No more water and toxic chemicals used in garment finishing around the world.

For further information, please contact:
DÉCOM, Patricia Aguilar, Jeanologia
paguilar@agenciadecom.es,
+34 96 353 04 81

❐

Kornit Digital

Printful installs Atlas Max technology from Kornit Digital

Printful Raises the Bar for Print-on-Demand Quality with New Upgrades from Kornit Digital

Global ecommerce platform and leader in on-demand merchandise production now leverages 86 Kornit Atlas MAX systems across its global fulfillment network

Printful, the global ecommerce platform and leader in on-demand merchandise production, today announced the company has significantly upgraded its ability to empower creators, entrepreneurs, and businesses of all sizes by expanding its direct-to-garment (DTG) printer resources – further solidifying its position as an industry innovator. By integrating added units of the innovative Atlas MAX technology from Kornit Digital, Printful is setting a new benchmark for print quality and color consistency, delivering the best results in the industry for its customers worldwide. Both Printful and Kornit will be exclusively discussing their partnership at Impressions Expo in Long Beach, CA on January 23-25.

The expanded partnership equips Printful with an unmatched 86 Atlas MAX systems across its global fulfillment network, making them the industry leader in print on-demand DTG. Since 2015, the company has invested tens of millions of dollars in upgrading its DTG printing solutions to ensure advanced print quality and reliability for its millions of customers. Renowned for producing vibrant, durable prints with remarkable precision, Atlas MAX technology guarantees that every product meets Printful's ambitious standards for quality and reliability - something for which Printful merchants around the world have come to rely.

"We can confidently say Atlas MAX technology is the best DTG solution available on the market - and at the rate Kornit Digital innovates - we cannot see them being surpassed. Printful has made significant investments, both in the dollar value and R&D resources, to upgrade our DTG systems in recent years as technology has advanced to ensure our customers delight in the printed product they receive and enjoy. We are confident in our ability to deliver durable and vibrant prints across any production technique, and it's a privilege to work with trusted partners like Kornit Digital, who share our passion for excellence and delivering an outstanding experience to the end customer," comments Krisjanis Ozols, Printful's Operations Strategic Partnerships and R&D lead.

"At Kornit Digital, we continuously push the boundaries of what's possible in textile printing so customers like Printful can accelerate and grow their business to new heights," said Ronen Samuel, Chief Executive Officer at Kornit Digital. "Printful is an ideal partner as they share our dedication to sustainability while delivering vibrant, durable prints. Kornit will never stop innovating solutions that ensure partners like Printful can thrive in the on-demand economy."

The adoption of Atlas MAX fully reinforces Printful's sustainability goals, offering a more eco-conscious printing solution with reduced waste and a smaller environmental footprint, aligning with the growing demand for sustainable practices in the ecommerce and printing industries.

This equipment upgrade is part of Printful's larger mission to enhance its global fulfillment

network and support its customers in building successful businesses. The advanced technology ensures superior results across its entire catalog of custom products, from t-shirts and hoodies to tote bags and beyond, all while supporting the speed and scalability for which Printful is known.

To learn more, please visit Printful and Kornit Impressions Expo in Long Beach, CA at booth No. 1061 – January 23 – 25.

About Kornit Digital

Kornit Digital (NASDAQ: KRNT) is a worldwide market leader in sustainable, on-demand, digital fashion and textile production technologies. The company offers end-to-end solutions, including digital printing systems, inks, consumables, software, and fulfillment services through its global fulfillment network. Headquartered in Israel with offices in the USA, Europe, and Asia Pacific, Kornit Digital serves customers in more than 100 countries and states worldwide. To learn more about how Kornit Digital is boldly transforming the world of fashion and textiles, visit www.kornit.com.

About Printful

Printful is a technology platform that helps ecommerce sellers of all sizes to use production-on-demand and other fulfillment solutions to turn their ideas into brands and products. Founded in 2013, Printful pioneered the market by providing production and fulfillment services to small and medium-sized businesses. It has since expanded its offering to serve the direct-to-consumer market and large enterprise clients. Printful has scaled its own high-quality, on-demand production facilities across multiple continents and is now trusted to fulfill more than a million items monthly.

For further information, please contact:
Kornit Digital
Craig Librett, Public Relations
Craig.librett@kornit.com
Ingrid Van Loocke, Public Relations
Europe, ingrid@pr4u.be ❐

Mimaki Europe BV

Mimaki rolls out Tx330-1800 and Tx330-1800B for on-demand, sustainable and high quality textile applications

- Mimaki launches the Tx330-1800 and Tx330-1800Bfor the textile and apparel markets
- Built for optimal accessibility and sustainability, the Tx330 Series offers high-quality printing for on-demand and varied print runs

Mimaki Europe, a leading provider of industrial inkjet printers, cutting plotters, and 3D printers, unveils two new direct-to-textile printers, the Tx330-1800 and Tx330-1800B. The Tx330 Series offers extensive textile printing capabilities, able to print on a variety of materials with minimal wastewater. In contrast to conventional textile printing processes that require pre- and post-processing equipment, the Tx330 Series streamlines production into a more space-efficient solution—ideal for users with limited space. FESPA in Berlin (6th-9th May 2025) will mark the EMEA debut of the Tx330-1800 and the unveiling of further details concerning both printers.

The Tx330-1800 hybrid model provides seamless printing on both fabric and paper

The Tx330 Series drives the transformation of the textile industry towards waterless, high-quality solutions, as well as for apparel manufacturers, who look for a printer which offers both quality and sustainability. The printers are equipped with dual ink set capability to seamlessly switch between textile pigment inks and dye sublimation inks, further diversifying application possibilities. Unlike conventional dye inks, these solutions simplify the process with a straightforward printing and heat fixation procedure. This eliminates the need for extensive facilities for water supply, drainage and wastewater treatment, as well as the dyeing expertise needed to operate, making digital textile printing more accessible.

The Tx330-1800 allows for seamless printing on both fabric and paper in one machine, ideal when producing textile signage and interior fabrics. Meanwhile, the Tx330-1800B uses a space-saving belt conveyor to stably print on stretchy, thick, and thin fabrics commonly used for apparel, ideal for the production of short-run and varied apparel in small spaces, such as offices, schools, and retail stores.

The Tx330-1800B is an ideal space-saving solution, with added stability for printing on complex

Arjen Evertse, General Manager Sales EMEA at Mimaki Europe, comments, “Looking at today’s textile market, we anticipate that the demand for textile products produced on-demand and locally will continue to grow. So, with that in mind, we released two products which are easy-to-use, versatile and sustainable, for those printers looking to incorporate textile printing capabilities within a small space, without compromising on capabilities and quality.

“The ink versatility aspect of these printers tackles the important concern of industrial water pollution, of which traditional textile dyeing alone contributes around 20% to. Utilising textile pigment and dye sublimation processes, Mimaki’s latest printing solutions remove the need for the large amounts of water typically required in post-processing, creating a much more resource efficient process with almost no water used at all—while also significantly reducing energy consumption.”

The Tx330-1800 Series utilises Mimaki's "330 Engine", providing the same sharp details, smooth colouring and accurate colour printing as other entries in the 330 Series due to smooth gradation expression and high-density printing capabilities.

To accompany the Tx330 series, Mimaki is also introducing a textile RIP software, the TxLink5. This latest version of the TxLink software is designed to further improve the workflow in environments with multiple printers, which allows for usersto manage their printing processes more efficiently.

The Tx330-1800 and Tx330-1800B will both be available for the textile and apparel market in June 2025. For more information and future updates, click here.

About Mimaki

Mimaki is a leading manufacturer of wide-format inkjet printers and cutting machines for the sign/graphics, industrial and textile/apparel markets. Mimaki develops the complete product range for each group; hardware, software and the associated consumable items, such as inks and cutting blades. Mimaki excels in offering innovative, high quality and high reliability products, based upon its aqueous, latex, solvent and UV-curable inkjet technology. In order to meet a wide range of applications in the market, Mimaki pursues the development of advanced on-demand digital printing solutions. Mimaki Engineering Co. Ltd., (President: Kazuaki Ikeda) Nagano (Japan), is publicly listed on the Tokyo Stock Exchange, Inc.

For further information, please contact :
Danna Drion
General Manager Marketing,
Mimaki Europe B.V.,
Tel: +31 20 462 79 42,
email: d.drion@emea.mimaki.com
Ivan Lesmana,
Communication Coordinator EMEA,
Mimaki Europe B.V.,
Tel: +31 20 462 79 42,
email: i.lesmana@emea.mimaki.com
Clare Porter, Associate Director, Bespoke
Tel: +44 1737 215200
e-mail: clare@bespoke.co.uk
https://www.mimakieurope.com/ ❐

Durak Tekstil

Durak Tekstil offers specialized solution from a single source for sewing and embroidery threads

Durak Tekstil, one of the leading manufacturers of industrial sewing and embroidery threads, offers the best solutions to the needs of numerous industries with its 52-year deep-rooted history and strong R&D. The companycontinuesoperations in its facility in Bursa, one of the strongest textile centers of Türkiye, and exports high-quality, durable and functional threads to more than 77 countries. Durak Tekstilhas high-capacity production power withmodern machine lines and obtains more than 65% of its total turnover from export markets. The company continues to make investments that will strengthen its presence in target markets, especially in the USA and the EU region.

Durak Tekstil has more than 350 product types, allocating 5% of annual turnover to the R&D unit, which consists of expert engineers and technicians for innovative products. Durak Tekstil appeals to many application areas and industries, especially the mattress/quilting industry, as well as apparel/garment, embroidery, denim, outdoor and automotive. The threads developed by Durak Tekstil with the concept of technology, art and sustainability add value to the final products with a wide range of colors.

DURAK Duma® and DURAK Duraless® changed the way of view of bottom sewing threads

Durak Duraless® bottom sewing thread, which can be used on any bobbin in sewing machines, allows more thread winding and provides 10% more efficiency compared to standard sewing threads with its special cavity structure in the middle. Duraless®, produced from continuous fiber, minimizes dirt and dust units in sewing machines

thanks to its soft touch and lint-free structure. The threadalso prevents machine problems that may occur due to dirt and eliminates cleaning processes related to bobbin winding as well.

Durak Duma® bobbin thread, produced by Durak Tekstil from 100% high-strength continuous fiber polyester, provides approximately 3 times more threadcapacity. Durak Duma® bottom sewing thread increases efficiency by 15% with its special hook.

Duraless® and Duma® sewing threads offer superior performance with their special oils, regular structures, meticulous raw material selections and unique lubrication techniques that increase their performance. Thanks to their special structures, both bottom sewing threads allow use with a stable tension from the beginning to the end of the sewing process. This prevents any problems such as collapse, loose winding, breakage, etc. in the sewing, and guarantees high quality results.

DURAK Durabobbins® the 'lock' of sewing

DURAK Durabobbins® bottom sewing thread, which stands out as a unique solution for quilting lockstitch, has different thicknesses and length alternatives. The thread, produced from continuous fiber, textured, corespun fiber and staple fiber polyester, exhibits a strong performance thanks to its meticulous raw material selection and unique lubrication technology. Durabobbins has tension stability from beginning to end, and does not collapse and provides the best sewing result. Thanks to its meter-sensitive winding technology, the meter difference between the cocoons is at a maximum level of 1%. With all these features, Durabobbins® is the choice for those looking for high quality standards in sewing.

DURAK Durafix® for those looking for sewing thread with technical features

DURAK Durafix® sewing thread has thickness alternatives from 450 tex to 7 tex, appealing to several different industries. Offering 300 colors in its color chart, this high-strength 100% polyester continuous fiber sewing thread appeals to a very wide range of applications with its performance-enhancing special oils, regular structure, high strength and bright colors. If necessary, the thread can be made suitable for customer demand by adding technical features such as WR, FR, AS, with applications that can be applied at the finishing stage.

More comfortable and safe sewing with Durak Bug Safe®

Developed as a result of intensive R&D and sustainable production with a low environmental footprint, Durak Bug Safe® thread keeps small insects and pests away from seam areas with special chemicals in its structure. The thread does not contain any harmful chemicals, and does not harm the ecosystem by removing small insects that cannot be seen with the naked eye from the seam instead of killing them. Durak Bug Safe® thread is an ideal solution especially for moist seam areas in products such as bedding and toys, maintaining its effectiveness against mites, bed bugs, mosquitoes and other similar pests for a long time (up to 50 washes). This success of the thread has been proven in preliminary tests conducted with OEKO-TEX. Offering new opportunities for outdoor

textile products as well as the bedding and toy sector, Durak Bug Safe® thread can be produced in different colors according to customer demand.

Fire-resistant seams with Durak Fire Safe P-Aramid® and Durak Fire Safe M-Aramid®

Durak Fire Safe P-Aramid® and Durak Fire Safe M-Aramid® sewing threads, developed by Durak Tekstil from para aramid and meta aramid fibers to reduce the fire risk in home textile products, especially in mattress, confirm their success in the international market. The threads produced from aramid fiber, which provides high strength and heat resistance in textile products with its strength close to steel, can withstand heat up to 500°C. Durak Fire Safe P-Aramid® and Durak Fire Safe M-Aramid® threads prevent the rapid spread of fire thanks to their late ignition feature, and have successfully passed leading safety and flame retardancy tests. The threads can be used in firefighter and security force clothing, and also provide a high level of safety standard for the mattress industry.

Durak Tekstil offers Durak Fire Safe P-Aramid® sewing thread, produced from 100% staple fiber para aramid raw material, in two different thicknesses, tex40 and tex60. The thread can withstand heat of 500°C, and has a natural straw yellow color.

Durak Fire Safe M-Aramid® sewing threads are offered to textile manufacturers in various colors with a special dyeing process, and also gain resistance against UV rays thanks to this process. Durak Fire Safe M-Aramid® threads, produced in tex26, tex40 and tex70 thicknesses for outerwear and outdoor applications, can withstand temperatures up to 370°C.

For further information, please contact :
Durak Tekstill
NEFA PR and Communication Agency
Denizkoeskler Mah, Muzaffer Sokak
8/D 5 Ambarli 34315, Turkiye ■

INDEX TO ADVERTISERS

APRIL 2025

Name	Page
Agma Products	*
Associated Autotex Ancillaries Pvt. Ltd.	3
Aspire Grand Excel Automation	9
Basant Fibertex Pvt. Ltd.	*
Bea Electronics	83
Bharat Beams Pvt. Ltd.	10
Bluemoon Machines Mfg Co.	*
Chiven Spinning	13
Dhara Engineering Works	*
DH Textile Engineering	*
DTG-2025	*
Elgi Electrics Industries Ltd.	47
Gayatri Textile Machines	C-III
GTTES 2025	*
Jaytex Engineers	*
Indian Dye Springs Co.	C-II
Inspiron Engineering Pvt. Ltd.	*
Krsna Engineering Works	*
Kubershwar Machine Products	*
Lakhmi Machine Works Ltd	67
Laxmi Precision Technologies Limited	12
Lakshmi Ring Travellers (CBE) Ltd.	C-I
Laxmi Textile Products	*
Mag Solvics Private Limited	*
Mangal Singh Brothers Pvt. Ltd.	5
Manoj Engineering	*
Mehra Wax Products Pvt. Ltd.	79
Mayur Reeds and Healds Pvt. Ltd.	*
Mayur Textile Equipments	*
M.K. Spindle Manufacturers Pvt. Ltd	*
Mylon Metallics Pvt. Ltd.	4
New Make Industries	*
NIF Mechanical Works Pvt. Ltd.	*
OM Corporation	14
Paras Healds & Reeds Pvt. Ltd.	*
Peass Industrial Engineers Pvt. Ltd.	C-IV
Precision Rubber Industries Pvt. Ltd.	*
Printer Fa Ni Asia Private Limited	*
Rimtex Engineering	85
RMP Bearing Limited	*
Ringmann	6
Sakthi Textile Engineers	*
S. B. Dye Springs (India) Pvt. Ltd.	*
Sheeba Enterprise	*
Shriji Sparekraft Impex Pvt. Ltd.	*
Shree Ram Textile	*
ShreeTex Corporation	*
Simta Group of Companies	7
Spin Air Systems Coimbatore Pvt. Ltd.	*
Spintex Exports	*
Standard Equipments	*
Sunrise Industries	*
Sumanlal J. Shah Sons (P) Ltd	75
Tech Mech Engineers	8
Technocraft Texmach Pvt. Ltd.	*
Techno Electronics & Instruments	60, 61
Texlab Industries	*
Tex-Tech Industries Pvt. Ltd.	86
Trutzschler India Pvt. Ltd.	*
Varjilal Hirjibhai Trivedi & Sons	*
Vetri Engineers	71
Vishwaa Engineering	*

We are listing most common stressful events which majority Spinners are now facing. Here, we talk of one such event.

Theoritical and academic causes of higher yarn imperfections are known to all spinners. But they are unaware...

The reason is a practical one, the Wellness of Spinning and Ring-Frame. Ring Frame components when in dispair create unwanted spinning high peak tension, and generates continuous imperfections, like thin places and neps.

Wellness is the fundamental thing, if not observed due to practical practices or due to ignorance it will definitely initiate several problems in spinning, which can result in accumulating losses. And such losses, when numerically accounted, give shocking figures.

We have checked 400+ such cases by now, and acquainted them with Wellness and its problem. All such problems were resolved. All are happy with the results. Not only their problems are solved but have gained in Quality and Productivity. We are encouraging others to share their problems, if any, we will be glad to guide and assist. Together, we will be able to resolve all such problems, and in some time, lift up the industry's Quality and Productivity standards.

We are doing this free of cost for now.

However, we can be more precise in resolving your problem, after inspection at your Spinning Unit.
Please register at: **RCC@thexaxis.in**

RCC

Research & Counselling Center,

a social cause unit of the X-axis® OCL for wellness of spinners.

Spinning Wellness Program For All

Lets Promote Quality®

EXPERT PERFORMANCE ELEVATORS

TEXTECH Specializes in the manufacture of Hi-Performance Retrofit kits to up-grade older generation Combers to the latest 4th generation for achieving Optimum Removal of Noils along with Improved Yarn Quality Levels. TEXTECH is the only company manufacturing all types of Technological Spare parts as OEM replacements for all models of Combers. TEXTECH is happy to be the only Expert Performance Elevator to more than 1000+ mills since 40+ years. TEXTECH with its rich technical experience will continuously offer profitable performance solutions with its core strategic value of the high-quality research-based products crafted with the latest technology for the Spinning Industry worldwide.

www.textechonline.com

CUSTOMIZED

High Performance Retrofit Kit for All Models of Combers

- PRODUCTIVITY
- QUALITY
- YIELD

Combing Technologist

We also manufacture all types of critical spare parts for all Models of COMBERS AND LAP FORMERS

TEX-TECH INDUSTRIES (INDIA) PRIVATE LIMITED

27 - D, V.N. Industrial Estate, Bharathi Colony Peelamedu, Coimbatore - 641 004. India.

Ph: +91 422 2562796 | M : 93606 65968 / 93608 66667 | E : textech@textechonline.com

GAYATRI

Delivering Qualitative Excellence

Our products are specifically engineered and designed for meeting the needs of spinning industry, with our expertise and continued in quality, we are providing leading solutions allowing you to increase efficiency and gain competitive advantage.

Other Range of Products

- Eccentricity & taper tester machine
- Ultra violet treatment machine
- Top roller greasing machine (Vertical)
- Top roller greasing machine (Automatic)
- Top roller de - greasing machine
- Clearer roller cleaning machine
- Fluted roller truing machine
- Cot mounting machine (Hand/Pneumatic)

Auto Feeder with Flocked Clearer Roller Cleaning Machine

Flocked Clearer Roller Cleaning Machine

Cot Grinding Machine Model-GCGHY-200

Cot Grinding Machine Model GCGHY-200-25-AF

Hydraulic Cots Mounting & De-Mounting Machine

Spindle Lubricating Machine

Cot Grinding Machine Model-GCGH-200

Cot Grinding Machine Model-GCGHY-200-AF

GAYATRI

GAYATRI TEXTILE MACHINES

17, Harshad Ind. Estate, Margha Farm Compound, B/h. L.B.S. Stadium, Bapunagar, Ahmedabad - 380024. Gujarat (India). • Mo.: +91 98 9808 1503 • Email: gayatrirrp@gmail.com, gayaytirrp@rediffmail.com • Website: www.gayatritextilemachines.com, www.gayatritextilemachines.in

R.N.I. No. 2815/1958
Registered
Postal Registration No. KOL RMS/264/2025-2027

Published by Debajyoti Dutta on behalf of M/s. Eastland Publications Private Ltd.
at 44, Chittaranjan Avenue, Kolkata-700 012. Printer : Arun Kundu at Gita Printers, 51A, Jhamapukur Lane, Kolkata-400 009
Editor : Tapan Kumar Banerjee