Textile Trends
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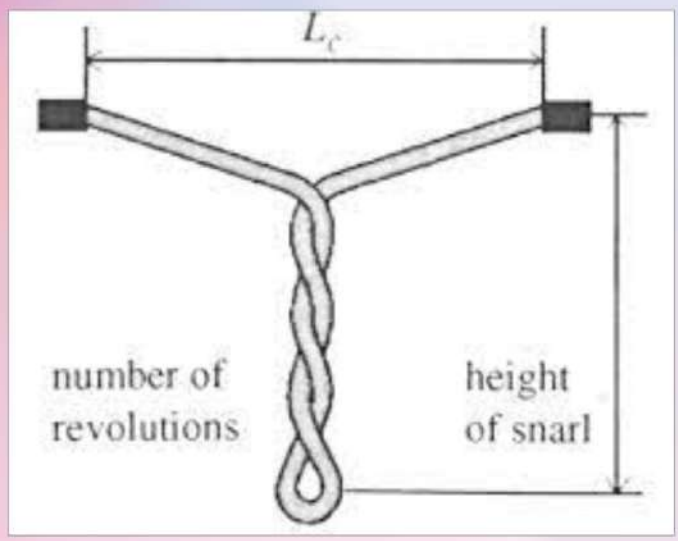

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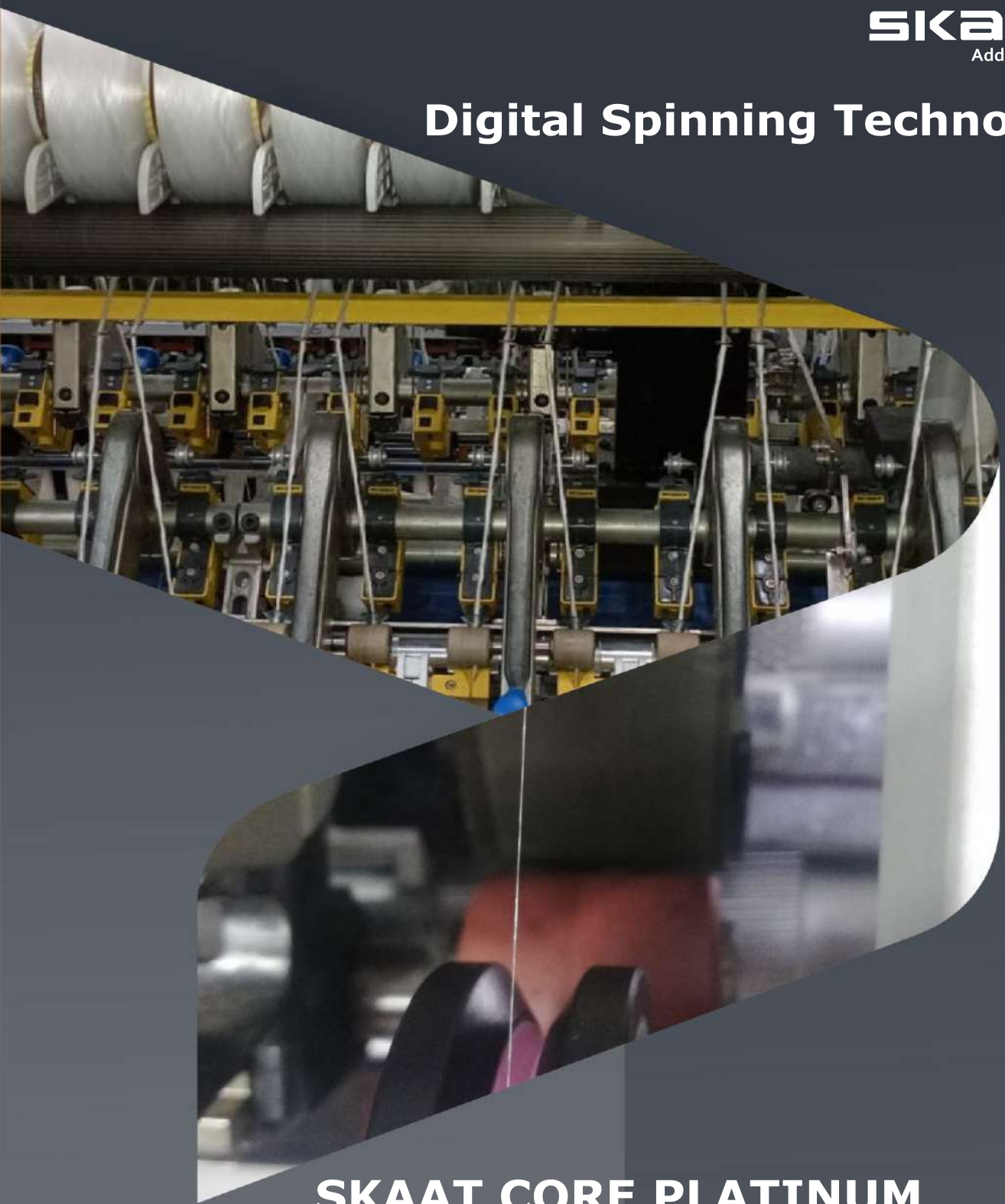

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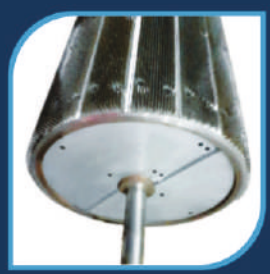
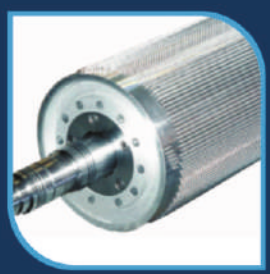





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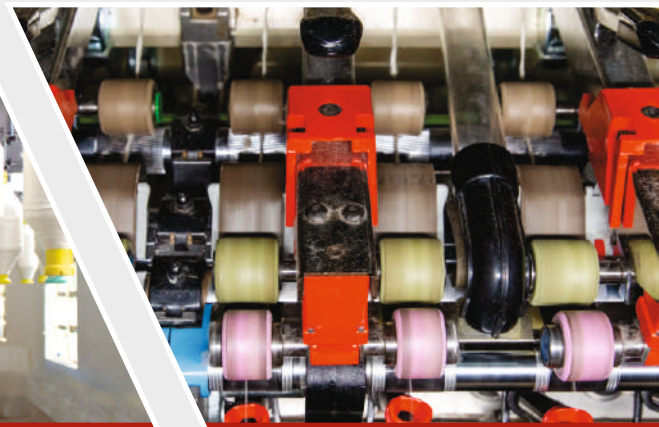

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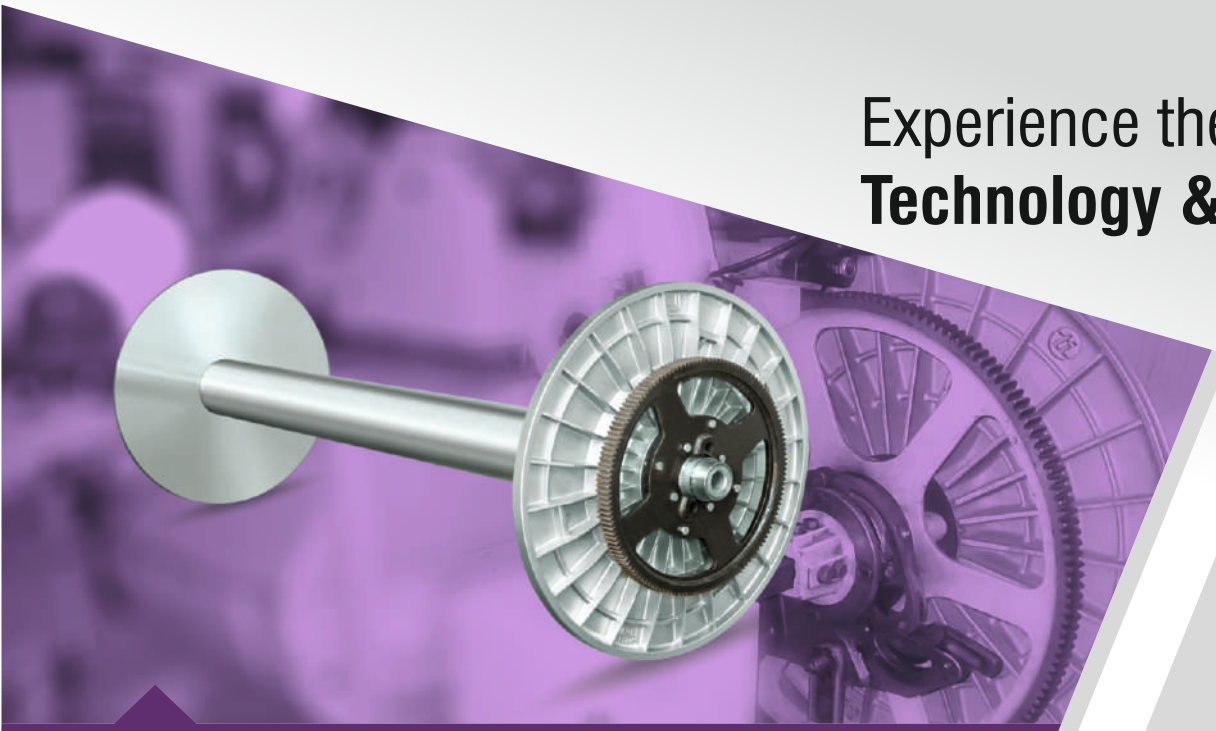

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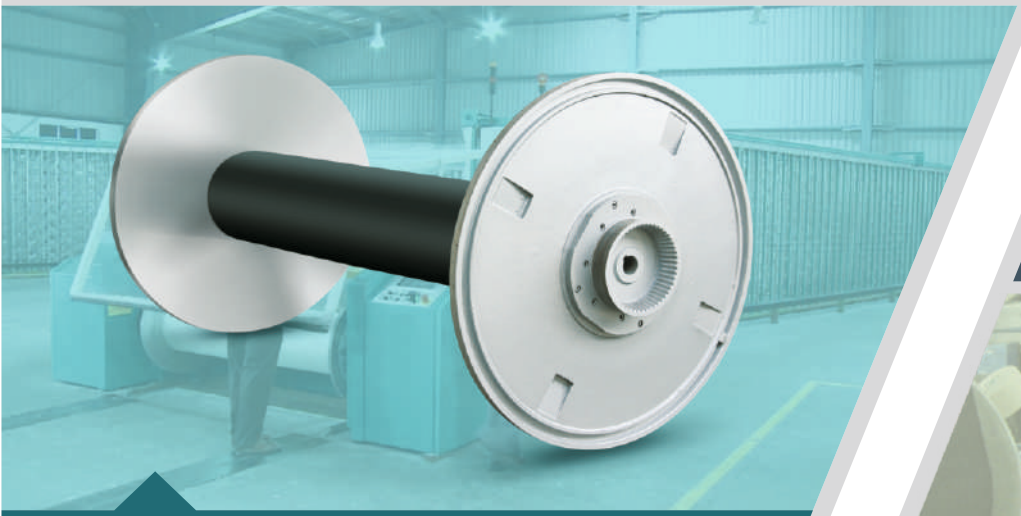

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EDITORIAL

Presence of private equity firm needed to promote India's fashion brands at global stage

Until a decade ego, we used to follow Europe in design sensibility, our designs were copied, but our legacy in design is slowly and surely coming back to India. There is organic involvement of textile artisans. Our design identity must be taken to a larger level, and this can happen at corporate level. We need tools of the internet and corporatization of funds to be able to carve an identity of India. It is good in the long run.

Indian crafts and techniques have found greater acceptance across the world, this trend is set to grow in future with initiatives like "Make in India" which have boosted and improved output results in the sector of fashion manufacturing. At the event of London Fashion week, 2023 a collection spun by few promising Indian young designers was showcased in association with London School of Trends and a message of 'Khadi for Nation', Khadi for Fashion and Khadi for Transformation and the mission to take the fabric from 'Local to Global' were relayed. From manufacturing point of view designers feel that India is strong for its skilled workmanship specially embroideries but not much in design and quality of the products and experience. Many global brands are outsourcing skilled workers from India.

In 2022, India's apparel market was worth $59.3 billion in the world. Ecommerce, social media and the internet, specially in the post pandemic world, have also contributed to creating awareness on global fashion trends. There is constant participation and representation of designs at the global platforms which have proven well to establish one's own brand. India is the third largest exporter of textile and apparel in the world. The share of textile, apparel and handicraft in India's total export was 11.4% in 2020-21.

Money matter is a considerable factor for designers; a designer has to spend million of rupees for a publicity fashion show and work on the operations, on an average, a designer's collection can cost anywhere between rupees 2 lakh and 10 lakhs for a traditional piece such as saree, lehenga, kurta or a western wear. The financial impact is huge and only a handful of Indian Fashion brand have attracted institutional capital. Private equity firms should come forward to assist Indian Fashion brands.

China issued guidelines to attract more foreign investments

China's State Council issued guidelines recently that it said would further optimise the country's foreign investment environment and attract more foreign investment. The State Council said in a document containing 24 guidelines that authorities should increase protection of the rights and interests of foreign investors' reinvestment of their profits into China. The State Council said it would explore a "convenient and secure management mechanism" for cross border data flows. The proposal comes amid tensions between authorities and international enterprises, including global accounting firms, over data security. China has sought to court foreign capital as its economic recovery from the the COVID pandemic slows in the face of weak export demand from key trade partners and ongoing tumult in the country's property market. However, Beijing has so far struggled to attract foreign enterprises and investors, which are wary of political risk in an environment that increasingly prioritises national security measures, and concerned about the impact of deteriorating relations between China and many Western countries on their operations. ❐

Goyal: G20 to be able to reach broad consensus on trade issues

The G-20 Ministers of trade and investment would be able to agree on a broad consensus on all trade related issues looking at the nature of discussions at the sessions, commerce and industry minister Piyush Goyal said recently. On the first day of the ministers' conference, the discussions centred on the topic of 'Multilateral Trade for Global Growth and Prosperity,' which included exchange of views on how trade can work for developing nations and reforms in the World Trade Organisation. The second session was 'Inclusive and Resilient Trade', which focused on the issues of trade and resilient value of global value chains and integrating micro, small and medium industries in world trade."I have the confidence looking at the sessions that we will be able to agree on a broad consensus on all trade-related issues where we can all come out with a strong outcome document and chairs text reflecting the desire of the whole world to see greater prosperity across continents," Goyal said. On the last day of the meeting a session on 'Leveraging Technology for Paperless Trade' is scheduled and the curtains will come down on the discussions with the adoption of the G-20 Trade and Investment Ministerial statement. This rules out issuance of joint communique at the end due to differences over Russia-Ukraine conflict. This has been the pattern in other G20 meeting held under India's presidency. The communique did not come in foreign ministers' meetings, energy transition meeting and central bank governors' and finance ministers' meetings. Trade for growth and prosperity arm of the discussions included more transparency on non tariff barriers and recognising the importance of aid for trade initiative to enable the global south to effectively participate in internal trade. On global value chains the agreement could centre on developing a mapping framework that can help memebrs identify opportunities for improving efficiency and build resilience within these chains. Prime Minister Narendra Modi said in his opening remarke delivered virtually at the meeting, "We must build resilient and inclusive global value chains that can with stand future shocks. In this context, India's proposal to create a Generic Framework for Mapping Global Value Chains is important. This framework aims to assess vulnerabilities, minimise risks, and enhance resilience." Logistics for trade include reliability of international trade cargo operations, developing logistics infrastructure and promoting international paperless transactions that would reduce transaction costs. He said the 'High Level Principles for the Digitalization of Trade Documents' that the group is working on can help countries in imlementing cross-border electronic trade measured and reduce compliance burdens. Modi also said in his remarks that as cross -border E-commerce continues to grow, there are challenges as well, "We need to work collectively to ensure equitable competition between large and small sellers. We also need to address the problems faced by consumers in fair price discovery and grievance handling mechanisms." ■

US GDP rises to 2.4%

The US Economy grew faster than expected in the second quarter as labor market resilience underpinned consumer spending, while businesses boosted investment in equipment, protentially keeping a much freared recession at bay. Gross domestic product increased at a 2.4% annualised rate last quarter, the Commerce Department in its advance estimate of second quarter GDP. The economy grew at a 2.0% pace in the January-March quarter. Economists polled by Reuters had forecast GDP rising at a 1.8% rate. Outside the housing market and manufacturing, the economy has largely weathered the 525 basis points in interest rate hikes from the Federal Researve since March 2023 as the US central bank battled inflation. Economists have since late 2022 been forecasting a downturn, but with price pressures retreating, some now believe that the soft-landing secnario for the economy envisaged by the fed is feasible. The fed of late raised rate by 25 basis points to a 5.25%-5.50% range. The economy is being anchored by the labour market, whose continued tightness was underscored by a separate report from the Labor Department recently showing initial claims for state unemployment benefits fell 7,000 to a seasonally adjusted 221,000 for the week ended July 22. Companies are hoarding workers after struggling to find labour during the Covid pandemic. Employment in the leisure and hospitality sector remains below pre-pandemic levels. The number of people receiving benefits after an initial week of aid, a proxy for hiring, dropped 59,000 to 1,690 million during the week ending July 15. Despite high profile layoffs in technology and finance sectors in 2022 and early this year, the socalled continuing claims remain low by historical standards. This suggests that some laid off workers are quickly finding employment. At 3.6% in June, the jobless rate was not too far from multi decade lows. But some economists remain convinced that a recession is on the horizon, arguing that higher borrowing costs will eventually make it harder for consumers to fund their spending with debt. They also noted that banks were tightening credit and excess savings accumulated during the pandemic continued to be run down. US regulators unveiled a sweeping overhaul recently that would direct banks to set aside billions more in capital to guard against risk. It fully implemented, the proposal would raise capital requirements for large banks by an aggregate 16% from current levels, with the brunt felt by the largest and most complex firms, regulators aid. The industry is already warning that such a big hike could force them to trim services, raise fees or both. Agency officials argued that such costs would be more than offset by the benefit of a more resilient banking system. ❐

China steps up efforts to bolster financial mkts

Chinese authorities have stepped up efforts in recent days to bolster financial markets in a sign that Beijing is growing uncomfortable with the pace of declines in stocks and the yuan. Mainland exchanges recently asked some investment funds to avoid net selling equities. Officials requested state owned banks to escalate intervention to support the yuan, while also encouraging companies listed on the techheavy Star Board to buy back shares. The securities regulator said recently it will slash handling fee in stock transactions and study extending trading hours for equities and bonds. The moves complemented the People's Bank of China's surprise interest rate cut recently, which was the biggest reduction since 2020, and its most forceful yuan fixing guidance ever. So far, the measures have yet to buoy the markets. A guage of Hong Kong listed Chinese stocks was on course for a third-straight week of losses. The Hang Seng Index is down more than 8 per cent this year, ranking among the biggest global losers. The guage entered into a bear market recently. While the yuan eked out marginal gains against the dollar on 18th August more than 5 per cent this year. Also, sentiment has been shaken after top property developer Country Garden Holdings lurched toward a positive first default. ■

Fectory output growth lower than expected, hits a 3-month low of 3.7% in June

Pulled down by a tepid manufacturing show, the country's factory output measured by the Index of Industrial production (IIP) grew at a weaker-than-expected three-month low rate of 3.7 per cent in June 2023, official data released recently showed. This latest growth print was much lower than the upwardly revised 5.3 percent growth recorded in May 2023 and belied the hopes raised by the strong June 2023 crores sector growth performance of 8.2 per cent, which was a five-month high. The eight Core sector industries make up 40 per cent of IIP. In June last year, IIP recorded 12.6 per cent growth, largely due to a favourable base in 2021 when Lockdown 2 was imposed. For the April-June 2023 period, the IIP grew 4.5 per cent, much lower than the 12.9 per cent growth recorded in the same period last fiscal, data released by the Ministry of Statistics and Programme Implementation showed. Ahead of the official data release, economists were estimating IIP growth to all in the 3.9 – 6.3 per cent range.

Slowdown in Manufacturing

the overall IIP growth was brought down by a weak show in manufacturing, which recorded a growth of 3.1 per cent for the month under review. This was substantially lower than the 12.9 per cent growth recorded by this segment in June last year. As many as 14 of the 23 sectors in manufacturing registered negative growth. The significant non performers were food, textile related, and electronics, amongst others, Machinery and metals were the drivers here. The performance of electronics is a disappointment as this industry had been a front runner for the PLI scheme, said Madan Sabnavis, Chief Economist, Bank of Baroda. "IIP growth came in lower than our expectations at 3.7 per cent. We had a forecast of 5.5 per cent, which was based on support coming from the consumer goods segment to the impressive core sector performance," Sabnavis said. "The third quarter will be crucial for the manufacturing sector as this will be the time when festival demand will add to growth. Here, both rural and urban demand would matter". Aditi Nayar, Chief Economist and Head of Research and Outreach, ICRA Ltd, said the IIP slowdown was led by the manufacturing sector, while the mining and electricity sectors witnessed an improvement in their growth performance amid deficient rainfall in the month. The YoY performance of most available high-frequency indicators, such as petrol and diesel sales, generation, improved in July relative to June. In contrast, the YoY growth in vehicle registrations and finished steel consumption deteriorated in July 2023 relative to the previous month while remaining in double digits.

Infra Industries grow

In terms of use based industries, infrastructure industries excelled with growth of 11.3 per cent, while consumer durables fell by 6.9 per cent, FMCG grew by 1.2 per cent. "Clearly there is still stagnation in consumption. For the first quarter, consumer goods have shown negative growth of 2.8 per cent," Sabnavis said. ❐

Govt will stick to fiscal deficit target of 5.9% of GDP for FY 24

The government will stick to the fiscal deficit target of 5.9 per cent of the GDP as robust tax, non-tax collections will help meet the spending requirement and make up for any shortfall in disinvestment proceeds, Finance Secretary TV Somanathan said recently. Although there would be a shortfall with respect to disinvestment he said, this shortfall would be met by non-tax revenue mobilisation. "Disinvestment target is unlikely to be met. However, I would say in agreegate the collective amount between disinvestment and non-tax revenue is likely to be very close to the budget," he told PTI. The total of disinvestment receipts, plus non-tax receipts are likely to be very close to the Budget Estimates, he said. "We expect to adhere to our fiscal deficit target this year...none of the events so far have caused anything for us to deviate from it," he said. The government has already got a higher dividend from the Reserve Bank of India and expects higher dividends from public sector banks and other PSUs than estimated in the Budget. The Reserve Bank of India in May approved a ₹87,416 crore-dividend payout to the central government for 2022-23, nearly triple of what it paid in the previous year. The government was expecting ₹48,000 crore from the RBI,

public sector banks and financial institutions in the current fiscal. The dividend payout by the RBI was ₹30,307 crore for the accounting year 2021-22. With public sector banks posting record profits of over ₹1-lakh crores in 2022-23, the government's earnings from them are likely to be higher. Finance Minister Nirmala Sitharaman, in the Budget, stated that the fiscal deficit is estimated to be 5.9 per cent of GDP in BE 2023-24. To finance the fiscal deficit in 2023-24, the net market borrowings from dated securities are estimated at ₹11.8, lakh crore. The balance financing is expected to come from small savings and other sources. The gross market borrowings are estimated at ₹15.4 lakh crore. ❐

India likely to be the world 3rd largest economy

India is likely to get the third largest economy tag in 2027 (or FY28), based on actual GDP data as on March 2023, a movement of seven places upwards since 2014 when India was ranked 10th per State Bank of India's economic research report 'Ecowrap'. State-wise estimates indicate that at least two States, Maharashtra and Uttar Pradesh, will break the $500-billion mark in 2027 (of FY28). India should surpass both Japan and Germany in 2027 at the current rate of growth, the report, put together by SBI's Economic Research Department (ERD), said. "This is a remarkable achievement by any standard. Interestingly, the incremental (GDP) increase by India between 2022 and 2077, is more than the current size of Australia's economy at $1.8 trillion ! "At this rate, India is likely to add $0.75 trillion in every 2 years, implying that India is all set to touch $20 trillion by 2047," said Soumya Kand Ghosh, Group Chief Economic Edviser, SBI. The ERD underscored that behind this surge, India needs to grow at a CAGR (compounded annual growth rate) of 8.4 per cent till 2027 (in dollar terms). This translates into 11.0-11.5 per cent nominal GDP growth per annum (in rupee terms), which is eminently achievable with a 6.5-7 per cent growth rate, it added. "The India economy continues to enjoy a period of sustained Goldilocks. There is now an increasing consensus that India's GDP in Q1FY24 is likely to surpass 8 per cent (SBI projection at 8.1 per cent with an upward bias), thus pushing India's GDP growth to beyond 6.5 per cent for FY 24. "We firmly believe that in a world that is ravaged by uncertainties, 6.5-7.0 per cent growth is the new normal," Ghosh said. The GDP size of major States in 2027 will be more than the size of some of the Asian and European countries like Vietnam and Norway, the report said. In the coming days, as macroeconomic prospects steadily improve, India will dynamically seek fuller expression of its full potential and a transformative change in its global position, per the report. ■

India's foreign trade exceeds $800b mark in first six months of 2023 : GTRI

A healthy growth in India's services segments has helped the country's total exports and imports of goods and services to cross the USD 800 billion mark during the first half of 2023, despite a slowdown in global demand, think tank GTRI said in a report recently. According to the analysis of the Global Trade Research Initiative (GTRI), exports of goods and services rose by 1.5 per cent to USD 385.4 billion during January-June this year, as against USD 379.5 billion in January-June 2022. Imports, however, dipped by 5.9 per ent to USD 415.5 billion during the six months of this year, as against USD 441.7 billion in January-June 2023. ❐

Retail inflation to shrink below 7% in August

India's annual retail inflation in August is expected to fall below 7% after unexpectedly rising to a 15-month high of 7.44% in July, an economist at Motilal Oswal said recently. Retail inflation rose as of last count as prices of vegetables and cereals skyrocketed, beating all expectations and putting pressure on the government to bring down prices. "I think we must look at the drivers of higher inflation in India and not unnecessarily be worried about vegetable-led headline data," Nikhil Gupta, economist, institutional equities research at Motilal Oswal, said in an interview. Mr. Gupta was the only economist who forecast July's retail inflation above 7% in the Aug. 3-8 Reuters poll of 53 economists. He expects vegetable prices to keep inflation elevated in August though the headline number would be below 7%, before slipping under 6% in September. ■

80 years old through her Malkha marketing trust producing a handspun fabric with passion

It's a world that's long disappeared the tall cotton trees in Gujarat that Marco Polo admired; clothes, finer and whiter than flax spotted by Alexander's admiral in 327 BC ; muslin that could be drawn through a ring ; entire villages engaged in the making of cotton. The industrial revolution spun cotton into a coveted commodity and mechanisation made it a mass produced fabric. This imagery of a lost world is revived in a Frayed History, a book Uzramma, 80, co-wrote with journalist Meena Menon.

There are two kinds of people those who flit on the surface from interest to interest, debbling in whatever catches their fancy and those who dive deep into an all consuming devotion from which there's no return. No prizes for guessing which category Uzramma, founder of the Malkha Marketing Trust (which was set up in 2008 to produce a handspun fabric that derives its name from the traditional mulmul and khadi) belongs to, "As time passes, if you're really interested in something, you discover more and more about it," she says.

Uzramma emphasises the importance of diversity, She tells me that countries such as China envy this Indian quality. "The Chinese are convinced that democracy is dependent on diversity,"she says, adding that she wishes India would use this to its benefit rather than "iron our differences". "It's a great gift and we are throwing it away," she says.

Uzramma, whose Malkha initiative was born from a dream of replacing large spinning mills with small units located close to cotton farms and weavers, is talking about the diversity of homegrown varieties of cotton and how the introduction of American cotton in the 1970s killed thie heterogeniety. But in a country that seems determined to crush its multicultural history, I find the parallels to present-day politics starting.

When I point this out, Uzramma, who goes by one name, agrees. "Diversity is a good thing whether it's in politics or in the way people live," she says. "Now everyone is trying to get into one mould. It's very frightening." Mostly through, she prefers to discuss her lifelong passion : cotton and democratising its production. Hyderabad based Malkha, along with its long-time collaborator Centre for Sustainable Agriculture just suggested that the State create a Telangana brand for the cotton it produces. South India's leading cotton producer is home to many popular handloom varieties.

Uzramma believes that the struggle between large companies and small cotton farmers - who are still the main growers - to control farming practices is the modern day iteration of the battle between the East India Company and 19th century cotton farmers.

It's difficult to extract details about how her interest in this subject was kindled. "A lot of people ask me this question and I'm always stumped," she says, about the world's most comfortable fabric, "The weaving of cotton cloth in India has been such an important activity for thousands of years."

Born to a a Muslim family in Hyderbad - her father was an official in the Indian Railways and her mother, a homemaker - it was when Uzramma came back from a U.K. stint in the 1980s that the found herself with "nothing much to do" and decided to research the history of cotton. She delved into 16th and 17th century trade. "The whole world bought cotton from India," she says, adding that everything about cotton, from the plant to the skills required and technology employed was native to this country.

Malkha's vision was to put the complete cotton chain from field to fabric back in the hands of people. She wanted to use small scale spinning units located in villages near cotton fields to provide locally made cloth to locals. Uzramma began a long term partnership with weavers from Chinnur in Telangana. The project began as a part of Dastkar Andhra before it eventually got its own identity. It took a decade to get the decentralised spinning initiative off the ground.

There's cult following for the signature unbleashed Malkha fabric and also the natural indigo dyes that show up brillianty on this soft cloth. From the start, the response to Malkha from the fashion fraternity was enthusiastic and customers were able to see its special qualities. "It seemed that Malkha had inherited the khadi mantle with its links to Gandhi and the struggle for Independence," Uzramma says in her book.

While Malkha continues to be a favourite of big city consumers who put a premium on sustainable living, widening its customer base to include all those who want to retreat from fast fashion and embrace the comfort cloth that' been around from the days of the Indus Valley Civilisation is a goal that is yet to be attained. Right now, the initiative produces a modest 100 metres every month. But measure it in qualities not quantity : qualities such as equity democracy and diversity. ■

Handloom sector played a significant role in reducing poverty

The handloom sector turnover increased about fivefold and production of Khadi rose three times in the less nine years demonstrating the resurgence of traditional Indian textiles in the country and world over, Prime Minister Narendra Modi has said.

"Nine years ago, the turnover of Khadi and other village industries was about 25,000-30,000 crores. Today, it is over ₹1,30,000 crores. There is a surge in demand for Khadi clothes in the country and abroad," he said at the National Handloom Day celebration at Pragati Maidan recently.

"The NITI Aayog has said that over the last five years, as many as 13 crores people in India have come out of poverty. The handloom sector, too, has played its role in this," he said. Modi urged people to buy handloom products during the upcoming festivals such as Rakhi, Ganeshutsav, Dussehra, Diwali and Durga Puja. "With the spirit of 'Vocal for Local', the citizens are buying indigenous products wholeheartedly and it has become a mass movement," he said.

Modi said the schemes implemented for the textile sector were becoming major means of social justice and lakhs of people were engaged in handloom work, nothing that most of these prople come from Dalit, backward, pasmanda and tribal societies, the Prime Minister said that the efforts of the government have led to an increase in employment in large numbers along with a boost to income.

"Free ration, pucca house, free treatment up to ₹5 lakh, this is Modi's guarantee," the Prime Minister said underlining that the present government had put an end to the decades-long wait of the weaver comunity for basic amenities. ■

Govt-owned troop clothing firm makes extreme weather resistant wear for soldiers in substitute of import from US

India having a face-off with China in Galwan in 2020 forced the country to buy some extreme cold weather clothing system (ECWCS) from the US for its troops. But now, defence enterprise Troop Comfort Ltd. (TCL) has stitched up its own version of multilayered suits that can insulate soldiers from sub-zero temperatures. The hardy clothing can be deployed at the world's highest hostile battlefield of Siachen glaciers.

TCL offered 21 samples of the seven Layered ECWCS suits to Army's Northern Command for trials last October. This was after an autonomous lab —the 'Wool Research Association Textile Testing Lab (WRATTL)', in Thane, cleared the suits for quality, senior officials of the government defence company told BL. Army's Northern command, however, is said to have asked the TCL to be ready for another round of trials in the coming winter to test the FCWCS in extreme live weather environment as the suits, according to the Forces, need improvement for withstanding insulation and breathability beyond -20°C.

The average temperature dips from 10°C to beyond -50°C in Siachen where soldiers man base camps that are 12,000 feet above sea level, with the Bana Top post from where an eye is kept on Pakistan scaling 20,000 feet.

The WRATT lab, which was also given a sample of extreme weather clothing supplied by the US to the Indian Army for comparison with TCL-manufactured suits, found it as good as the ones imported from Washington, TCL officials claimed. While the upper of the suit is seven-lawyered, the lower is only five layers.

Army officials, who have done high altitude postings, explained that soldiers' metabolism increases and their body generates heat as they move from, for instance, 12,000 feet to 20,000 feet and forms a liquid film between the skin and the clothing. So the ECWCS has to have two important parameters, of right insulation and breathablity, for warmth, they stressed. The heat loss leads to casualty of soldiers due to 'hypothermia', commented Army officials.

The Ministry of Defence (MoD) had done as emergency purchase of 30,000 ECWCS from the US Army to equip Indian Army personnel with adequate extreme winter clothing post Galwan stand-off in May of 2020, that led to casualty from both the sides.

With MoD putting the import of ECWCS under negative list to push Atmanirbharthaa in the defence sector, TCL sources said, the Centre will be able to save ₹200-300 crore annually otherwise paid to foreign vendors. ■

India's impact on Global Fashion in modern time

A little over 150 years ago, over 30,000 hand cut and mounted samples of Indian textiles were painstakingly organised into an album series to educate and inspire commercial and design industries in Indian and Britain. Its creator, John Forbes Watson, called them 'trade museums'.

Watson would have been pleased to walk around the 'India in Fashion' exhibition at the newly-opened Nita Mukesh Ambani Cultural Centre (NMACC) in Mumbai, which documents the country's impact on global fashion in modern times. The exhibition starts off with magnificent armadillo dress and a striking pair of shoes, notable for its unconventional shape and covered with scales of iridescent paillettes, designed by the late British designer Alexander McQueen for his Spring/Summer 2010 show, Plato's Atlantis. The costume is juxtaposed against a large framed visual of a jewelled bettle, the Sternocera ruficornis — its shiny greenish-blue wings used frequently in exclusive embroidered textiles in India since the 15th century.

Captivated, British women in India had commissioned their gowns with this decorative element by the late 18th century and it soon spread across the costume world over the next century. From the iconic 'Peacock Dress' worn by Baroness Curzon at the Delhi Durbar in 1903 to celebrate the king's coronation to paintings by American artist John Singer Sargent, these shiny green jewels captured the fashionable imagination.

This example of a quiet reverberation between India and the West is the Ieitmotif that British Journalist and curator Hamish Bowles presents in this exhibition through around 140 costumes, carefully hand-picked and drawn from some of the biggest museums and formidable archives around the world. It is mounted in a nearly 50,000 square feet facility, with climate control capabilities making possible for the first time in India the hosting of international art exhibitions at this scale.

Presented as 10 segments – from 18th century Dutch costumer of chintz, a coveted colonial trade textile, and Indian craft inspired Jewellery, to unseen haute couture archival pieces drawn from Yves Saint Laurent, Chanel, Dior and more - the curatorial prowess of bringing so many exhibits to Mumbai is admirable. It also demanded the onerous task of writing to multiple institution, requesting these pieces of history, often up to four years ahead.

The emergence of the Ambani family at leading international museums, as patrons over the past two decades, has played a significant role in bringing vital pieces from museums such as the Metropolitan Museum in New York, the Royal Ontario Museum and others. Costs for loans, wall-to-wall insurance, transport, conservation care, and a long list of other requirements are also part of the lending process.

In exhibition design director Patrick Kinmonth, Bowles found an able partner. The designer reference the curator's segmented narrative, picking up the scrutiny of fashion storytelling by referencing the architecture and vibrant colours from India and weaving it into the theme. He brings in a scale and grandeur of museum exhibition design that the country is not quite used to – visually connecting spaces and infusing drama.

That said, an oddity here and there disgruntles. Early in the walkthrough, after a pleasant ingestion of an 18th century block printed jama, one walks up a low lit midnight blue ramp and is unexpectedly stunned with a blingy Bollywood trilogy of film costumes, all perched on disproportionate cylindrical bases and strangely lit with shimmering lights, almost like an afterthought. Costumes donned by Kajol, Kareena Kapoor Khan and Priyanka Chopra Jonas from popular Hindi cinema, and a mirrorwork Madhuri Dixit outfit a few steps later are an uncomfortable reminder that the patrons' preferences must also be accommodated.

Bowles and Kinmonth tango smoothly in the sections ahead - references of the dreamy whiteness of a marble Mughal garden frame the Dhakai muslins and floral chintzes ; a spectacular inverted stepwell theme showcases the YSL couture ; and the Great Exhibition of London 1851, orginally set in a magnificent glass Crystal Palace, is translated here as ribbed white skeletal arches that tower over softly lit exhibits. There is a dramatic placing of the fashion costumes and many hours of careful planning have been invested in bringing hundreds of details together to present an India story.

Also scattered through the exhibition are special commissions created by leading Indian designers

such as Rahul Mishra, Ritu Kumar, and Anamika Khanna that respond to the thematic vintage craft, embroidery or silhouettes. Easily a favourite with visitors, they speak highly of the curatorial decision to extend patronage and bridge archival inspirations to contemporary times. These pieces created in 2022 - 2023 take history and catapult it as a future vision and continue the story of fashion by creating new chapters.

However, for what was clearly intended as a blockbuster exhibition, several things fall short. The design in many spaces inhibits the visitor from seeing the costume up close, as some showcases move above and away from the eye level. And for a showcase that trumpets free entry to fashion and art students, the intent of instructional or educational material is poor.

The exhibition didactics are inefficient and a monumental opportunity to share and understand great fashion through textbook pedagogy of silhouette, form, pattern, cut and drapes has been lost. Some stunning examples of costume worthy of explanation, or at the very least sensible labels, are poorly lit and in absolute shadows. The care and display of vintage textiles is a specialised craft, and whilst many costumes have been carefully installed by international lenders, there are other vintage costumes styled by celebrity sari drapers with safety pins, risking damage to the exquisite embroideries. In the long term, it might not be unwise for organisers to dip into the talented pool of textile conservators in our country so that rare books are not placed flat without much-needed supportive book rests or fragile textiles rested without quality rollers. On ground curatorial supervision is vital in such shows and, ultimately, something no amount of money can remedy.

Through 'India in Fashion' as its opening offering, NMACC clearly intends to impress Indian audiences, and succeeds in setting the bar high. One hopes that it can emerge as a cultural centre that truly brings world-class are to India and, in future, global audiences as well. ■

EU textile sector eager to 'Make with India' Policy

The textile industry in the European Union is keen on tapping the strengths of the Indian textile sector and coming up with a "Make with India" policy rather than "Make in India", says The Yarn Bazaar co-founder and CEO pratik Gadia.

"Make in India is great. But it seems to have slight negative sentiment with the European Industry as it feels that India is not opening up its imports. This was the crux of the message we recently got during an Indo-European Union meeting on fee trade pact," he said.

Gadia was one of the Indian representatives during deliberations with the European Union on co-operation measures for mutual economic benefits at EU-India Leaders Conference at Bruseels European Parliament. There was a separate panel for textiles during the event.

The EU industry feels that with both knowing their strengths, it would be better to collaborate for a clear win-win partnership, he said.

"The EU is not just looking at cross-border collaboration with India or simply looking to increase business between the two. The idea is, together how can we capture larger international textile market share ? We are discussing how we can collaborate so that we can get a larger textile industry ?" Gadia said.

In particular, the EU industry wants India to buy more machineries even as India looks for better access for its textile products in the union.

India and EU can opt for technology transfer of collaboration. "We can do a lot of collaboration in design and innovation. Post pandemic, the global industry has changed. A lot of innovation is happening but India is yet to catch up. Collaboration can help that way," he said.

The collaboration will help the EU and India once a free trade agreement is signed. Currently, Bangladesh enjoys a duty rebate or preferential duty rate as it is considered a least developed country (LDG). "The FTA will put us at par with Bangladesh. Together with this, we can target a much larger global share for our textile," the Yarn Bazaar CEO cofounder said. ■

REVIEW OF FIBRE REINFORCED CONCRETE

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Abstract

Concrete is essential component in the construction industry as it has large application in infrastructure development. Because of properties like low tensile strength and crack propagation of concrete, it limits its application. Improvement in these properties is achieved by adding synthetic and natural fibre. The demand for high strength and cracks resistant concrete led to the development of fiber-reinforced concrete. This paper reviews the effects of fibers inclusion on the performance of concrete. The properties of fiber reinforced concrete are also discussed. Factors affecting the properties of fibre reinforced concrete

Keywords : fiber-reinforced concrete; tensile strength; crack opening; brittleness, Fiber-Matrix Bond

Introduction

Civil structures made of steel reinforced concrete normally suffer from corrosion of the steel, which results in the failure of the structures. Constant maintenance and repairing is needed to enhance the life cycle of those civil structures. Since 1960's efforts have been made by scientists and engineers to develop concrete composites which will overcome the drawbacks of concrete by incorporating fibers into a cement matrix to increase the toughness, tensile strength, and improve the cracking deformation characteristics of the resultant concrete. Many researchers have shown that the addition of small closely spaced and uniformly dispersed fibre to concrete would act as crack arresters and would substantially improve the tensile strength and other properties of the concrete.

Fiber reinforced concrete has so far been successfully used in slabs on grade, architectural panels, precast products, offshore structures, crash barriers, footings, hydraulic structures and many other applications.

Every textile product applied under the soil is a geotextile. The products are used for reinforcement of streets, embankments, ponds, pipelines, and similar applications. Depending on the required function, they are used in open-mesh versions, such as a woven or, rarely, warp-knitted structure, or with a closed fabric surface, such as a nonwoven. The basic geotextile functions include Separation, Drainage, Filtration, Reinforcement, and Protection. Fabric is used for the reinforcement purpose in geotextile, so the main the objective of this research is to know the use of fabric as a possible solution for the concrete structure as reinforcing material and which may be benificail in avoiding the the propagation of the cracks. This is prerequisite of the long service life of the concrete structure.

An Overview of The Literature

Concrete is quite brittle; it has very good compressive strength but comparatively little tensile strength, which makes it likely to crack under many conditions. Cracking leads to further damage. Fiber reinforced concrete is a type of concrete that includes fibrous substance that is homogeneously dispersed and oriented haphazardly which increases its structural strength and cohesion. Fiber reinforced concrete is less likely to crack than standard concrete this is because of stretching ability under load of reinforcing fiber is greater than concrete. Use of fibers to reinforce other materials is not a new idea. In fact, it has been practiced for thousands of years, with straw mixed into mud bricks and horsehair included in mortar.

The characteristics of concrete depend upon the kind of fiber utilized, volume proportion of the fiber, and the ratio of length and diameter of the fiber. These conditions will improve the mechanical properties, including toughness, ductility, tensile strength, shear resistance and loading limit of the fiber reinforced concrete.

Jean-Francois Trottier et all, studied Can Synthetic Fibres Replaces Welded –wire fabric in Slabs on Ground and they have concluded that use of low-denier monofilament and fibrillated-synthetic fibers at low fiber dosages (0. 3 to 0.9 kg/ m3) is far more effective in the control of plastic shrinkage than the welded-wire fabric

Brown R .et all carried out research work on effect of temperature and time on tensile properties of polypropylene in various specific environments and concluded that the tensile properties of polypropylene fibers remain unchanged for a period of six months when exposed to all the specified environments.

Fariborz Vossoughi in his experimental research, the reinforcement of cement with carbon fiber produces a highly conductive composite. The conductivity changes significantly at a critical fiber

content, which is found to be independent of the matrix.

Edith MaDer et all studied effect of coating on glass fibre for the improvement of concrete, the concentration of the coating, and the mechanical properties of the coatings were found to significantly influence the strength and failure behavior with cementitious matrix.

Mohsen Miraftab et all carried out work on Utilization of Carpet Waste in Reinforcement of Substandard Soils and concluded that Nylon carpet pile waste can be successfully mixed with substandard soil up to a maximum of 10% whilst enhancing cohesion and strength of the soil as well as its internal friction. Although optimum fiber content was not investigated, clearly adding increasing quantity of fiber to these types of soil improved all functionally important parameters. Moisture content within the fiber/soil showed a pivotal role in influencing soil reinforcement.

H. K. Lee presented the result of Effectiveness of Anchorage in Concrete Beams Retrofitted with Sprayed Fiber-reinforced Polymers, the test result shown that increase in the load-capacity and energy absorption was evaluated by using sprayed fibre reinforced polymers.

Fibres used for FRC

Different types of fibers can be used for concrete, depending from the raw material from which they are produced:

Metallic: carbon steels and non-alloy steels, aluminum.

Natural: asbestos, cellulose, carbon.

Synthetic: nylon, polypropylene, polyacronytrile, polyvinylalcohol.

Table 1: Mechanical Characteristics of the fibre

Fibre	Diameter (µm)	Density (103kg/ m3)	Young's modulus (kN/mm2)	Tensile strength (kN/mm2)	Elongation at break (%)
Steel	5-500	7.48	200	0.5 - 2	0.5 3.5
Glass	9 -15	2.60	70-80	2-4	2-3.5
Asbestos	0.02-0.04	3.00	180	3.30	2-3
Polypropylene	20-200	0.90	5-7	0.5-0.75	8
Naylon	-	1.10	4	0.9	13-15
Polyethylene	-	0.95	0.3	0.0007	10
Carbon	9	1.9	230	2.60	1
Kevlar	10	1.45	65-133	3.60	2.1-4
Acrylic	18	1.18	14-19.5	0.4-1	3

Effect of Fibers in Concrete

Fibers are usually used in concrete to control plastic shrinkage cracking and drying shrinkage cracking. They also lower the permeability of concrete and thus reduce the bleeding of water. Some types of fibers produce greater impact, abrasion and shatter resistance in concrete. Generally, fibers do not increase the flexural strength of concrete, so it cannot replace moment resisting or structural steel reinforcement. Some fibers reduce the strength of concrete. The amount of fibers added to a concrete mix is measured as a percentage of the total volume of the composite (concrete and fibers) termed volume fraction. volume fraction typically ranges from 0.1 to 3%.

Properties of the fiber reinforced concrete

The properties of under load (static and dynamic) fiber reinforced concrete may be classified according to the following actions:

- Compression;
- Uniaxial direct traction;
- Splitting indirect traction;
- Bending indirect traction (measure of toughness and fracture energy);
- Shearing and torsion;
- Fatigue;
- Impact;
- Abrasion;
- Viscous deformation (Creep).

Factors affecting by properties of fibre reinforced concrete

Here are the factors which affect the properties of a fiber reinforced concrete:

- The fibers: geometry, aspect ratio, contents, orientation and distribution;
- The matrix: resistance and maximum dimension of the aggregates;
- The interface fiber-matrix;
- The tests: test dimensions, geometry and methodology.

For the formulation of any kind of concrete, it is necessary to consider the three main variables which must be modified to reach the desired result: water/cement ratio, workability and cement content. The interaction of these three variables allows the designer to achieve a specific concrete strength. Any variation in one requires the others to vary accordingly if the same strength is to be achieved.

REVIEW OF FIBRE REINFORCED CONCRETE

The workability of fiber-reinforced concrete is a major issue. The primary factors deciding the level of workability are the paste volume fraction, the fiber dosage rate, and the fiber aspect ratio.

Fiber-Matrix Bond

In FRCs, toughness or energy absorption capability is of primary interest. Therefore, inelastic bond failure mechanisms such as interfacial crack growth, and fiber slip are of greater relevance. Therefore, fibre-matrix bond in FRC is of critical importance. So, fiber pull-out tests are often performed to assess fiber efficiency in FRC and in such tests fiber bond and slip are monitored simultaneously.

Testing of fibre reinforced concrete

The following test are performed on reinforced concrete:

- Compression test
- Tensile strength
- Flexural property
- Cracking behavior

Conclusion

The study caried out in this field it is found that the addition of fibers improves the mechanical characteristics of concrete ductility performance. The addition of fibers reduces the shrinkage and creep deformation of concrete. It was studied that geometrical properties of fiber affect performance of the concrete. Incorporation of polypropylene has effect on cracking behavior of the concrete.

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KEY SKILLS FOR APPAREL MERCHANDISER

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Abstract

Merchandiser is accountable for confirming that the right quantity of goods are available in right place and are being sold at the right price. To perform these activities merchandiser has to possess few skills which are most important to achieve target. These skills will help in managing and delivering product smoothly. They work closely with company buyers to achieve profit by predicting and monitoring sales trends and accurately controlling stock levels. Skills such as technical, analytical, soft and hard skill enhance the productivity and quality of work. Other skills such as product forecasting, computer knowledge change working style of merchandiser in effective way.

Keywords : Apparel, Merchandising, Product, Soft Skill.

Introduction

Apparel merchandising is one of the departments in the apparel industry who take care of order planning, execution, and shipment. It plays a key rolein it. Along with the above-mentioned activities, a lot of initial as well as post planning, implementation, and execution is required. Also, he has to involve in various activities such as order creation in excel, sample planning, preparation of time and action plan, calculation of raw material requirement, costing of raw material and costing of a product, follow up with production and shipment department. Merchandising is a one of the key department in the Apparel Industry.

Merchandiser is a link between buyer & export house. Merchandising is the department that creates the link between the marketing and production departments. Apart from planning and execution merchandiser has to do costing and pricing of individual items of apparel, raw materials such as fabric, trims, accessories, etc. In all situations, the merchandiser is responsible for planning & executing the orders seamlessly as per the time and action plan. So, it is a very valuable department in the apparel industry.(1)

Now, apparel exporters must take advantage of available merchandising tools to provide shipment with the optimal lead time. Because of the complexity inherent in apparel manufacture and merchandising, the production and shipment of clothing and apparel are not easy. Apparel export houses have to develop new tools to meet their deliveries on time with less rejection. To meet the expectations of the export house, it is necessary to incorporate the new techniques and strategies into merchandising department.(2)

To execute strategic and operational tasks across the complex apparel supply chain, merchandising professionals need specialised knowledge, ranging from product development to forecasting, assortment planning, sourcing, distribution, retail, and marketing.(3)

Merchandising Skills

Technical skills

First is related to Production and Processing. Knowledge of raw materials, production processes, quality control, costs, and other techniques for exploiting the effective manufacture and distribution of goods. Along with this quality control and analysis includes conducting numeroustesting and inspections of products, services, or processes to assess quality or performance for fault free product.

The second topical area discovered hard skills used by merchandisers over the two themes: First Technical Skills and second Thinking/Conceptual Skills. The Technical Skills theme began from knowledge of material, production processes, quality and testing. The Thinking/Conceptual Skills theme described higher order thinking needed to make complex product making. Five categories discovered this theme: problem solving and decision-making, critical thinking, innovation, metacognition, and strategic thinking.

Operations Analysis includes analysing needs and product requirements to create a design.

Operation Monitoring includes watching all the time and action activities is working properly. Systems Analysis insures effective use and communication among all the departments with merchandising. For a merchandiser it is necessary to understand how a system should work and how changes in surrounding, operations, and the environment will affect results.

Active learning includes understanding the implications of information for both current and future problem solving and decision-making

arises during order completion. Learning tactics includes current methods and procedures as well as new appropriate for the successful shipment. It will maximize the effective manufacture and distribution of goods.

The third topical area, shows knowledge, consisted of two themes: General apparel Knowledge and Merchandising knowledge. The Merchandising knowledge theme included seven categories: raw material sourcing, marketplace awareness, business, retail operations, product development, assortment management, and marketing. These categories described various aspects that were essential for merchandisers to function effectively in the global retail industry. The fourth interesting area, unstated knowledge that useful for the significance of skill improvement. This theme arises from merchandiser discussion of the importance of work experience in the order activity, starts from getting order to completion of order.

Analytical skill

Analytical skills are a long set of specialized abilities that comprise the skill to think censoriously, analyse data, make tough decisions, and solve intricate problems. Here it is knowledge of product design, principals involved in production, planning and scheduling. Motivating, developing product and new strategy, and directing all departments for smooth work, identifying the best ways for sourcing and manufacturing required product.

- To discover the current market trend
- To forecast market to develop the new style
- Product development is done by merchandiser
- Creation of new segment for the forthcoming season
- Development of line plan
- Make the marketing calendar
- Communication and coordination with buyer

Product forecasting

This includes assessment of customer demand, quality standards, market feasibility, and expected return from new product development. Evaluation of customer satisfaction is also important aspect. Fashion apparel products forecasting is a challenge that emphases on upcoming trends. Merchandiser predicts the fabrics, colours, textures, materials, graphics, prints, beauty/grooming, accessories, footwear, street style, and other styles that will be presented on the runway and in the market for the upcoming seasons. (4)

Soft skills

Soft skills are character behaviours or wanted qualities. Soft skills form the basis of people-related skills (interpersonal) and personal or individual attributes (intrapersonal) and are movable from one working situation to another such as communication skills, time management, listening skills, and sympathy. The Interpersonal theme summarized people-related skills and included four categories: teamwork, communication, diplomacy, and leadership. The Intrapersonal theme arisen from participants' descriptions of desirable personal qualities necessary to perform the numerous merchandising activities. Five categories should be develop: administrative/managerial, flexibility, responsibility, positive attitude, and self-management.

Hard skills

Hard skills are basically definite abilities, or capabilities of an individual that he can possess and measurable. It represents abilities to effectively use technology as well as mathematical skills to do calculations which will require for bill of material. Thinking or conceptual abilities relate to higher order cognitive or reasoning skills which involve making sound judgements, critical thinking, decision-making, problem-solving, as well as reflecting on experiences and learning. As such, thinking skills are movable and not discipline specific. Some technical skills are also convenient, such as numeracy or use of general software (e.g., Microsoft Office), whereas other technical skills are discipline specific. Use of specialised or new software such as virtual display, 3D design of merchandise and store layout planning is an example of a technical skill specific require for Retail/apparel merchandising.

Apart from the above skill following are the key skills required for merchandiser.(6)

- Profitable awareness
- Self-confidence
- Able to cope with pressure
- Teamwork skills
- Communication skills
- Leadership skills
- IT skills
- Decision-making skills
- Organisational skills.

Qualities of a Good Merchandiser

- Ability to Create a Halo Effect
- Ability to Calculate Accurate and Fast
- Decision Taking
- Market Communication Skill
- Ability to Influence Buyers
- Ability to Work with Team Members
- Good Analytical Ability
- Enough Knowledge of Garments products
- Basic Computer Skills (MS office)
- Hard Worker

Conclusion

As an effective merchandiser it is required to possess numerous skill qualities and this requirement depends on what type of merchandising job a person is doing. So, it is required that merchandiser need to develop some of the most important skills and qualities which makes a merchandiser successful in his career. Also, he has to develop a problem solving skill/ability to overcome various kind of day to day issues associated with shipment activities.

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Farmers may suspend sowing cotton as yields and prices slump in Tamil Nadu

Area under cotton cultivation in Tamil Nadu is likely to fall next sowing season as farmers harvesting cotton now struggle to get remunerative prices.

Selvakumar, who raised cotton on 1.5 acress in Tiruchengode area, said he spend ₹35,000 and earned Just ₹15,000. The yield this year was just 200 kg an acre as against 11 quintals last year. The price had also dropped from ₹120 a kg last year to ₹70 a kg now. "We do not know if the fall in yield was due to pest attack or severe summer. But, at least 25% of farmers in our region will not sow cotton next year," he said.

Kannan, a farmer from Tiruvarur district, said that recent the average price for cotton in that area was ₹64 a kg. Of late, the price was ₹55 a kg or less.

According to data available with the Indian Cotton Federation, almost L65 lakh hectares of land was under cotton cultivation in the State and production was expected to be 6.5 lakh bales during the 2022-2023 cotton season (October to September).

An official of the CCI said that the new minimum support price (MSP) rates were declared for cotton season 2023-2024 and added that the Corporation would step in for MSP operations from day one (October 1), if necessary. "We have been told that at present, the prices are running at about ₹6,800 per quintal and in case of Cauvery delta region it was ₹6,400 to ₹6,500," the official said.

Ravichandra, a farmer from Nannilam, said the government should support them to form farmer producer organisations and set up ginning mills in the cotton growing areas so that they get better prices. Further, the revised MSP that was implemented from October 1 should be advanced for the summer crop in Tamil Nadu where picking started in June.

V. Sathyanarayanan, State secretary for the Consortium of Indian Farmers' Associations, demanded steps to boost prices for cotton by products so that farmers were not affected by the cotton price fluctuations.

The textile industry has sought a Technology Mission on cotton to boost yield and so help farmers get better prices. ■

REVIEW ON WOOL BASED KERATIN FOR MEDICAL TEXTILE

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ABSTRACT

The polymer based hydrogel mainly used as absorption of liquid including bodily fluids. The hydrogels are created using both synthetic and natural polymers, as well as their derivatives. wool keratin films were created using water, methanol, and ethanol as coagulation solvents to create the wool keratin/ionic liquid solutions. Compared to natural wool fibres, the thermal stability of regenerated wool keratin films marginally decreased. Application of keratin as biomaterials depends in large part on its biocompatibility. Dental implants' ossointegration is improved by keratin hydrogel made from wool using a sheep's can cellulose bone model. A few days after subcutaneously implanting the sample in the mouse, no obvious sign of acute tissue inflammation, such as swelling of the reddish skin, was seen. After being implanted for a number of weeks, the keratin hydrogel disintegrated with numerous cracks and gaps whereas the keratin film maintained its original morphology of a sheet-like structure. After freeze-drying, the gel possessed a fast-swelling property and a highly porous structure. Additionally, it demonstrated strong mechanical properties in both the tensile test and the dynamic viscoelasticity test. These findings led us to the conclusion that keratin film was mechanically stronger than keratin hydrogel and more resistant to degradation than keratin hydrogel. It was also mainly biocompatible without inducing inflammation or encapsulation.

INTRODUCTION

Technical textiles including personal protective equipment (PPE)[1] bandages, hydrogels, and dressing materials, as well as implantable prosthesis for tissue engineering, are among the medical textiles with the fastest increasing markets[2]. The technological medical textile industry is developing and growing quickly, especially in fields like implantable textile, pressure and bandaging garments, and wound healing textile[3-4]. Additionally, the number of long-lasting and potent antimicrobial drugs is growing [5]. The creation and use of antimicrobial agents to achieve desired antimicrobial effects and improve the effectiveness of the resulting medicine[6]. In addition to reviewing recent advancements in the field[7] the following review attempts to update and provide an overview of the function that textiles can play in the healthcare Industry[8].

The papers described research on antimicrobial agent production and incorporation to produce the necessary antimicrobial effects, as well as research on the effectiveness of the resulting textiles and clothing[9-10]. The antimicrobial textiles were designed to be used in a variety of products, including sutures, implanted objects, wipes, wound dressings, and personal protective equipment (PPE) for healthcare workers[11-12]. And textiles used in hospitals generally[13]. Advances in nanotechnology that allow the incorporation of the active antimicrobial agent[14] in nanoparticle form into the textile either during spinning of the fibre-forming polymer or through finishing treatments can be blamed, at least in part, for the increase in published research on antimicrobial topics over the past five years.[15-16]

It's advantageous that the nanoparticles can be added to fabrics meant for medical usage without negatively affecting their textile characteristics[17]. Compared to metal salts or adsorbed quaternary ammonium compounds[18] which work by leaching from the treated material, such treatments with antimicrobial agents[19]. in the form of nanoparticles can demonstrate high levels of antimicrobial activity along with excellent durability (both in use and through repeated cycles of laundering)[20-21].

That may be the case, but a number of other nanoparticulate agents and combinations of agents are now showing comparable levels of efficacy, and pre-treatments[22] such as those with chitosan or carbon nanotubes, are being shown to improve not only the uptake of the active agents but also their efficacy and durability[23]. Overall, however, multifunctional finishes that combine antimicrobial action with surface alteration to enable the fabric to repel/shed hazardous liquids like body fluids are the antibacterial treatments that demonstrate the most value in practise[23-24]. Antimicrobial treatments for textiles will be discussed in the context of each specific application in this issue of Textile Progress[25]. It's interesting to note that while the development of antibacterial treatments for textiles may have had a significant uptick, With regard to viruses, the same degree of activity may

not necessarily apply[26-27]. Despite the fact that there was just one mention of liquid filters for virus elimination (for water treatment)[28].

Compared to products from traditional wet, dry, or melt-spinning processes, electrospun nanofibres are relatively slow to produce[29]. However, the very specific properties they possess due to their fineness, and consequently extremely high surface areas along with great flexibility[30-31] the effort worthwhile[32]. Given the right solvents and enough polymer-chain entanglement, the electrospinning procedure is well-established and applicable to a variety of polymers[33-34].

The majority of Interest is in collecting nanofibers in the form of continuous bundles or yarns because these bundles can be very neatly constructed and can be twisted to produce, for example, two-fold nano fibre yarns[35-36]. Although they can be collected and used in the form of a web, such webs are very weak and difficult to handle[37]. Additionally, nanofibres can be used to coat a normal filament yarn to produce yarns with properties that a core-spun yarn cannot achieve on its own[38]. These core-spun yarns combine the strength of a conventional yarn with the surface properties of nanofibres[39]. Additionally, dissolving that core may result in hollow yarns (of interest as reservoirs for drug delivery). Synthetic absorbable polymer (SA polymer)-based electrospun yarns[40]. This has happened in part because electrospun fibre assemblies and textiles have enormous surface areas and porosities that make them great scaffolds for cell growth and proliferation during the time when the steadily deteriorating polymer is required to give support[41-42].

MEDICAL TEXTILE APPLICATION

Various academics have understood the term "medical textiles" at various points in time[43]. "Medical textiles are products used outside the body and are typically not in contact with flowing blood or open wounds[44-45]. Thus, a straightforward bandage, dressing, eye patch, feminine hygiene item, diaper, an incontinence pad, sling, gauze pad, finger cot, and external casting, brace and support ,"reads one of the interpretations[46-47].

The intersection of technical disciplines and the living sciences is where medical textiles are found[48]. On the one hand, it represents the technical aspect, which includes textile engineering, chemistry, and testing and certification, and on the other[49]. It includes the life sciences, which include medicine, microbiology, and comfort or strain[50]. When it comes to the practise of human hygiene and medicine, textiles are pervasive[51]. Due to advancements made in the fields of bandaging and pressure garments, wound healing, controlled-release, implanted devices, and medical devices, advanced medical textiles are growing[52-53].

HYDROGELS

The crosslinker and the solvent, respectively, provide natural and synthetic polymers their viscoelastic capabilities and network structure, resulting in polymer hydrogels[54]. These polymers are three-dimensional cross-linked hydrophilic polymer systems that can absorb a lot of water or biological fluids, forming aqueous semisolid/solid gel networks in the process.[55-56] Hydrogels could be solid, semisolid or liquid[57].

If molecular entanglement and/or secondary forces play the primary role in creating the bond[58]. Hydrogels are also classified as physical gels or "reversible" gels[59]. Physical gels are frequently rescindable and can be dissolved by changing the environment's pH, ionic strength of the solution, or temperature[60-61]. Examples of reversible hydrogels include "ionotropic" hydrogels produced by interactions between polyelectrolytes and multivalent ions with opposite charges and polyelectrolyte complexes (complex coacervates) produced by interactions between two polyelectrolytes with opposite charges[62-63]. Crosslinking polymers in the dry state or solution allows for the covalent bonding tying together different macromolecular chains in "permanent" or "chemical" gels[64]. Hydrogels swell because the crosslinking of the polymer network prevents their breakdown in water[65].

Water-polymer interactions, which in turn depend on the hydro philicity of polymers, have a direct impact on a hydrogel's ability to swell[66]. The greater the polymer's hydro philicity, the stronger the water-polymer interactions. Water can be included in a hydrogel either free or bound[67]. The outermost layer contains free water, which is conveniently eliminated by mechanical compression or centrifugation[68]. Bound water is the water that is affixed to the polymer chain and establishes hydrogen bonds with the polar groups of the polymer[69].

Hydrogels can be categorised in a variety of ways and ways of different means depending on

the characteristics and use[70]. This classification is based on the hydrogels' sources, preparation process, physical and chemical characteristics, ionic charges, swelling characteristics, biodegradation rates, and crosslinking[71]. Hydrogels have been widely used in a wide variety of biomedical applications, including tissue engineering, wound dressing, drug administration, and other areas, since their structure and properties closely mirror[72]. The microenvironment of many human body tissues[73].

CLASSICICATION OF HYDROGEL

Different classification bases can be used to categorise hydrogels[74]. The first is that hydrogels can be divided into two categories: natural and synthetic[75]. Based on the components of the polymer, hydrogels can also be categorised[76]. In light of this, homopolymers[77] which are made of a single species of monomer can be classified as hydrogels, while co polymers are made up of two or more different species of monomers with at least one hydrophilic component[78]. Interpenetrating polymeric hydrogels (IPNs), a significant type of hydrogels comprised of two separate cross-linked synthetic and/or natural polymer components that are contained in a network shape, are also known as multipolymers[79-80].

The physical or chemical cross-linkage that is produced when creating hydrogels is another approach to categorise them[81]. Based on the presence of covalent bonds within the matrix, hydrogels are classed as "chemical" or "permanent" hydrogels[82]. Based on the connection between the polymer and the water in these bonds and the level of reticulation occurring in the matrix, these bonds regulate how much the hydrogel swells[83]. On the other hand, "physical" or "temporary" hydrogels are produced by molecular entanglements, ionic bonding, hydrogen bonding, physical contacts, or other processes that can be reversed with enough force or environmental modifications[84-85].

Hydrogels can also be divided into "intelligent" or "smart" hydrogels based on how responsive they are to environmental cues[86]. pH, light, temperature, electric fields, solvent composition, pressure, sound, and magnetic fields are some of the environmental stimuli[87].

ENVIRONMEMTAL SENSITIVITY HYDROGEL

Hydrogels have the potential to be stimulus sensitive and responsive to their environment[88]. Smart hydrogel systems respond to environmental stimuli such as temperature, pH, ionic concentration, light, magnetic fields, electrical fields, and chemicals [89]. They contain a variety of chemically and structurally sensitive moieties[90].

These are comparable to ordinary hydrogels, with the exception that they may show large volume changes in response to slight variations in these stimuli[91]. Shape, volume, phase, and optical property changes are possible responses to these stimuli[92]. Numerous elements, including the type of monomers, hydrophilic-hydrophobic balance, crosslink density, osmotic pressure, the conformation of chemical groups, etc.,[93] contribute to the gels' ability to change volume in response to stimuli[94].

The thermals are another name for temperature-sensitive hydrogels[95]. These stimuli-sensitive hydrogels can show variations in their network structure's swelling behaviour depending on the surroundings[96]. Temperature-sensitive hydrogels can be divided into two categories: negative temperature and positive temperature[97]. According to the definition, negative temperature hydrogels are impacted by temperature ranges in respect to the upper critical solution temperature, and positive temperature hydrogels are impacted by temperature ranges below or above the lower critical solution temperaSmart hydrogels called pH-sensitive hydrogels have a gel structure that changes as the pH level changes[98-99]. The pH-sensitive hydrogels respond to changes in the liquids' pH by either expanding or contracting[100]. Another stimulus for hydrogels is the magnetic field. When the magnetic field is applied, the gel's pores alter, which affects the swelling[101]. In supramolecular materials, a strong magnetic field can also cause anisotropy, and this leads to relative orientations in the network[102]. Polymers known as electric field-responsive hydrogels swell, contract, or bend in reaction to an applied electric field[103]. Usually, polyanions, polycations, or amphoteric polyelectrolytes are used to make them[104].

Materials that are light-responsive can react to stimuli when exposed to light sources including UV, Vis, or infrared light[105]. Light is a particularly attractive stimulus to change the properties of a hydrogel in the case of light-responsive hydrogels since it is a remote stimulus that is simple to manage[106-107]. Adding photosensitive groups allows for the synthesis of

typical light-responsive materials[108]. Elegantly merging two or more stimuli-sensitive processes, polymers have also been created with numerous responsive characteristics[109]. This may mean the development of systems that can react simultaneously and independently to multiple external stimuli, such as pH and temperatures[110].

POLYMERS OF HYDROGEL

1. SYNTHETIC POLYMER

Petroleum oil is the source of synthetic polymers, which are man-made polymers[111]. From the perspective of applications, synthetic polymers can be divided into four major groups[112]. These include elastomers, synthetic fibres, thermosets, and thermoplastics[113]. At a specific temperature, thermoplastic polymers are pliable and moldable and harden after cooling[114]. The same is true with thermoset polymers, which are also tough and cannot change their structure once set[115].

They are utilised in adhesives often because they are set and as a result. A wide variety of polymers are used to create synthetic fibres, which are used to address issues with natural plant and animal fibres[116]. When compared to natural polymers, synthetic polymers are chemically and mechanically stronger, hydrophobic, mechanically stronger, and strongly bound chemically[117]. The material has great longevity thanks to the increased mechanical strength, which lowers the rate of degradation[118].

"Synthetic polymeric hydrogels are typically covalently or ionically cross-linked networks of hydrophilic homo polymers or copolymers in three dimensions[119]. The polymerization of free-radical vinyl monomers with swelling agents and bi-functional crosslinking agents is the most frequent way to create polymeric hydrogels, however there are other ways as well[120]. The polymer produced using this process is intriguing since it exhibits characteristics of both solids and liquids[121].

The polymer produced using this process is intriguing since it exhibits characteristics of both solids and liquids[122]. More than 80% of the water in the polymer is water[123]. But because of the network created by the cross-linking in the reaction, it also exhibits solid-like qualities[124]. More specifically, it behaves more like elastic solids in that the hydrogel may remember a reference configuration and return to it after being deformed for a while[125]. Poly hydroxyethyl methacrylate (PHEM), one of the ground-breaking synthetic hydrogel polymers created by Laftah etal[126]. has been used in a variety of fields, mostly in the medical business, due to its biocompatible nature, nontoxicity, and strong water-absorbing properties[127].

2. NATURAL POLYMERS

Agriculture, the food business, waste water treatment, medicine, cosmetics, tissue engineering, drug delivery and wound healing, the packaging sector, and the removal of heavy metals are just a few of the industries where biodegradable polymers are widely used[128-129]. Given that most natural polymers are Extracellular Matrix components, they offer hydrogels with the highest biocompatibility. [130]. polymers found in nature that could be used to make hydrogel[131].

Chitosan, a deacetylated form of chitin, is regarded as a biopolymer that contains at least 60% D-glucosamine waste (D-glucosamine and N-acetyl-D-glucosamine)[131]. Although this biopolymer is not extensively distributed, it is thought to be the second most prevalent biopolymer after cellulose and is easily produced by deacetylating the naturally occurring polymer chitin[132-133]. Another naturally occurring cationic copolymer that has great promise for hydrogel architectures is chitosan. Hydrogels made of chitosan may be used as engineering scaffolds to accomplish successful tissue repair[134-135]. The definition of hybrid hydrogels is still up for debate[136].

They can be described as a complex made up of a large number of chemically or physically cross-linked nanogels, as systems[137] made up of various polymers and/or nanoparticles, including plasmonic, magnetic, and carbonaceous[138] as being composed of chemically, functionally, and morphologically distinct building blocks from at least two different classes of molecules, including biologically active polymers like polysaccharides[139].

Although the fabrication of hydrogels with proteins and polysaccharides has been suggested, the material's properties depend on the type of polymer and its features[140]. The hydrogel's mechanical characteristics, swelling behaviour, thermal stability, and degradation rate must all be identified[141]. Additionally, research on the biological impact of materials is necessary for biomedical applications[142].

3. PROTEIN BASED POLYMER

A natural polymer called collagen is found in extracellular matrices (ECM), which are typically made from fibroblasts and osteoblasts[143]. Collagen type I, the most prevalent kind, is derived from a variety of tissues, including skin and ligaments, through enzymatic and acidified processes[144]. Collagen is extremely compatible with biological applications because it is derived from ECM[145]. Because of collagen's mechanical characteristics and quick degradability, collagen-based hydrogels can only be used in a limited number of applications, so it is clear that this polymer's features need to be improved[146-147].

Natural polymers can be converted into hydrogels through physical and chemical interactions[148]. Although the fabrication of hydrogels with proteins and polysaccharides has been suggested, the material's properties depend on the type of polymer and its features[149]. The hydrogel's mechanical characteristics, swelling behaviour, thermal stability, and degradation rate must all be identified[150]. Additionally, research on the biological response to materials is necessary for biomedical applications[151]. In this review, we address the properties of hydrogels based on proteins like silk, keratin, and collagen as well as polysaccharides like chitosan, alginate, carrageenan, hyaluronic acid, starch, and cellulose[152].

Either a hybrid collagen and other polymer combination or changing the crosslinking density can be used to improve the characteristics[153]. Proteins from animal sources are converted into keratin through the heat denaturation of specific types of collagen[154]. In a different use, gelatin has become a very popular protein polymer for making hydrogels[155]. Wool keratin-based hydrogels can be made in a variety of ways, including by altering the polymer's amino acid linkages, adding crosslinkers to the polymer to enhance its mechanical properties[156]. creating an interpenetrating polymeric network, copolymerizing the polymer with other natural and synthetic polymers, or using the polymer alone[157-158].

Physical hydrogels have drawn a lot of interest lately, with fields as diverse as biomedicine and soft electronics using them[159]. Enhancing the biocompatibility of materials is a practical strategy to enhance their performance and expand their uses. Physical hydrogels based on natural polymers can be created in this manner[160-161]. Ionic interactions, crystallisation, hydrophobic association, and hydrogen bonding, respectively, are the four main physical interactions that are used to cross-link with natural polymers in this research[162-163].

4. CELLULOSE BASED POLYMER

A typical biodegradable polymer found in plants is cellulose[164] . Special bacteria might also be used to make cellulose[165]. Despite having different and distinctive macromolecular structures and physical properties, cellulose generated from bacterial microorganisms (BC) and plant cellulose (PC) are chemically identical[167-168]. Plant cellulose is combined with various foreign elements including lignin, pectin, and hemicellulose, making biological cellulose more pure than plant cellulose[169-170].

The hydroxyl group in the cellulose repeating unit is converted into derivatives of cellulose by the processes of acetylation, etherification, and esterification[171]. Cellulose and its derivatives are easily biodegradable using naturally occurring bacteria, fungi, and enzymes[172]. In addition, they are environmentally beneficial[173].

hydrogels can swell and absorb water and other aqueous fluids, but they are insoluble in them[174]. These days, there is an increasing need for biodegradable products and materials created from renewable resources like cellulose[175]. The widespread use of cellulose-based personal care products is due to cellulose's remarkable biocompatibility[176]. These products use cellulose hydrogel as a thickening, stabilising ingredient, or moisturising agent to enhance the product's skin-like feel[177]. As personal care items, hygienic cellulosic absorbent goods such diapers, pantyliners, tampons, paper towels, and tissue papers are utilised[178].

The behaviour of the chitosan hydrogel's pH-dependent swelling was successfully converted into cellulosic sites, and the behaviour of the hydrogel's pH-dependent response to stimuli was also confirmed[179]. The finished fabric was determined to be appropriate for use in medical, surgical, and transdermal treatment applications[180]. In the meantime, these changes have unexpectedly changed fundamental mechanical and comfort characteristics[181]. It was determined that the planned antimicrobial treatment made the support thicker and produced a minor decrease in air permeability[182]. The obtained data also showed that chemical activation had a significant

impact on tensile behaviour and ultimate comfort characteristics[183].

APPLICATION OF HYDROGEL

The range of applications for hydrogels is fairly broad[184]. But the biological and bioengineering fields are where these materials are most crucial[185]. In the majority of circumstances, these hydrogels can be used to distribute medical fabrics, which are the fundamental component of medicine[186]. Although there are many precautions in medicine and healthcare, such as those involving biocompatibility, biodegradability, and other aspects, hydrogels made of natural polymers, particularly those made of keratin, are still very important[187-188].

1. DRUG DELIVERY VECHILES

Natural polymers are also known as biopolymers, have been used often in recent years as starting points for the creation of effective drug delivery systems[189]. Because they are analogous to the body's tissues, have a high water content, and have a rubbery consistency among the various drug delivery systems, hydrogels offer unique qualities that make them perfect for this purpose[190]. Hydrogels made of keratin and carrageenan were created as a topical medication delivery mechanism[191]. The created gels were discovered to have a stable, hemocompatible composition, and a smooth texture[192]. The drug-loaded gels displayed enough antibacterial effectiveness to be applied topically[193].

As larger concentrations of the medication are administered directly to the target area in a sustained way, controlled and localised delivery of the medication to the wounds is more practical than systemic administration[194-195]. Additionally, they have the capacity to create ideal environmental circumstances that promote wound healing while doing away with the requirement for frequent dressing changes[196-197]. Controlled distribution of wound healing agents has huge potential for patient-friendly wound treatment as the number of persons with chronic wounds rises globally[198].

Wound care has been practised for many millennia[199]. In order to lessen discomfort, ward off infection, and keep the wound closed, the most traditional treatments relied on wrapping the incision in leaves and fabric and administering natural ointments[200]. Even though some of these tactics are still in use, they haven't been found to be effective at promoting healing in chronic wounds[201]. Additionally, using traditional wound care techniques to treat deep incisions leads to the development of permanent scars[202].

Because of their biocompatibility and structural resemblance to the natural extracellular matrix, hydrogels have been used in regenerative applications for many years[203]. Initially, invasive surgical procedures were used to form the materials outside of the body and implant them[204]. But thanks to developments in synthetic chemistry and materials science, researchers now have access to a variety of methods that allow hydrogel formation to take place in situ after being administered using ordinary needles[205-206]. This opens up a possibility for the minimally invasive delivery of therapeutic payloads, the filling of intricate tissue defects, and the stimulation of the regeneration of injured body parts[207-208].

2. WOUND DRESSING

Instead of only providing a surface covering for a wound, modern dressings are made to speed up healing[209]. Advanced wound dressings come in a variety of forms, and each one differs in the benefits it offers the wound[210]. This category comprises wound dressings that offer protection, dressings with antimicrobial properties, dressings that offer autolytic debridement, including films, hydrogels, and hydrocolloids, and dressings that offer chemical debridement[211]. Utilizing hydrogels for wound dressing applications is desired because to specific qualities of hydrogels such high surface area, absorbency phenomena and variety in product shapes[212].

A wound is defined as a break in the continuity of the skin's or mucosa's epithelial lining as a result of thermal or physical trauma[213]. The wound is classified as acute or chronic based on the length and kind of healing process[214]. An injury to the skin caused by an accident or surgical procedure is referred to as an acute wound[215]. Depending on the size, depth, and amount of the damage to the epidermis and dermis layers of the skin, the healing process normally takes 8 to 12 weeks[216].

surroundings that can hurt[217]. These dressings accelerate the regeneration of the epithelium and collagen, encourage angiogenesis by bringing hypoxia to the wound bed, and lower the pH of the wound bed, which reduces wound infection[218-219].

Gauze, lint, plasters, bandages (natural or synthetic), and cotton wool are among the dry wound-dressing supplies that are used as main or secondary dressings to keep the wound clean[220-221]. Gauze dressings composed of cotton, rayon, and polyester woven and nonwoven fibres offer some level of defence against bacterial infection[222]. With the aid of their fibres, some sterile gauze pads can be utilised to absorb liquids and exudates from an open wound[223]. The frequent replacement of these dressings is necessary to prevent the maceration of healthy tissues[224]. Gauze bandages are less economical[225].

Instead than just covering a wound, wound dressings have been designed to help it heal[226]. These bandages are intended to prevent dehydration of the wound and encourage recovery[227]. There are several products on the market that can be chosen from depending on the cause and kind of the wound[228]. Modern wound dressings are categorised as passive, interactive, and bioactive products and are typically made of synthetic polymers[229]. Gauze and tulle dressings are examples of passive products that are non-occlusive and used to cover wounds in order to restore their natural functions[230]. Interactive dressings come in the shapes of films, foam, hydrogel, and hydrocolloids, and they are either semi-occlusive or occlusive[231]. These dressings serve as a barrier to prevent bacteria from entering the wound environment[232].

3. TISSUE ENGINEERING

the world are working to identify solutions to meet the growing demand for organs as a result of the lack of eligible organ donors for transplantation[233]. Over the past two decades, extremely biocompatible yet delicate materials for tissue regeneration have been created and integrated to address this pervasive problem[234]. A special class of biocompatible 3D polymeric materials called hydrogels can serve as a scaffold and imitate the characteristics of different biological tissues[235].

The high water content and tissue-like mechanical properties of hydrogels make them very compatible for scaffolds that can be implanted in empty tubular nerve prostheses or that can be directly injected at the lesion site to promote cell adhesion and proliferation[236-237].

Through the incorporation of cells into their structure, they eventually degrade to leave only healthy tissue behind[238]. Since they can maintain a high water content, maintain a porous structure, and adapt to different sol-gel conditions, they have become quite popular in recent years[239]. Through encouraging the entrance of cell metabolites and the removal of cell wastes through their pores, these structural characteristics enable hydrogels to be employed as tissue scaffolds in the body[240-241].

The materials utilised for such applications that have been the subject of the greatest research are biocompatible polymeric polymers[242]. Tissue engineering (TE) methods have proven to be particularly well suited for naturally occurring and synthetic polymers, including their numerous composites and blends, which have been successful in a variety of medical applications[243]. Tissue engineering and other medical uses of these materials now have greater possibilities thanks to growing breakthroughs in polymeric biomaterial research and manufacturing techniques[244-245].

Hydrogels that respond to external stimuli like temperature, pH, light, magnetic and electric fields, ionic strength, or enzymatic environment[246] have been dubbed “smart” or “intelligent” hydrogels as a result of researchers’ persistent efforts to engineer them by changing their physical and chemical properties[247]. Targeted drug delivery, regenerative medicine, and tissue engineering are just a few non-invasive, remote-controlled therapies where smart hydrogels have demonstrated considerable promise[248-249].

WOOL KERATIN

Wool is a natural and animal fiber[250]. Wool contains up to 95% keratin and is commonly used as a biomaterial. In recent years, wool has been gaining recognition as a high-performance specialty fibre with various functional properties[251]. Keratin exhibits a high degree of chemical functionality[252]. Largely not achievable within the recycling of other fibers[253]. The recycled wool fibre can be blended with other textile fibres and used for clothing[254]. Wool is composed of about 95% keratin and contains 7–20 moles of cysteine residues[255]. Wool has high stability and low solubility[256]. The flexible but durable properties of hair and wool are brought about by forming inter- and inter-molecular bonds[257]. Epidermis, cortex, medulla, and cell membrance are parts of the wool keratin fiber[258].

WOOL KERATIN BASED HYDROGEL

Biomaterials have been rapidly developed in the medical industry and widely applied to numerous cutting-edge medicinal applications[259]. Keratin is one of the most widely utilised and environmentally favourable biomaterials[260]. The primary structural element of hair, wool, feathers, horns, and nails is made up of keratin proteins[261]. which have three-dimensional mesh structures connected to structural fibrous proteins[262]. Because of their rigid and fibrous architectures and abundance of disulfide connections, structural proteins high in cysteine make up keratins, which have important mechanical qualities[263]. Each year, more than 300,000 t of protein-rich hair waste are created globally[264].

The present study was carried out using two experimental hydrogels, one extracted from human hair and the other from sheep hair[265] compared with the most widely used Comfeel Transparent Dressing (Transparent Wundverband, Coloplast, Denmark)[266] as well as the natural wound healing process, taking into account the cellular attachment property and theories regarding the effect of hydrogels composed of human and animal hair in wound healing[267]. The mechanism of stimulatory activity in the healing process was also determined by complementary histology research[268].

CHRACTERIZATION MACHANISAM OF HYDROGEL

Since several decades ago, the development of polymeric drug delivery methods as an alternative to traditional drug formulations has increased gradually, mostly in an effort to overcome insufficient local drug availability and distribution site difficulties[269-270]. For regulated drug delivery, thermoplastic- and particularly hydrogel-based scaffolds are appealing[271] their characteristics may be adjusted during production and they can be safely implanted, released, and degraded[272].

Natural, synthetic, or semi-synthetic polymers that have been physically or chemically bonded together to form a mesh constitute hydrogels, which are highly hydrated mesh networks[273]. Because they offer great biocompatibility, drug protection, spatiotemporal control of the drug release, and physicochemical tailoring capabilities, this class of materials is employed for local drug delivery[274-275]. Additionally, hydrogels make it possible to encapsulate and transport medications with a variety of characteristics, such as tiny molecules, proteins, and nucleic acids[276]. Traditional definitions of hydrogels and hydrogel drug delivery systems include natural and synthetic[277].

Simulating physiological settings has been the basis for studying release profiles and processes in vitro[278]. As a result, scientists typically submerge their gels in phosphate-buffered saline (PBS), which has physiological pH and osmolality and may be appropriately incubated at body temperature(37 °C) while being stirred[279-278]. The aforementioned variables need to be carefully selected because they have a big impact on the release kinetics[279]. The most crucial factors that have a substantial impact on the release are in fact, the agitation speed, temperature, pH, and compositions of the release[280].

CONCULATION AND FUTURE WORKS

Medical textiles are textile products that help the pharmaceutical and healthcare sectors. Insoluble, crosslinked, hydrophilic, three-dimensional, and insoluble polymers are known as hydrogels, and they have a high absorption capacity. Natural polymer-based hydrogels have an advantage in terms of biocompatibility, degradability, and nontoxicity. A naturally occurring polymer that is derived from collagen, keratin can be found in many animal tissues that contain protein, including skin, bones, connective tissues, chicken feet, fish scales, and insects. Because keratin is nonimmunogenic, nontoxic, inexpensive, and readily available, wool keratin-based hydrogels have been used in biomedical and medical fabrics. In general, keratin-based hydrogel may have uses as a transdermal drug delivery system, bioink, wound healing, and tissue repair material.

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High prices, low demand to make a Indian textile exports uncompetitive

Shares of textile firms like Welspun India and Bombay Dyeing, and those manufacturing innerwear, such as Page Industries, Lux industries, and VIP Clothing, have exhibited mixed performance so far this calendar year (CY 23), amid higher domestic cotton prices and tepid global demand.

Shares of Welspun India and Bombay Dyeing, for instance, have gained upto 40 per cent in CY 23, while Page industries. Lux Industries, and VIP Clothing have declined up to 13 per cent. In comparison, the benchmark S&P BSE Sensex has surged 8.7 per cent, during the same period.

With domestic cotton prices on the higher end as compared to global markets, analysts believe that the disparity is affecting India's global competitiveness in the near term.

VK Vijayakumar, Chief Investment Strategist of Geojit Financial Services said that textile exporters like Bangladesh, Vietnam, and Cambodia have been benefiting from lofty cotton prices in India due to lower custom duty in their countries. The consequent higher prices rendered Indian exports uncompetitive, thereby hurting the domestic industry, he added.

Historically, Indian cotton prices have largely remained at par, or lower than international cotton prices.

However, in financial year 2022-23 (FY 23), domestic cotton prices were 20-24 per cent higher than global markets due to an elevated import duty (of 11 per cent) versus Asian peers, and emerging inflationary pressures from the West as well as European nations.

This has caused domestic exports to hit a decade-low level of 6.6 lakh tonnes in FY 23, compared to 13.8 lakh tonnes in FY 22, showed data from the Confederation of Indian Textile Industry (CH).

Export of cotton yarn, fabrics, and handloom products, too, slid 1.2 per cent on a year-on-year (YoY) basis in June, while shipment of manmade products, carpets, and jute products plunged up to 26.7 per cent YoY.

Consequently, cotton yarn exports stood at 19 per cent of the yarn produced in FY 23, wrote analysts at Care Edge Ratings in their recent note.

"Though the spinning units were able to function despite the increase in cotton prices to some extent, the significant drop in sales volume, rising energy costs, and height rates led to a contraction in operating profitability margins. The average spread of cotton yarn remained around ₹100-105 per kg. similar to pre-Covid levels," the agency added.

Moreover, reports suggested earlier of July spinning mills in Tamil Nadu were forced to suspend operations as they incurred heavy losses. Textile industry bodies urged the Indian government to reduce interest rates to 7.5 per cent from 11 per cent, as they increased the cost of yarn production by ₹1/kg.

Against this backdrop, analysts at Antique expect textile companies to report a 15 per cent YoY average net profit decline in the April-June quarter (Q1FY24), with 14 per cent YoY average drop in earnings before interest, tax, depreciation, and amortisation (Ebitda).

However, while overhangs for the textile industry are unlikely to diminish in the near term, analysts remain hopeful of recovery from the second half of this fiscal year (H2FY24).

Vijayakumar of Geojit Financial Services predicts large-size companies like Welspun india and Raymond to display resilience during these challenging times, and remains bullish from a long term perspective.

Deepak Jasani, head of retail research of HDFC Securities, on the other hand, forecasts a gradual re-rating in the textile sector from H2 onwards, given the government's thrust via production linked incentives, rebates, and free trade agreements (FTAs). ❐

Apparel exports anticipated to 8-10% rise in coming months

Cotton textile and garment exporters expect an 8-10% rise in outbound shipments in the next few months with the holiday season in the developed markets expected to bring relief even as apparel export slump continues with order deferments and requests for price cuts.

Inflation and economic slowdown in advanced economies, coupled with piled up inventory since the pandemic, have caused India's apparel export clients to defer orders or request lower prices, said an industry representative.

Exporters are looking forward to the Christmas season in the next quarter to allieviate the on going slump. "Cotton textile exports rose 6% in July and the July-September quarter is expected to maintain that momentum," said a representative from the cotton textile industry. As per the representative, green shoots are emerging especially in the yarn sector through inflation continues to bite readymade garment exports.

"We will end the year on a positive note and see and 8-10% rise in the near future. In the next

few months, both readymade garments and home textiles will see growth," the representative said.

The problem is that "India's export of apparel has largely been US and EU centric", said Mithileshwar Thakur, secretary general of Apparel Export Promotion Council (AEPC). The US, the EU and the UK account for approximately 50% of India's textiles and apparel exports. "Orders have not dried up, but generally the request is to defer it by a few months," Thakur said, adding that clients have been asking for price cuts too. The first three months of this fiscal saw apparel exports decline by around 23%, 13% and 17% in April, May and June respectively, according to official estimates. The quarter as a whole saw a 17.7% year over year dip to $3.69 billion in 2023 from shipments worth $4.49 billion in 2023.

Exports of apparels and garment to practically all destinations have declined. Thakur said ; in June 2023. The US bound shipments declined 23.8% compared to that in June 2023, while the UK and Germany saw declines of 14.2% and 23.7% respectively, he said. Yet, these remain India's top apparel export markets, with US-bound exports for June 2023 to the tuned of $412 million. Thakur noted.

Thakur emphasised the need not only to diversity India's export markets, but also rejig the composition of the export basket. Global demand for manmade fibre (MMF) apparel is on the rise, but their share in India's offering, which is skewed towards cotton, is little. ❐

Textile exports continue to fall

Exports of textiles and apparel declined 1.9% and 17.4%, respectively, in July compared with the same period the year earlier. Cumulative export of textiles and apparel for the April-July 2023 period slid 13.7% year-on-year.

Data from the Confederation of Indian Textile Industry (CITI) showed that cotton year, fabrics, and made-ups registered 6.62% growth in July ($1,009 million) from July 2022 ($946.48 million). However, shipment of man-made yarn, fabrics, made-ups, jute products, carpets, and apparel items declined.

Textile products worth a total of $1,663 million were shipped last month compared with $1,695 million in July 2022. Apparel exports were $1,141 million in July versus $1,381 million in July 2022.

Sanjay Jain, Indian Chamber of Commerce's chairman on textiles, said garment exports were at a "sustained low" for a year. In volume terms, the decline was sharp. Retailers in the U.S. market were destocking and demand was expected to revive. "India expects a good cotton crop next season. If cotton prices remain competitive, exports will revive," Mr. Jain added.

"Regarding cotton textile exports, the mood is cautiously optimistic," said Siddhartha Rajagopal, ED of Cotton Textiles Export Promotion Council. "Demand looked better from China and if Indian cotton prices are reasonable, export of fabrics will look up," Mr. Rajagopal added.

Ravi Sam, chairman of Southern Indian Mills' Association, said in the current market conditions, Indian could regain competitiveness in cotton textile only if the import duty on cotton was removed. Recently, Indian cotton prices were higher than international prices. ❐

Prolonged Ethnic Violence has brought down Manipur Textile Exports

The protracted ethnic violence in Manipur has brought down the state's exports of handwoven textiles, medicinal plants and food items by almost 80%, according to M. Chandrakeshore Singh Pallel, vice president (Manipur) of North East Federation of International Trade (NEFTT).

Manipur is famous for fabrics like moiraingphee, leirum, lasingphee and phanek, which have good demand in the US. Europe and Singapore.

Media reports say that 142 people have been killed and thousands displaced since violence broke out in the state between the Meiteis and Kukis in early May, following a court order for granting scheduled tribe status to the Meities. The violence and he ensuring restrictions imposed by the authorities on movement and internet service have hit the state's economy.

The closure of Land Port Morehin Manipur, which is 110 km from Imphal and acts as India's gateway to the East through the Moreh-Tamu border point the only feasible land route for trade between India and Myanmar and other Southeast Asian countries has impacted exports from this small hilly state, whose cotton fabrics accounted for 44.18% of its merchandise exports in FY 22.

"The banks and ATMs remain closed and truck movement through the Moreh land port is restricted. Only emergency vehicles are allowed," said NEFIT vice president Pallel.

Manipur has the second largest population of weavers in the country at more than 462,000 and the fourth largest number of looms, which tops 280.000.

"Those who have handloom manufacturing units in Navi Mumbai or Delhi have been able to

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export since the outbrak of the current violence. Others have not been able to export. The daily wage earners are worst affected," Pallel said.

"Unless the law and order situation improves in Manipur and the issue is settled politically, FIEO (Federation of Indian Exports Organisation) cannot intervene to boost exports from the state," said Ajay Saha, director general of FIEO. "Though the value of exports may not be big as it is a tiny state, many people depend on exports for their livelihood. But definitely we will step in once the situation normalises in the state."

In FY 22, Manipur exported goods worth $0.93 million.

"The ethnic violence comes at a time when the Jiribam-Imphal new rail project is nearing completion, which will help the state's local producers to export their produce outside the state faster," said a pine apple exporter. ❐

Textile sector has seen a remarkable 131 non-tariff measures since 2019

The textile sector was the target of as many as 131 non-tariff barriers/measures (NTBs/NTMs) notification from around the world in the last four years which included various certification requirements, inspection mandates and new regulations, per a survey cited by the Apparel Export Promotion Council (AEPC). Of these, 69 per cent were related to the apparel industry.

"The EU, the US and the UK are our top markets for the apparel sector and we should be extra careful about their moves to bring any legislation/ regulation in the nature of TBT's (technical barriers to trade) affecting the apparel sector.

"Most countries follow a consultation process before a new TBT is introduced or an existing one is modified. Indian industry must participate in the consultation process and report its apprehension process and objections to the government at the initial stage of the lawmaking process itself rather than complaining after its entry into force," said Seetharaman Sampath, co-founder, Sarvada Legal at a webinar on emerging NTBs in the apparel export sector jointly organised with the AEPC.

Of the 131 NTB notifications issued related to the textile sector since 2019, Uganda topped the list with 71 notifiations followed by Ecuador with 10, China with 8, Taiwan with 7, Israel with 5, USA with 4, and Peru with 3, the survey carried out by Sarvada Legal pointed out.

"Non-tariff barriers have slowly but surely emerged as a potent tool to damage and even disrupt legitimate trade," said Mithileshwar Thakur, Secretary General AEPC.

He added that of late, innovative ways were being explored by developed economies like the EU to restrict imports from developing countries.

"Legislations like CBAM (Carbon Border Adjustment Mechanism) and EUDR (EU Deforestation Regulation) are violative of WTO agreements and bound to make Indian exports to EU less competitive and thus ways and means need to be explored to handle the challenges arising out of these legislations," he said. ❐

Cotton industry expects revival in FY 24

After a Lacklustre year, the cotton industry is keenly anticipating a revival with a sales volume expected to grow by 5-7% over last year. Industry observers maintain that the optimism is pegged on factors such as alignment of Indian cotton prices with international prices, a shift in demand from competing nations, and gradual recovery in demand from China.

Expectations of a good festival season for retailers in the domestic market and a rebound in global demand from downstream industries is also expected to give a leg up to the Indian cotton industry which is trying to recover from the poor performance in FY 23.

Ashwin Thakkar, vice president, Textile Association of India, said, "The industry is slowly making its way out of the trouble and the coming months are going to be brighter for the cotton industry. People have spent much on travelling and personal care and this festival season is expected to witness a healthy demand for the textile sector, especially the retail business may see a very strong demand."

He said, "The global demand for Indian products may not see much change in the short term because we do not see any end for the Ukraine-Russia conflict which is impacting the demand in European and American markets. But South Asian countries are doing well and may change the demand patterns in the second half of the year."

According to a CareEdge report, the Indian cotton yarn industry is likely to register a sales volume growth of 5.7%, while the operating margin is expected to expand by 100-150 bps in FY 24 compared to FY 23.

Last year, the cotton production in India declined from 35.2 million bales in Cotton Season 2020-21 to 31.1 million bales in CS 2021-22. The lower cotton production caused a steep surge in the cotton prices. The average domestic cotton price registered a peak of around ₹1 lakh per candy (₹280/kg) in FY 23. The mismatch between the domestic and international prices impacted the cotton exports significantly and India witnessed its lowest cotton yarn exports in a decade.

In FY 23, India's cotton yarn export stood at 664,000 tonne against the decade's highest exports of 1,389,000 tonne in FY 22. ❐

Apparel market remains slow-moving amid anaemic demand

Gokaldas Exports Ltd., a Bengaluru based garment manufacturer and exporter, said demand for apparel would remain sluggish during the first half of FY 24 as the global economy continued to be anaemic.

In his market commentary, Sivaramakrishnan G, MD, Gokaldas Exports said global retail offtake has been slow during the first quarter of FY 24, resulting in overall imports of major consuming markets like the U.S., U.K. and the EU declining significantly.

"Apparel import data showed a year-over-year decline for April-and May 2023 of 26% for the U.S. and 20% for U.K. and Europe. Weak retail demand in autumn winter '22 due to inflationary trends, high interest rates and a mild winter contributed to a excess inventory impacting offtake this year," he elaborated in a regulatory filing. While the global economy remained anaemic, the good news was that it could only get better, Mr. Sivaramakrishnan said adding, "We are optimistic about revival of the business in H2." ❐

Viscose spun yarn set to climb $2.5 bn revenue

Revenue of the Indian viscose spun yarn (VSY) industry is set to climb 10%-12% to an all-time high of more than $2.5 billion in 2023-2024 on account of continuing strong demand, Crisil Ratings said.

An analysis of VSY companies by Crisil indicates even as yarn prices dip, overall profitability may raise by 200-300 basis points.

The removal of anti-dumping duty on imports on viscose staple fibre (VSF) also helped steady VSY prices, Crisil said.

Viscose spinners' volume is expected to grow 15% y-o-y this fiscal, supported by substained domestic demand and a revival in export demand during the second half, said Himank Sharma, director, of Crisil Ratings, in a release. "Overall, segmental growth will be in low double digits," he added.

Meanwhile, Executive Director of Pallavas Textiles, Dural Palanisany, told recently while domestic demand for viscose yarn was decent, the export demand was poor. ❐

Jute industry's revenue likely to shrink 5-6% on weak overseas demand

India's Jute Industry is likely to witness a fall in revenue of around 5-6% this fiscal due to lower exports, marketing the second consecutive year of decline, according to Crisil Ratings.

The credit rating agency, in a report recently, said the jute sector's exports, which forms a third of the sector's revenue of ₹12,000 crores, are seen 15% lower this fiscal, after falling 8% last fiscal as overseas channel partners continue to destock amid slowdown worries in the US and Europe.

The end-use of jute in these markets is largely discretionary. In contrast, domestic demand is expected to be stable because of steady orders for storage and transportation bags (made of jute) owing to higher grain procurement by the government.

The domestic market, which accounts for the balance two-third of the sector's revenue, depends on government demand as it procures almost 80% of the jute produced through its nodal agencies. To add, mandatory norms under the Jute Packaging Materials Act 1987, provides 100% reservation for packaging of sugar in jute bags.

This lends stability to demand for jute bags domestically and this trend is unlikely to change over the medium term. But the revenue comes at lower operating margin compared with exports, said the report.

Crisil Ratings director Nitin Kansal said, "Weak export demand will reduce capacity utilisation of specialised looms and weigh on sales of specialised jute products such as hessian, gift articles and decorative fabrics. Hence, companies may defer capacity addition and only undertake minor maintenance capex. At the same time, companies may woo overseas customers through longer credit period, which may lengthen working capital cycles from 100 days to 140 days, on average, leading to higher reliance on working capital debt." ■

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SASA places customer service orders comprising original parts & secure remote services in collaboration with Oerlikon Neumag

SASA Polyester Sanayi A.Ş. and Oerlikon Neumag reinforced their partnership at the ITMA 2023 trade fair in Milan. SASA placed a customer service order with Oerlikon Neumag for its staple fiber systems. The order comprises both original parts and two secure remote service agreements.

Original parts are designed explicitly for the demanding deployment of the systems for which they are intended. Due to their superlative quality standards, they are considerably more durable than other spare parts, hence preventing unplanned production stoppages and saving money in the longer term. Mustafa Kemal Öz, Executive Board Member & General Manager of SASA confirms this: "Cutting costs when it comes to original parts makes no sense. Poor quality in wear parts used for staple fiber systems always has a negative impact – either directly on the quality of the yarn or on the system performance overall."

Reinforcing an already strong partnership: Ömer San, Taskin Aytekin, Robert Jürgens, Mustafa Kemal Öz, Mathias Pilz, Martin Rademacher and Abdullah Kele (from left to right).

Secure remote service is a 'good-bye' to system downtimes!

Remote service has long been absolutely essential in the globally-networked textile industry. Remote access to systems permits pinpointed intervention, with a degree of accuracy that cannot be offered over the phone or by e-mail, hence allowing system operators to increase their productivity. And for good reason: unplanned production system downtimes and the associated production stoppages swiftly drive the corresponding costs into the five-figure range. "Remote services can help us prevent or – in the event of a problem – significantly reduce these downtimes", explains Mustafa Kemal Öz, giving his reason for opting for these service agreements.

And this is also beneficial to IT security, as Oerlikon sets high standards, constantly keeping the corresponding hardware and software up-to-date. "When customers choose a Secure Remote Service Contract, the requisite hardware, software and all upgrades are included. With this, customers no longer face additional purchasing costs and are no longer under pressure to continually update their technical security requirements. We assume these tasks for them", comments Robert Jürgens, Regional Sales Director Customer Services for Oerlikon Neumag, highlighting the benefits.

SASA Polyester Sanayi A.Ş., headquartered in Adana, is one of Turkey's top 20 industrial enterprises and a globally-leading manufacturer of polyester polymers, fibers and filament yarns.

About Oerlikon Polymer Processing Solutions Division

Oerlikon is a leading provider of comprehensive polymer processing plant solutions and high-precision flow control component equipment. The division provides polycondensation and extrusion lines, manmade fiber filament spinning solutions, texturing machines, BCF and staple fiber lines as well as nonwoven production systems. It also develops and produces advanced and innovative hot runner systems and multi-cavity solutions for the injection molding industry. Its hot runner solutions serve business sectors, including automotive, logistics, environmental, industrial applications, consumer goods, beauty and personal care and medical. Moreover, Oerlikon offers customized gear metering pumps for the textile, automotive, chemical, dyes and lacquers industries. Its engineering competence leads to sustainable and energy-efficient solutions for the entire polymer processing value chain with a circular economy approach.

Oerlikon Polymer Processing Solutions Division serves customers through its technology brands – Oerlikon Barmag, Oerlikon Neumag, Oerlikon Nonwoven and Oerlikon HRSflow – in around 120 countries with production, sales, distribution and service organizations.

The division is part of the publicly listed Oerlikon Group, headquartered in Switzerland, which has more than 13 000 employees and generated sales of CHF 2.9 billion in 2022.

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Collaborative Success: Lenzing Group's Conclave raises status Coimbatore Weavers with Eco-Friendly Fibers

- Lenzing hosted its 11th conclave for Indian market in Coimbatore.
- 'The Lenzing Conclave' reached out with new innovations to weaving hubs of Palladam, Somanur and Avinashi from the district.

The Lenzing Group, world leading provider of wood-based specialty fibers, hosted the 'The Lenzing Conclave' in Coimbatore, Tamil Nadu. The event brought together over 60 experts from the region to foster knowledge exchange and explore the applications of TENCEL™ branded fibers and LENZING™ ECOVERO™ branded viscose fibers through an exhaustive product display and interactive seminar.

With the increasing demand for Lenzing fibers across South Asia and India in the last decade, the Lenzing Group has significantly strengthened its presence in the regional market. Coimbatore, which is also called 'Manchester of South India', has a strong textile base and is also the regional head office of Lenzing group in South Asia. Hence, The Lenzing Conclave, Coimbatore came as a unique opportunity for Lenzing team and the local industry stakeholders from towns of Palladam, Somanur and Avinashi, in Coimbatore district, to foster collaborative relationships and promote integration of new age fibers, like TENCEL™ and LENZING ™ ECOVERO™, into their weaving processes for new innovations.

Coimbatore is recognized as a prominent center for weaving, made-ups and apparel production. Notably, approximately 70% of the products developed in the region have significant usage in the domestic market, while the rest are exported to Western markets. The Indian market focuses primarily on home textile products like bed sheets and apparel such as kurtis and women's tops. As the market heavily relies on cotton fibers, there is a growing demand for alternatives and blending opportunities for wood based cellulosic fibers. This creates an excellent opportunity to explore TENCEL™ lyocell and LENZING™ ECOVERO™ viscose fibers and develop new products that not only offer superior quality but also align with increasing focus sustainable products.

Speaking on the initiative, Mr. Avinash Mane, Sr. Commercial Director – Textile Business, AMEA & NEA, Lenzing Group, South Asia shared, "We are incredibly delighted with the overwhelming response to 'The Lenzing Conclave' in Coimbatore. This momentous event showcased the remarkable power of collaboration and innovation in the textile industry, uniting experts from fibers, weaving and spinning. It has been truly fulfilling to witness the passion and interest in Lenzing fibers among Coimbatore's weaving community. The conclave has further solidified our commitment to the region and to promote sustainable innovations. We also express our gratitude to the weaving community of Coimbatore region for their support. Together, we are forging a brighter and more sustainable future for the regional textile products."

Lenzing Group closely collaborates with weavers, providing technical expertise, bulk production support, and marketing tools to effectively promote their innovative products. This additional assistance alleviates weavers' concerns about post-development stages. The adoption of TENCEL™ and LENZING™ ECOVERO™ fibers in weaving hubs has sparked interest with good potential of elevating product quality and creating substantial value. Empowered by Lenzing's unwavering support, weavers can confidently

introduce finest offerings to the market. The inclusive conclave attracted diverse participants, eager to learn more about Lenzing fibers. Already leveraging such successful experiences in various hubs like Surat, Ichalkarinji and Tirupur, Lenzing along with the weaving community aims to foster superior products for both domestic and international markets, reinforcing the region's position in the global textile industry and supporting sustainability goals.

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Mr. Dhandayuthapani (CD) promoted unanimously as Managing Director of MAG Solvics Pvt. Ltd

MAG has started in August, 1991 and completing 32 years in the field of Textiles Testing and online monitoring products. Over the years, MAG has put all efforts to meet the customers' expectations and need such as product quality & services. MAG has never compromised in these areas. As we all know, Mr. Dhandayuthapani (CD) is working as Director in MAG, focusing more on Sales & Marketing functions apart from involving major decisions in the other areas. Considering our future plan, focus

more on the current market demands and take the MAG to next level, MAG has made changes in Directors Level. In the recently concluded Board of directors meeting, they unanimously decided to elevate Mr. CD as Managing Director of MAG Solvics Private Limited to take care of its entire business operations with immediate effect.

He will continue to support for Sales and Marketing function apart from other operations.

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Fashinza unveils its first tech-led fashion design lab in India, backed by robust R&D

The design lab is backed by robust R&D infrastructure and aims to optimize the global supply chain by reducing the time of the new product development cycle to as low as 2 weeks.

A leading B2B apparel global manufacturing startup that focuses on global fashion supply chains has recently launched its state-of-the-art design lab in Gurugram, to build a strong Product Development and Research infrastructure. The facilitywill research the latest trends and innovations in material and design, and help take those products to market in a quick time.

Product research and development is a significant component of apparel supply chains. Products developed in Fashinza's design lab automatically identifies relevant fabric and trim sources to ensure seamless bulk production without compromising on the quality and time.

Delighted with the launch, Pawan Gupta, CEO of Fashinza said, "We are excited to launch our cutting-edge product development and research facility, equipped with the latest tech innovations. This new unit represents our commitment to innovation and excellence, empowering us to explore novel textile solutions, refine our craftsmanship & set new industry benchmarks for quality and performance. Technology and R&D are the spines of the facility and we look forward to optimizing the global fashion supply chain in a more sustainable & optimized way."

Fashinza's new facility is a sprawling 3000 Sq. Ft. design lab and has a lineup of the latest tech-backed machinery & equipment. It is aimed at bringing down the new product development cycle to as low as 1 week. With this, the platform strives to focus on the data-driven trend led by a few of the leading designers in the industry.

CORPORATE NEWS

Powered by technology, the design lab supports digitally driven and expedited manufacturing processes. The facility boasts digital tools for pattern making, in-house costing and consumption calculators for an optimized design and manufacturing process.

Fashinza further bolsters the process by inducing the brands with new designs every week for quick feedback in each iteration. Eventually, it will reduce the time-to-market and minimize fabric wastage in manufacturing.

Presently, the design lab is developing 1500 new designs per month. With the new setup, Fashinza aims to produce more than 20000 new designs within the first year of its launch.

Founded in 2020, Fashinza is a tech enabled design to delivery apparel manufacturing platform for fashion brands, retailers & manufacturers. The AI platform predicts upcoming trends and designs by crunching data and provides fashion brands with real-time production updates on one single platform.

To empower SMB manufacturers with latest designs and industry 4.0 solutions, the new design lab will contribute to Fashinza's universal goal to create a sustainable supply chain by 2030 from design to delivery.

About Fashinza

Fashinza is a B2B fashion supply chain startup that offers a one-stop solution from design to delivery for brands. Started in 2020, the platform simplifies ethical sourcing and production process for fashion brands, based on an exclusive working model with suppliers. The technology-first platform empowers brands with a greater degree of reliability, transparency, speed and agility for an exceptional customer experience.

Fashinza offers complete textile production solutions to fashion firms ranging from startups to large retailers. The company assists businesses in locating the right manufacturers and then manages the full production process, including fabric procurement, costing, sample, production, quality control, and delivery. Once a brand subscribes to the Fashinza services, there is no need for them to commit time in any production-related work. Fashinza helps brands reduce inventory forecasting errors and produce goods with complete transparency and minimal effort.

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Madewell's commitment to mute adverse impact on environment leads to tie up with bluesign®

Madewell, First US Denim Brand to Become a bluesign® System Partner

Bluesign, a leading sustainability solutions provider for the textile industry, is proud to announce its official partnership with the fashion and denim lifestyle brand, Madewell as the first US denim company to become a bluesign® System Partner brand. This partnership reflects Madewell's commitment to reducing its environmental impact through the implementation of the best available techniques and sustainable practices in denim production.

As a comprehensive solutions system, bluesign focuses on sustainable chemistry, employing a holistic approach to drive environmental improvements, enhance worker safety, and increase resource efficiency.

Through rigorous on-site assessments, management of input streams, and verification of chemical inventories, the bluesign team works closely with system partners, including brands, manufacturers, and chemical suppliers. Together, they develop tailored solutions that prioritize the highest level of safety for people, the planet, and consumers.

Madewell's collaboration with bluesign to produce denim more sustainably launched in October 2022. Their first denim style launched under the partnership was crafted using bluesign® Approved ISKO fabrics, a certification that signifies adherence to bluesign's strict worker safety and environmental requirements as well as elimination of hazardous chemicals from the beginning of the fabric production. This newly signed system partnership further reinforces Madewell's commitment to

sustainable denim production and its dedication to implementing innovative solutions to lead the way towards a more sustainable fashion industry.

CEO of bluesign Daniel Rüfenacht further emphasized the core principles of the bluesign technologies ag, a member of the SGS Group., saying, "Our bluesign® Denim initiative aims to revolutionize the way denim is produced, ensuring that clean chemistry and clean production processes are at the heart of the system partner mills and laundries. With Madewell as our first US denim brand system partner, we are taking a major stride towards leading the industry with a transformational approach to denim production. We are expecting more brands to follow Madewell's footsteps in joining the bluesign Denim initiative.

Madewell's system partnership with bluesign coincides with the introduction of the solution provider's "bluesign® DENIM" concept, highlighting the importance of clean chemistry and production processes for a sustainable and responsible choice. bluesign® Denim represents a commitment to minimizing the denim industry's negative impact on people and the planet through collaboration with denim partners to eliminate harmful chemicals and ensure sustainable manufacturing processes. With a focus on creating the cleanest denim in the world, the concept covers fabric and garment production steps that meet the strict bluesign® Criteria, ensuring safety of workers, the environment, and consumers. Choosing bluesign® Denim will allow consumers to embrace the freedom of denim while making a reliable and sustainable fashion statement.

About bluesign

The bluesign® SYSTEM is the solution for sustainable textile production. It eliminates harmful substances right from the start of the manufacturing process, and it sets and controls standards for environmentally friendly and safe production. This not only ensures that the final textile product meets very stringent consumer safety requirements worldwide but also gives consumers confidence in purchasing sustainable products.

Bluesign technologies ag was founded in 2000. Since then, with over 700 system partners, the bluesign® SYSTEM has been adopted by worldwide leading textile and accessory manufacturers as well as chemical suppliers. Various well-known brands in the outdoor, sportswear and fashion industry partner with Bluesign and trust its extensive knowledge and services to collectively reduce textile industry's impact on people and the planet.

About Madewell

Madewell is a destination for women's and men's denim that champions creativity, inclusivity, and self-expression. A part of the J.Crew Group, it operates Madewell stores nationwide and is available at madewell.com and with select wholesale partners, as of September 1, 2023. Rooted in the timelessness of denim, Madewell inspires effortless style through foundational pieces and emotional designs made to be worn every day. Beyond impeccably designed products, Madewell distinguishes itself through meaningful sustainability initiatives, a best-in-class customer loyalty program and community-driven initiatives.

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Marco Salvade given appointment as New ACIMIT President

A changing of the guard at the top of ACIMIT, the Association of Italian Textile Machinery Manufacturers. Indeed, at the association's General Assembly held on July 4th, Marco Salvade has been appointed to replace Alessandro Zucchi as President of ACIMIT.

Born in Como in 1967, Marco Salvade is married with two children. He began his career at Salvade Srl, the family company specializing in the finishing machinery sector, founded by his father and uncle in 1967. After being a member of the company's board of directors, he has been President since 2021.

Marco Salvade has long been active in the life of the association. Since 2018 he has been a member of ACIMIT's General Council, and since March 2023 he has been part of the Italian delegation at CEMATEX, the Committee of European Textile Machinery Associations.

CORPORATE NEWS

Following the election of Salvade, the General Assembly expressed its gratitude to the outgoing president, Alessandro Zucchi, who has guided the association for the past six years.

Along with the new president, the General Assembly also elected its new Vice Presidents, Chiara Bonino (Bonino Carding Machine SRL), Federico Businaro (Sperotto Rimar SRL), Ugo Ghilardi (Itema SpA) and Cristian Locatelli (Marzoli Machines Textile SRL).

Marco Salvade's first comments as newly appointed ACIMIT president : "I wish to thank the Assembly for the trust they have placed in me, and I want to express my gratitude to the former President Alessandro Zucchi for everything he has done during the last six years to strengthen the role of the association and of Italian industry on the international scene. With the new vice-presidents and the ACIMIT Board, I will continue the work that has been done in recent years by previous presidents. It will certainly not be a simple task, but one that will no doubt prove stimulating. My primary goal is to increase the sense of belonging to ACIMIT of its member companies, with which we share the same values, and to adjust the association' strategies to changing conditions in the economic and geopolitical context."

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Radici Group participated at the Imperial Forum Museum during the Phygital Sustainability Expo in Rome held from 5-6 July 2023

RadiciGroup's sustainable fashion offering: a 100% biosourced dress

Once again, RadiciGroup took part in the Phygital Sustainability Expo, this year in its fourth edition, which was held in Rome on 5 and 6 July. This leading event in the fashion industry is entirely dedicated to the ecological transition of fashion and design brands through technological innovation.

The show is always an important platform for discussion on sustainable transition issues, involving Italian and international brands, fashion tech start-ups, representatives from the institutional, business and educational fields, and consumers.

RadiciGroup's participation in the event was further evidence of the Group's commitment to making a contribution to sustainability and circularity in the fashion and textile industry, in collaboration with all the other players in the supply chain. During the narrated fashion show, held on the evening of Wednesday, 5 July, in the evocative archaeological complex of the Imperial Forum Museum, RadiciGroup presented a maxi dress made of Biofeel® eleven, a yarn of completely natural origin featuring high technical, aesthetic and environmental performance. This yarn is produced starting from a small bean cultivated in India on semi-arid land and thus does not compete with human food production. These beans yield a special oil ideal for obtaining biopolymers, such as the one produced by Arkema and spun into yarn at RadiciGroup in Italy.

The dress is not only made from a low environmental impact raw material, but is also an example of ecodesign: indeed, the garment was realized on a Shima Seiki Whole Garment knitting machine, where the entire item was knit directly from spools of Biofeel® eleven yarn, bypassing the traditional stages of weaving and tailoring. It is a zero-waste process, as only the quantity of yarn strictly needed for the garment is used.

Biofeel® eleven yarn endows the dress with special and unique characteristics, including low moisture absorption, greater lightness and high resistance and durability. Besides being 100%

biobased, the yarn is also 100% recyclable because it is made of a mono-material polymer, which facilitates its end-of-life recycling and processing into new materials suitable for any application requiring high performance.

To sum up, Biofeel® eleven yarn is a practical contribution to an increasingly sustainable textile industry based on the principles of the circular economy.

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Liva by Birla Cellulose in collaboration with 1500 weavers from 7 states and 18 districts for economic upliftment of weavers community

Over 50 tonnes of yarn orders have been supplied; 50% YOY growth is expected

To support the weaver community and increase productivity in the handloom sector, Aditya Birla Group's Birla Cellulose has collaborated with over 1500 weavers across the country. They have introduced them to sustainable, eco-friendly, cost-effective, and durable materials. The company ensures the timely and consistent delivery of quality yarn at stable prices, thereby boosting the capabilities of weavers. These innovative solutions empower weavers to produce high-quality products at better prices while preserving the art of handloom.

Along with its regional partners, Birla Cellulose has created awareness about a natural, sustainable, and durable alternative by introducing fibers such as Viscose, Modal, and Excel under the Liva brand. Birla Cellulose has already supplied 50 tons of yarn to weavers in the past year, ensuring timely delivery. This initiative helps revive the industry and supports its expansion, aligning with the vision of "Make in India" for the handloom sector.

Hand-spun and woven handloom fabric have always been integral to India's rich cultural identity. The handloom industry is known for being less capital-intensive, using minimal power, and being eco-friendly. It also readily adapts to the needs of the market and embraces innovation. However, factors such as productivity, efficiency, and the younger generation's migration to other occupations due to lower income and unstable work have contributed to the industry's decline. Furthermore, the handloom weaving sector has faced challenges due to the rise of fast fashion and the growing influence of power looms.

According to Ms. Priyanka Priyadarshini, AVP of Business Development at Birla Cellulose, their steps aim to inspire new artists and provide them with stable-priced raw materials are creating demand consistency.

To create a seamless supply chain of Liva handloom products for consumers, Birla Cellulose has undertaken rural outreach programs, awareness campaigns, technical seminars, and offline and online marketing activities. They have extended their support beyond production, assisting with post-production requirements such as tagging, market connections, roadshows, and door-to-door promotions. They have successfully concluded Hub meets in Assam, Mizoram, Manipur, Meghalaya, Orissa, West Bengal, and Uttar Pradesh.

Birla Cellulose is actively working towards increasing business in the Handloom Sector, generating economic, cultural, and social opportunities for weavers while adding cultural value for consumers. The introduction of the saree brand "Navyasa" by Liva has further rejuvenated intricate weaves and traditional fabrics, preserving the magic of centuries-old culture from every corner of India.

They continue to explore innovative ways to support the weaver community, preserve India's cultural heritage, and contribute to sustainable and eco-friendly fashion.

About Birla Cellulose

Birla Cellulose, a unit of Grasim Industries Limited and part of the Aditya Birla Group, is a global leader in producing man-made cellulosic fibres. With a rich heritage and extensive in the textile industry, Birla Cellulose has established itself as a trusted name synonymous with innovation and sustainability. Their commitment to responsible manufacturing practices is evident in their focus on eco-friendly solutions that minimize the impact on the environment.

They are renowned for their diverse range of high-quality fibers, including viscose, modal, and lyocell. These fibres are known for their exceptional softness, breathability and versatility, making them highly sought after by leading fashion and textile brands worldwide. With a strong emphasis on research and development, Birla Cellulose continuously strives to introduce groundbreaking products that cater to evolving consumer preferences and market demands.

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Asia's Leading Business Platform for Textile Machinery

19-23 November 2023

National Convention & Exhibition Center
Shanghai, China

- 1500 exhibitors from 24 countries & regions
- 160,000+ square metres of gross exhibition space
- 19 product sectors, from spinning to services

Spotlight on Spinning and Nonwoven Sectors

The eighth edition of ITMA ASIA + CITME will feature a cuttingedge showcase presented by over 1,500 exhibitors. Many of the machinery manufacturers will be exhibiting technologies that enhance efficiency and productivity, as well as environmental protection.

Spinning technology has made rapid advances in recent years. The latest spinning machinery promotes production efficiency and enhances yarn quality. It is highly automated, thanks to the use of sensors and online monitoring technologies. The use of digital technology will also help the fibre industry to be more sustainable by reducing waste and resources.

The manufacturing of man-made fibres has also witnessed vast technological advancements. Man-made fibres account for a sizeable part of the total fibre production worldwide. In particular, high-performance and high-function fibres with special properties are in great demand.

Textile manufacturers can look forward to sourcing the latest machinery and solutions in spinning and man-made fibre manufacturing in Hall 7.1 and Hall 8.1.

Nonwoven machinery and solutions will also be showcased in Hall 7.1. In recent years, the development of nonwoven technologies is focused on the needs of end users, such as those from the medical and hygiene, filtration and transport sectors. Flexible and intelligent production, as well as eco-friendly processes and resource recycling are trending in this sector. Visit Hall 7.1 to explore the latest nonwoven technologies.

Sector Allocation Plan

Visitors will be able to source technologies displayed in 19 product sectors, including spinning and nonwoven.

- Weaving Braiding
- Finishing, Dyeing Recycling Research & Innovation
- Garment & Textile Processing Embroidery
- Nonwovens
- Spinning & Man-made Fibre Winding, Texturing & Twisting Testing
- Printing Colourants & Chemicals
- Knitting & Hoisery
- Industry info Hub

The following sectors can be found in all halls: Logistics, Software, Equipment for Plant Ops, and Services for Textile Industry.

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Type of Badge	Online Early Bird Rates (Ends 18 Nov 2023)	Onsite Rates (19-23 Nov 2023)
1-Day	USD5.00	RMB 50
5-Day	USD9.00	RMB 100

Register Your Visit Now!

- Enjoy a 40% discount with the puchase of badges by 18 November 2023.
- Online payment system is available on our website for your convenience.
- To avoid onsite queues, print your badge using print@home before arriving at the exhibition.
- All attendees are required to register with full name as stated in travel document or national identity card.

Click here to Register

For further information, please contact
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7th Bangladesh Int'l Garment & Textile Machinery Expo 2023

October 26-28, 2023

Int'l Convention City Bashundhara (ICCB)
Dhaka, Bangladesh

Event Profile

Redcarpet Global in association with BGMEA (Bangladesh Garment Manufacturers & Exporters Association) are organizing 7th BIGTEX 2023 — Bangladesh Int'l Garment & Textile Machinery Expo, to be held from 26 to 28 October 2023 at International Convention City Bashundhara - ICCB, Dhaka - Bangladesh. BIGTEX connects all kinds of garment & textile machinery, equipment, technology & accessory manufacturer, dealers, suppliers & importers from Home & Abroad.

Targeting the entire Textile, Garment & Apparel industry of Bangladesh, BIGTEX has 3 concurrent expos named as Bangladesh Int'l Fabric & Yarn Expo, Bangladesh Int'l Dyes, Pigments and Chmicals Expo & Bangladesh Int'l Printing, Packaging and Signage Expo.

Who can Participate in this Fair - Profile of Exhibitors

- All kind of Garment Machineries & Accessories
- All kind of Textile Machineries & Accessories
- Circular Knitting Machinery
- Embroidery & Quilting Machinery
- Knitting Machinery
- Sewing Machinery (Industrial/Household)
- Sewing Machine Motors
- Spinning Machinery & Accessories
- Weaving Machinery & Accessories
- Yarn Dyeing Machines & Apparatus
- Accessories for Textile Machinery
- Apparel Machinery & Accessories
- Automation System, Machinery & Accessories
- Auxiliary equipment
- Washing & Bleaching Machinery
- Printing Machinery & Accessories
- Computer Software
- Creasing, Cutting & Laying Machine
- Embroidery Equipments
- Fastening Machines
- Felting Needles
- Finishing, Fusing, Pressing, Ironing & Steaming Equipment
- Heat Transfer Equipment
- Inspecting, Measuring & Folding Machinery
- Knitwear Equipment & Machinery
- Knives, Scissors & Grinding machine
- Labeling Machinery
- Laundry Equipments
- Looms Spinning machinery & accessories
- Over seaming Machinery
- Packaging Machinery & Equipment
- HVACR: Heating ventilation, air conditioning, and refrigeration
- CAD/CAM/CIM System
- Chemicals & Dyes
- Pocket Welting Machinery
- Sealing Machinery
- Sewing Machine Attachments & Parts, Drive & Control Systems
- Sewing Threads & needles
- Spreading/Winding Machinery
- Steaming Machinery
- Storage & Transport Equipment
- Testing Equipment & Controls
- Screen Printing Machinery
- Unit Production System
- Winding Machinery
- Yarn Processing Machinery

Who Visits?

Visitors Profile

7th BIGTEX 2023 - looking forward to visitors from entire Bangladesh & Neighboring countries from different sectors like

- Members of Bangladesh Garment Manufacturers & Exporters Association
- Members of Bangladesh Knitwear Manufacturers & Exporters Association
- Members of Bangladesh Textile Mills Association
- Marketing Chiefs, Professionals and Consultants
- Textile & Garment Machinery Importers & Exporters
- Senior Management of large retailers, purchasing/procurement Heads
- Apparel Brands & Fashion Labels, Apparel Domestic Manufacturers
- Distributors & Agents of Textile & Garment Machinery & Accessories
- Buying Houses & Agents, Buying missions from neighboring regions
- CEO, Engineers, and Technocrats
- Dealers of Textile & Garment Accessories
- Design Studios & Institutes
- Fashion Designers & Merchandisers
- Knitting Manufacturers
- Textile Agents, Distributors, Manufacturers
- Trade Association, Trade Body Representatives
- Wholesalers & More...

Visitors Showed Interest on Below Products

Sewing Machinery	12.25%
Printing Machinery	18.10%
Knitting Machinery	12.15%
Embroidery Machinery	11.25%
All Machinery	8.35%
Spinning Machinery	8.10%
Accessories/Supplies	6.85%
Finishing/Testing Machinery	3.55%
Weaving Machinery	2.25%

TEXTILE EVENTS

QC/Certificate Provider	4.20%
Information Services	3.55%
Dyeing Machinery	4.25%
Planning/Design/CAD	3.20%
Distribution/Logistics	1.25%
Others	0.70%

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4th International Textile Machinery & Accessories Exhibition

21 to 24 February 2024

Helipad Exhibition Centre
Gandhinagar, Gujarat, India

Weaving the fabric of growth

India's economic health is growing stronger and well poised to leapfrog to a $5 trillion economy by 2025. "Make in India" initiative has gained remarkable momentum leading to significant investment in capacity building and achieving economy of scale. For textile sector, the Government has adopted the 5F Mantra of "Farm to Fibre to Fabric to Fashion to Foreign" and introduced policies and incentives for sustainable growth of the industry.

Product Categories

Machinery

- Yarn Spinning, Man-made fibre Spinning, Winding, Texturising, Twisting and Accessories.
- Web Formation, Bonding, Finishing of Non-wovens, Felting and Accessories.
- Preparatory Weaving, Weaving, Tufting and Accessories.
- Knitting, Hosiery and Accessories.
- Embroidery, Braiding and Accessories.
- Washing, Bleaching, Dyeing, Finishing, Cutting, Folding and Accessories.
- Machinery for Printing, Digital Printing, Consumables and Accessories.
- Garmenting, Garment Processing & Finishing and Accessories.
- Laboratory Testing, Measuring and Quality Control Equipment and Accessories.
- Transport, Material Handling, Logistics, Warehousing, Packing Equipment and Accessories.
- Equipment for Recycling, Waste Reduction and Pollution prevention and Accessories.
- Software for Design, Data Monitoring, Management, Processing and Integrated production.
- Dyes, Pigments, Inks, Colourants and Chmical Auxiliaries for textiles.
- Services for the textile industry and Associated Equipment for textile plant operations.
- Research and educational institutions, Technical Information.

An ideal location for a profilic event

India, being strategically located between South East Asia and Middle East, is one of the largest player in textile & apparel manufacturing and trade. It is also the destination for future growth and investment in textile & apparel industry. Within India, Gujarat is the epitome of success when it comes to economic development and industrialisation. The growth and development of its textile sector is even more deep rooted. Ahmedabad, which was known as the Manchester of the East in the past for its booming textile industry, is today a well-developed business hub & financial centre. Thus, ITMACH India 2024 will be held in capital city of Gandhinagar at The Helipad Exhibition Centre, Helipad Ground, Sector-17, from 21 to 24 February 2024.

The Helipad Exhibition Centre is so far the largest venue in India and holds the pride of hosting most reputed and largest trade shows of the country. The venue has been designed with advanced technology and amenities to facilitate business meets, convention, conferences & exhibitions of both national and international levels.

Participation Cost

Foreign Exhibitors:

Shell Scheme: US$ 250 per Square Meter + 18% GST
Bare Space: US$ 225 per Square Meter + 18% GST
Note: Foreign Exhibitors MUST pay Participation Fee in US Dollar

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Shell Scheme: US$ 12000 per Square Meter + 18% GST
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250+ technical textile brands are waiting to meet you

12 - 14 September 2023

Jio World Convention Centre, Mumbai

Are you considering to visit the 9th edition of Techtextil India but haven't completed your registration? With 250+ global and domestic brands, this expo will be your one stop destination to meet manufacturers and resellers inperson, experience live product demos, get your queries solved in real time and even explore solutions from international markets!

For further information, please contact :
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Space Application for ITMA ASIA + CITME 2024 unveils

ITMA ASIA + CITME 2024 space application is now open. Asia's leading business platform for textile machinery, the ninth combined show will be held from 14 to 18 October 2024 at the National Exhibition and Convention Centre, Shanghai, China.

According to show owners, CEMATEX (European Committee of Textile Machinery Manufacturers), the Sub-Council of Textile Industry, CCPIT (CCPIT-Tex), China Textile Machinery Association (CTMA) and China Exhibition Centre Group Corporation (CIEC), the launch of space application for the 2024 exhibition ahead of this year's combined exhibition in November is an exceptional procedure.

The regular biennial sequence of the ITMA Asia + CITME exhibition was disrupted due to the global Covid-19 pandemic. Originally slated for 2022, the exhibition had to be rescheduled to 2023. The ITMA Asia + CITME exhibition uniquely combines the Asian edition of the renowned ITMA exhibition with the China International Textile Machinery Exhibition (CITME). Over the past eight editions, it has established a stellar track record and holds significant importance within the textile and machinery industry.

Mr. Ernesto Maurer, president of CEMATEX, explained, "the planning of the 2024 edition of ITMA Asia + CITME requires an exceptional process, starting already ahead of this year's edition in November 2023. The exhibition has a stringent admission policy which encompasses various processes, including various stages of space application, rigorous admission procedures, space allocation, and thorough booth design vetting. Considering the multifaceted aspects involved in these preparatory stages, and above all, to safeguard the quality of the 2024 edition of ITMA Asia + CITME, the stand space application must open well ahead of the show in October 2024."

In continuation of this approach, the organisers have launched the space application for ITMA Asia + CITME 2024 before ITMA Asia + CITME 2022 takes place this November. This step allows both the organisers and potential exhibitors to begin plans for the ITMA Asia + CITME 2024 exhibition.

Mr. Gu Ping, president of China Textile Machinery Association (CTMA), emphasised, "China's textile industry has reached a high-quality stage, with the world's highest demand for continuous, automated, intelligent, eco-friendly, and scalable textile machinery. I believe the launch of ITMA Asia + CITME 2024 as scheduled next year, will be a highly anticipated event to foster greater collaboration and exchanges between domestic and foreign textiles industries, working together to shape the future. Therefore, our commitment is to uphold this biennial exhibition schedule."

Online space application for the 2024 edition will close on 13 March 2024. Successful applicants will receive their admission certificate and be notified of their stand space by 23 May 2024. Interested exhibitors may visit www.itmaasia.com or email itmaasiacitme@itma.com for more details.

ITMA ASIA + CITME 2022, which was scheduled to be held last November, will open on 19 November 2023 in Shanghai. To-date, it has attracted close to 1,500 exhibitors.

ITMA ASIA + CITME is organised by Beijing Textile Machinery International Exhibition Co Ltd and co-organised by ITMA Services. Japan Textile Machinery Association is a special partner of the show.

For further information, please contact :
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TEXTILE EVENTS

Intex Sri Lanka 2023 – A Tremendous Success

Intex Sri Lanka 2023 international textile sourcing fair concluded on a high note with record attendance of 4780 visitors and an overwhelming response from the Sri Lankan textile & apparel industry.

Drawing an unprecedented number of industry professionals from across the globe, Intex continued to cement its position as the premier textile sourcing event in the Sri Lankan and South Asian textile and apparel industry.

The presence of professionals ranging from manufacturers and designers to retailers saw Intex Sri Lanka becomes the central converging point for Sri Lankan and South Asian industry to explore the latest developments and forge invaluable connections with exhibitors from all over the world.

The Grand Opening Ceremony was held on 9th August 2023 at Mihilaka Medura at BMICH, Colombo. Present on the occasion as Chief Guest was Acting High Commissioner of India, Dr. Satyanjal Pandey in the presence of the Ambassador of Cuba, H.E. Andrés Marcelo Garrido; High Commissioner of Malaysia to Sri Lanka, H.E. Badli Hisham Adam; Guest of Honour Dr. Bernard Kingsley, Chairman & CEO of the Export Promotion Board of Sri Lanka and Mr. Son Joo Hong, Director General of Korea Trade Investment Promotion Agency (KOTRA) in Colombo.

Speaking on the occasion, Acting High Commissioner of India, Dr. Satyanjal Pandey said, "Exhibitions like Intex Sri Lanka are important in strengthening the ties between our countries. Going forward, this exhibition will play an important role in growing business relationships between India and Sri Lanka and I look forward to the industries of both countries collaborating with each other to create better export opportunities for all."

Yohan Lawrence, Secretary General of the Joint Apparel Association Forum (JAAF) stated, "The Joint Apparel Association Forum is very proud to once again partner with Intex in Colombo and are really excited in having a physical show in August this year. Intex is being organised at the right time as post-Covid, the Sri Lankan apparel industry

has seen an incredible recovery with the industry operating at full capacity."

Yasotharan Paramanantham, President, Sri Lanka Apparel Brands Association, stated, "Intex Sri Lanka is the right exhibition at the right time as this is the time when most Sri Lankan brands are looking for overseas opportunities and networking here will definitely enable them to connect with the right suppliers, yarn and fabric manufacturers, trims to fulfil the various supply chain needs in Sri Lanka. At this important time, Intex enables us to eliminate travelling time and to access all our needs on one sourcing platform."

Gopal Iyer, Secretary General, Sri Lanka Apparel Sourcing Association said, "We welcome Intex to Sri Lanka once again. The only way that the industry can grow is to have integrity between buyers and sellers to have better products manufactured and sourced from this region and have better output with regional collaboration being the foremost as the way forward. Hence, we request Intex Sri Lanka to keep coming back and we really support and endorse them year after year."

Continuing with the Intex practice of providing high level industry knowledge, the Interactive Business Forum (IBF) Seminar Series 2023 at Intex Sri Lanka saw suppliers, manufacturers, certification organisations, trend forecasters and industry stalwarts from across the world presenting their expert views at this industry forum. IBF saw industry experts including Mr. William Bettendorf, Director, Global Supply Chain Marketing & South Asia, Cotton Council International (USA); Mr. Ganesh Kasekar, South Asia Representative, GOTS (Germany); Mr. Rajesh Satam, Joint Director of the Cotton Textiles Export Promotion Council (Texprocil) India; Mr. Yasotharan P., President of the Sri Lanka Apparel Brands Association (SLABA); Mr. Mohit Maheshwari, Sr. VP Marketing, Maral Overseas Ltd.; Mr. Edga Melan, General Manager, Group Engineering & Sustainability, Teejay Lanka and Mr. Puneet Dudeja, Director Business Development, South Asia for WGSN (USA).

Intex Sri Lanka 2023 left an indelible mark on the industry, setting new standards for excellence, diversity, and global engagement. The resounding success of the fair has undoubtedly solidified its reputation as a premier event in the textile calendar across India, Sri Lanka and Bangladesh.

Industry professionals worldwide eagerly await the next edition of Intex which is taking place in India from 7th - 9th December, 2023 at IICC, New Delhi.

For further information, please contact :
www.intexsouthasia.com or
Zahir Merchant, Project Head,
Intex Shows on +91 9820028359 ■

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Email us: manojengineering@yahoo.com

Trützschler Group SE

Textile Recycling: Trützschler and Balkan in joint venture

The cooperation with Balkan Textile Machinery. INC.CO completes our product portfolio for recycling by cutting and pulling solutions, making us the first full-liner in spinning preparation for recycling! Thanks to our combined machinery expertise and technological know-how our customers can produce yarns at the highest possible quality level – and literally turn waste into value.

Markus Wurster, Director Sales and Marketing at Trützschler Group (left), and Osman Balkan, Owner of Balkan Textile Machinery INC.CO (right).

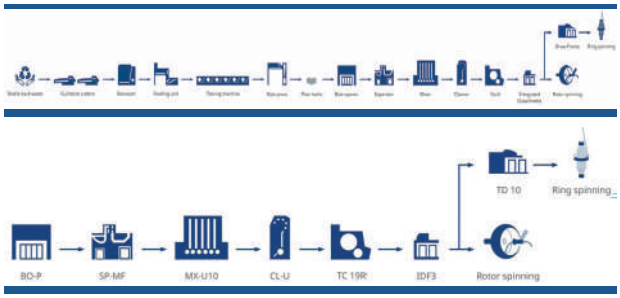
We are happy to introduce Balkan Textile Machinery. INC.CO, a partner that not only complements our product line but also shares our values. Both Balkan and Trützschler are family-owned companies for whom sustainability in the textile chain is a major concern. Balkan is well established in Turkey, one of the most important markets for textile recycling. Their robust and reliable machines help to cut, mix and tear textile waste to individual fibers, and to press them into bales of secondary fibers. These bales can be fed to the preparation process with Trützschler machines.

"We are now able to provide a complete line-up of technologically leading machinery which has been specifically developed for rotor and ring yarns from recycled materials", says Markus Wurster, Director Sales and Marketing at Trützschler Group. "Customers benefit from less complexity when planning and executing a mill project. The combined processes from Trützschler and Balkan are perfectly fine-tuned, reliable and reproducible. And of course, customers have access to Trützschler's premium service." Osman Balkan, Owner of Balkan Textile Machinery. INC.CO, adds: "I am very happy that we can join forces with such a strong international player like Trützschler. Together we can make a significant contribution to dealing with textile waste globally."

Processing secondary fibers with appropriate card clothing

Of course, appropriate card clothing is part of our complete recycling solution. Trützschler Card Clothing continuously developed their card clothing to meet the technological challenges in the processing of secondary fibers and to improve the resulting yarn quality. Special attention has been paid to the flat top as the heart of the carding process. Trützschler Card Clothing has combined the strength of MT/PT 40 and the cleaning power of MT/PT 45, resulting in the development of the MT/PT 45R – the new flat top for recycled materials. The right combination of flat top and cylinder wire is the key for yarn quality. Therefore, Trützschler Card Clothing offers various cylinder wires suitable for different recycling applications depending on production rates, type of textile waste and raw material – pure or blends. Thanks to this specification, customers can benefit from the best possible carding result, long lifetime of wires and high production in recycling applications.

"We are excited to offer our customers globally a complete package for recycling from June 2023 onwards", says Markus Wurster, "including tearing line, blow room, card, draw frame, card clothing and of course our service and technological know-how."

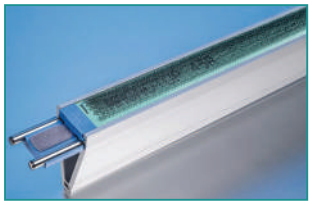


From waste to value: Balkan and Trützschler process for the recycling of hard textile waste.

TRUECYCLED stands for state-of-the art recycling installations from Trützschler. These Trützschler preparation processes enable manufacturers to achieve a high-quality end-product from hard waste. With TRUECYCLED, manufacturers can rest assured they use the

best technology and a reliable and reproducible manufacturing process – the pre-requisite for high-quality yarn made from hard textile waste.

How does a TRUECYCLED process look like? It is based on Trützschler's technological recommendations and a Trützschler machinery line-up to ensure ideal results from recycled materials. For example, Trützschler recently worked with a fashion company to make use of their own pre-consumer waste. Thanks to a special combination of Trützschler blow room machinery, the usage of TC 19i for Recycling and Trützschler draw frames, it was possible to create a ring yarn containing 60 % of pre-consumer waste – a true TRUECYCLED product! Trützschler customers and partners may use the brand TRUECYCLED for both the process itself and the end-product, as long as it contains a significant amount of textile waste.



MT/PT 45R flat top for recycling

About Trützschler:

The Trützschler Group SE is a German textile machinery manufacturer headquartered in Mönchengladbach, Germany. The company is divided into four business units: Spinning, Nonwovens, Man-Made Fibers, and Card Clothing. Trützschler machines, installations and accessories are produced and developed in ten locations worldwide. This includes four factories in Germany (Dülmen, Egelsbach, Mönchengladbach, Neubulach), as well as sites in China (Jiaxing and Shanghai), India (Ahmedabad), the USA (Charlotte), Brazil (Curitiba) and Switzerland (Winterthur). Service companies in Türkiye, Mexico, Uzbekistan and Vietnam and service centers in Pakistan, Bangladesh and Indonesia provide customer proximity in key regions for the textile processing industry. For more information visit: www.truetzschler.com.

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❐

Crealet AG

Becoming the world-leading provider of electronic warp feeding systems for both wide & narrow fabric weaving Crealet is set to celebrate its 20th anniversary

Crealet, the world-leading provider of electronic warp feeding systems for both wide and narrow fabric weaving, celebrates its 20th anniversary. The two decades are notable for solutions which fit the special needs of weavers.

Crealet was formed through a management-buy-out from Willy Grob AG. The time was right, as weaving machine manufacturers were integrating their own electronic warp let-off systems and this part of the Willy Grob business was affected as a result. A growing need for warp let-off controls with specific customized solutions was identified by Walter Wirz and Leo Kuster, at that time employed as CEO and Design Manager at Willy Grob. The pair seized the opportunity, supported by Johann Georg Schmid and Altmann Holding AG, and Crealet was established – its name based on 'creative warp let-off'.

Leo Kuster and Walter Wirz, founders of Cealet

KAST history

Crealet aimed to offer a universal control system suitable for different applications with the plus to achieve high warp tensions what's often impossible on weaving machines featuring integrated warp let-off. So in 2008, the UKAST was introduced. It was also a replacement for the KAST 197, for use in wide weaving for ground and warp beams in high positions, as well as for warp beams in free-standing warp beam frames.

This was one year after ITMA 2007 in Munich, where Crealet was a newcomer, presenting its customer-specific warp yarn feeder program for weaving machines. "We also took the occasion

to look for agents in order to get in contact with customers worldwide. We needed to convince them of our idea for a service which was not widely realized at that point in time," says Walter Wirz, then CEO of Crealet. The young company's offer was as individual as the weavers' needs, e.g. for early developments in the field of technical textiles.

UKAST in use since 2008

Crealet built a reputation for developing systems to replace older control units, or to meet the requirements of new applications such as ribbon weaving. The firm's experts devised a wide variety of solutions – such as selvedge yarn feeders to prevent waviness at fabric edges, and feeders for weaving carbon or tyre cord fabrics.

Always developing

At ITMA 2015, Crealet's self-confidence and strength were underlined by its new slogan "We Drive You to Success." Subsequent years proved that the focus on customized solutions was the right one. But it remained a challenge to explain the value of a system which was absolutely tailor-made, complex and individual.

Crealet's philosophy is that self-satisfaction should not last too long. Being good listeners, Crealet experts well understand what customers need. For example, there was a demand for a servo control to offer high precision and to approach and hold defined positions without torque loss.

With the control of KAST ERGO, it's possible for weavers to switch from mechanical fabric take-off to electronic.

The Crealet innovation Linked Motion Control was first introduced at ITMA 2019 in Barcelona, signaling a new era of warp tension measurement. This innovative load cellsensor system includes the advantage that the setpoint can be entered at the control unit, ensuring that the warp tension settings are highly reproducible.

Crealet believes its high level of service and support sets it apart from other industry players. Customers can rely on instant professional help from knowledgeable engineers in case of a malfunction. The new controls are designed to allow direct access to the warp let-off system via a remote maintenance tool. Quick and efficient support is guaranteed, without the need for a specialist on-site – a definite saving in time and money.

KAST ERC (Electronic Rope Control) launched in 2023

The show goes on

No single KAST solution will ever be ideal for all warp beams and weaving machine types. Crealet takes the view that 'good enough is not enough' with its program of various controls. Actually, the portfolio goes far beyond control devices, and includes the entire mechanical design of the system. Only when all components are perfectly coordinated can a system work perfectly.

Crealet has developed as a one-stop source for comprehensive consulting and solutions, with two key business partnerships bringing synergies and added value. The company has joined forces with COMSAT (core competence in sectional and direct warping machines and creels) and AEI (specialized in manufacturing quality assurance solutions in warp knitting and warp preparation). The alliances broadened the expertise and range of technologies available to customers.

Crealet upholds the typical Swiss values of quality, reliability and innovative power, living in the pioneering spirit of their ancestors – and facing the textile industry's new challenges. "We are never satisfied, until our customers are satisfied," says Walter Wirz, nowadays Emeritus CEO at Crealet. He has never regretted taking the risk to open up the business with his partners. Companions describe him as always remaining modest, despite the success of Crealet products and services and the company's world-leading position as manufacturer of electronic warp feeding systems.

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Oerlikon

Oerlikon Polymer Processing Solutions at the Techtextil India 2023

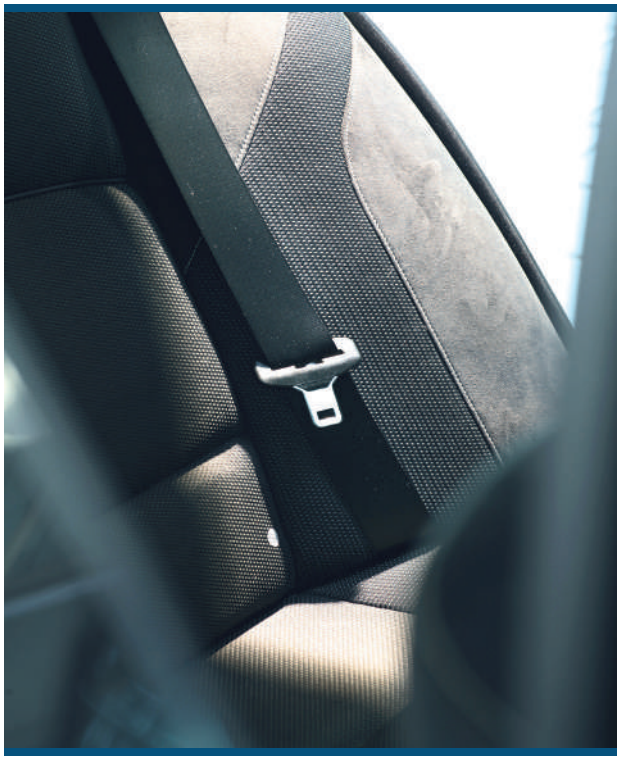
Oerlikon set to present its High-quality fiber and yarn production solutions for highest demands in technical textiles

At this year's Techtextil India, the Polymer Processing Solutions Division of the Swiss Oerlikon group will be presenting the trade audience with new applications, special processes and sustainable solutions focusing on the production of industrial textiles. Between September 9 and 12, the discussions at Jio World Convention Centre (JWCC), Mumbai, Pavilion 3, H32 will be concentrating on airbags, seat belts, tire cord, geotextiles, filter nonwovens and their diverse applications.

SCIENCE IN INDUSTRY

More polyester for airbags

Airbags have become an integral part of our everyday automotive lives. The yarns used in them are made predominantly from polyamide. As a result of increasingly diverse airbag applications and also the increasing size of the systems used, polyester is today used as well, depending on the application requirements and cost-benefit considerations. Against this background, the Oerlikon Barmag technologies make an invaluable contribution. In addition to high productivity and low energy consumption, they particularly excel in terms of their stable production processes. Furthermore, they comply with every high quality standard for airbags, which – as in the case of virtually all other textile products used in vehicle construction – must provide the highest level of safety for vehicle occupants. And all this without any loss of function in any climate and anywhere in the world for the lifetime of the vehicle.



In accidents, the number one lifesaver is not the vehicle's body work or the airbag, but the seat belt. It holds the vehicle occupants firmly in position and thus enables other protective technologies to unfold their full function.

Buckle up!

Seat belts play a decisive role in protecting vehicle occupants. They have to withstand tensile forces in excess of three tons and simultaneously stretch in a controlled manner in emergencies in order to reduce the load in the event of impact. A seat belt comprises approximately 300 filament yarns, whose individual, high-tenacity yarn threads are spun from around 100 individual filaments. "With our unique, patented Single Filament Layer Technology, we offer a sophisticated and simultaneously gentle hightenacity (HT) yarn process for manufacturing these lifesavers and other applications made from industrial yarn", explains André Wissenberg, Head of Marketing.

Invisible, but essential – road reinforcement using geotextiles

But it not just inside vehicles, but also under them, that industrial yarns reveal their strengths. Low stretch, ultra-high tenacity, high rigidity – industrial yarns offer outstanding properties for the demanding tasks carried out by geotextiles; for instance, as geogrids in the base course system under asphalt. Normally, geotextiles have extremely high yarn titers of up to 24,000 denier. Oerlikon Barmag system concepts simultaneously manufacture three filament yarns of 6,000 denier each. Due to the high spinning titers, fewer yarns can be plied together to the required geo-yarn titer in a more cost- and energy-efficient manner.

hycuTEC – technological quantum leap for filter media

In the case of its hycuTEC hydro-charging solution, Oerlikon Neumag offers a new technology for charging nonwovens that increases filter efficiency to more than 99.99%. For meltblown producers, this means material savings of 30% with significantly superior filter performance. For end users, the consequence is noticeably improved comfort resulting from significantly reduced breathing resistance. With its considerably lower water and energy consumption, this new development is also a future-proof, sustainable technology.

The organizer Messe Frankfurt India is honoured to receive once again the much valued support from the Ministry of Textiles, Government of India for the 9th edition of the show. This support from the Ministry of textiles further demonstrates the huge emphasis laid for this key sector in boosting the economy of the country given the enormous scope to grow rapidly apart from the remarkable opportunities present to do business in India.

About Oerlikon Polymer Processing Solutions Division

Oerlikon is a leading provider of comprehensive polymer processing plant solutions and high-precision flow control component equipment. The division provides polycondensation and extrusion lines, manmade fiber filament spinning solutions, texturing machines, BCF and staple fiber lines as well as nonwoven production systems. It also develops and produces advanced and innovative hot runner systems and multi-cavity solutions for the injection molding industry. Its hot runner solutions serve business sectors, including automotive, logistics, environmental, industrial applications, consumer goods, beauty and personal care and medical. Moreover, Oerlikon offers customized gear metering pumps for the textile, automotive, chemical, dyes and lacquers industries. Its engineering competence leads to sustainable and energy-efficient solutions for the entire polymer processing value chain with a circular economy approach.

Oerlikon Polymer Processing Solutions Division serves customers through its technology brands – Oerlikon Barmag, Oerlikon Neumag, Oerlikon Nonwoven and Oerlikon HRSflow – in around 120 countries with production, sales, distribution and service organizations.

The division is part of the publicly listed Oerlikon Group, headquartered in Switzerland, which has more than 13 000 employees and generated sales of CHF 2.9 billion in 2022.

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Saitex

Saitex Announces the Opening of Saitex USA in Los Angeles, CA with heavy investment in building the First-of-its-kind facility

Saitex (sai-tex.com) announces the opening of its first facility outside its Vietnam birthplace. Saitex USA, located in the heart of the American denim industry in Los Angeles, CA features state-of-the-art manufacturing technology with energy & resource-efficient machinery.

Recognized as the "Cleanest Denim Factory in the World," Saitex has expanded its vision and capabilities globally, to produce locally in the US. Los Angeles has long been the denim hub of the US, but change has been slow to come to the established brands and factories in the region. During the long months of the pandemic Saitex heavily invested in building the first-of-its-kind facility with the latest innovative laser cutting, semi-automated sewing, robotic spraying, 3D laser detailing, and futuristic one-step wash machines connected to a state-of-the-art water recycling system.

The hard work has resulted in the "Factory of the Future" an ever-evolving example of the manufacturer's forward-thinking, meeting decades of denim-making expertise supported by the most dynamic approach to environmentally responsible apparel production.

The manufacturing technology implemented allows for an automated supply chain ecosystem at speed using interconnected ordering and costing with shorter lead times, giving the Los Angeles facility a competitive advantage. Through the use of its Cloud-based digital Platform as a Service (PaaS) Saitex's Speed to Market™ system provides a conscious approach to inventory management and a trajectory towards "made to order" capabilities. Speed to Market™ offers online garment design, collaboration, and manufacturing custom garments at scale, sustainably, and fast.

"Saitex USA is another step in our journey, providing an opportunity to bring sustainable manufacturing and jobs to the United States, a first step in reevaluating and reinventing global

supply chains." - Sanjeev Bahl, CEO, and Founder of Saitex.

The challenges of the pandemic did not stop Saitex from completing not only the LA factory, but also continuing work on its state-of-the-art fabric mill in Vietnam enabling Saitex to create a unique, fully sustainable, vertical manufacturing system. With a team led by industry veteran Kathy Kweon, as USA President, the LA factory has recruited the best of the industry to work at Saitex in Los Angeles.

For more data and details about Saitex USA or to speak with founder Sanjeev Bahl about this please contact:

About Saitex

Saitex is the world's first-and-only denim factory that is bluesign® approved and Fair Trade and LEED-certified. Under the leadership of Sanjeev Bahl, Saitex has become a B Corporation with unrivaled technology and sustainability impact in the fashion apparel manufacturing industry. Their current facilities, based in Ho Chi Minh City, measure twenty-two cubic acres with denim washing, sewing, and finishing all on-site. The facility produces an average of 18,000 pairs of jeans per day and with a $2M recycling system on-site, the water consumption for each pair of jeans is greatly reduced from 80 liters to one. With a focus on removing any impact on the outside world, the entire facility is supported by renewable energy sources while minimizing all waste products or reinventing them into materials used to build orphanages in neighboring cities. www.sai-tex.com.

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ken@chapter2agency.com
Follow the Saitex journey at @saitexdenim ❐

Mayer & Cie.

Sound solutions for standard requirements Mayer & Cie. exhibited three circular knitting machines with great market potential at ITMA 2023

Circular knitting machine manufacturer Mayer & Cie. exhibited at ITMA in Milan three machines with which the company focuses on a wide range of demand. A newcomer to the Mayer & Cie. portfolio is the SF4-3.2 III. It specialises in lightweight and elastic three-thread fleece fabrics. The Relanit 3.2 HS, a popular single jersey machine with outstanding productivity and excellent plating properties, was on show at ITMA with various improvements. Another established model is the OVJA 2.4 EM, currently the most productive machine in its area. It specialises in mattress cover fabrics and Mayer & Cie. has developed a spacer kit to add to its capabilities.

Customers interested in jacquard machines were able to take an off-site look at the MJ 3.2 E and the OVJA 1.6 EE not far from the exhibition venue at Savio Macchine.

"We focus our portfolio on machines that earn our customers a large part of their added value," says Benjamin Mayer, Managing Partner at Mayer & Cie. "We have further improved established models and developed new ones in order to cater for central market requirements with premium machines."

Making tried and trusted even better: Relanit 3.2 HS

The Relanit 3.2 HS is Mayer & Cie.'s best-selling machine by far. Customers rate its productivity highly, especially in connection with elastomeric plating. The mechanical single jersey model processes a wide range of yarns and qualities most reliably. It also scores points for energy efficiency. The Relanit 3.2 HS's energy consumption is up to 30 per cent lower than that of a conventional circular knitting machine.

New yarn guide for the Relanit 3.2 HS

In its latest iteration the Relanit 3.2 HS comes with a new yarn guide that makes feeding elastic thread significantly easier. Existing machines can be upgraded to incorporate the new yarn guide.

Cooperation with Groz-Beckert

A further innovation consists of equipping the Relanit 3.2 HS with improved needles and sinkers. Developed jointly with Groz-Beckert, the needle's predetermined breaking point prevents it from breaking uncontrolled under high load or with a defective needle latch and in the worst case broken needle butts, requiring more complex intervention by the knitter. "With this improvement we reduce Relanit 3.2 HS downtimes," says Axel Brünner, senior product manager at Mayer & Cie.

The new sinker was also developed jointly with Groz-Beckert. With the new sinker the Relanit 3.2 HS runs more smoothly, more quietly and with less wear and tear. At higher speeds the thread tension increases less sharply too, thereby reducing the likelihood of faults in the fabric even with exacting qualities like sustainable cotton. The new sinker also makes setting the lower swing curve unnecessary, which in turn makes gauge gauges simpler.

Tinkering, further development and optimisation at Mayer & Cie.

Jacquard is trump

Customers were able to inspect three Mayer & Cie. jacquard machines at or near ITMA. At the trade fair stand itself the textile machinery manufacturer exhibited an OVJA 2.4 EM. At Mayer & Cie.'s Italian representative Savio Macchine interested ITMA visitors were able to see the MJ 3.2 E and the OVJA 1.6 EE in action.

Productive, more productive, OVJA 2.4 EM – Now with spacer

The OVJA 2.4 EM is one of five machines in the Mayer & Cie. portfolio that are specially designed for knitting mattress cover fabric. In this segment the most productive model in the market is the Mayer & Cie. OVJA 2.4 EM. In a 38-inch diameter it knits up to 30 kilograms of sought-after 300 grams per square metre fabric per hour.

This double-layer machine's portfolio has been extended. In a few simple steps the OVJA 2.4 EM can be converted to knit spacer fabric in gauges of E18 to E20. Visitors were able to watch the machine on show at ITMA knitting spacer fabric with a hole structure.

Further improvements to the OVJA 2.4 EM

A feature that delivers even greater reliability is the thread fluctuation system, which is installed in every other system. It ensures a constant thread tension and prevents the formation of thread loops or dropped stitches. The cross-flow nozzle can be switched off manually.

The new horizontal yarn guide serves the same purpose: to improve the OVJA 2.4 EM's reliability and user friendliness. The horizontal yarn guide has a larger bore, which is especially beneficial when using a thicker weft yarn. Adjustments for a change in height of the rib dial are not necessary. The improved hold-down function is particularly useful when long floats are involved.

MJ 3.2 E and OVJA 1.6 EE in the Savio Macchine showroom

The MJ 3.2 E is an electronic single jersey jacquard machine. Interested Mayer & Cie. visitors were able to see it in action at Savio Macchine. The MJ 3.2 E is a specialist in mesh and body mapping. It knits electronic jacquard using the two- or three-way technique as required.

Assembly at Mayer & Cie. in Albstadt-Tailfingen

The OVJA 1.6 EE was the second off-site exhibit on show at Savio. A double jersey jacquard machine, it has gained a reputation for being the most reliable choice in its sector. It knits both double-face fabric with a lay-in yarn and spacer fabrics.

SF4-3.2 III for lightweight 3-thread fleece fabrics

Mayer & Cie.'s third machine, the SF4-3.2 III, addresses a major trend in the clothing industry. Lightweight elastic three-thread fleece fabrics in both pure cotton and cotton blends are very much in demand. "In this new machine," Axel Brünner, senior product manager at Mayer & Cie., explains, "we combine our tried and trusted S4 3.2 II and components from our MBF 3.2 such as the stitch formation".

One of its most impressive features is its plating performance. The exhibitors demonstrated it most impressively by means of the black ground yarn that could not be seen on the front of the fabric. That testified to the quality of the plating – with the result that single dying is sufficient. The plating is so good that double dying is not necessary unless polyester yarn shows through, and if the polyester is processed invisibly in the way the SF4-3.2 III does the job, single dying is sufficient, cutting costs and saving resources.

Conversion kit for even greater flexibility

To make the SF4 3.2 III even more flexible Mayer & Cie. offers a conversion kit that transforms it into an S4-3.2 II in a few simple steps. It then knits single jersey structures with up to four needle tracks, such as piqué and double piqué, all in fine gauges of up to E44. There is also a kit to convert an S4-3.2 II into an SF4-3.2 III.

About Mayer & Cie.

Mayer & Cie. (MCT) is a leading international manufacturer of circular knitting machines. The company offers the entire range of machines required for making modern textiles. Fabrics for home textiles, sportswear, nightwear and swimwear, seat covers, underwear and technical uses are made on MCT knitting machines.

Furthermore, Mayer & Cie. regularly develops new approaches underlining its leadership in technology. Since 2019, Mayer & Cie. has augmented its portfolio by braiding machines which produce sheathings for hydraulic tubes used in aviation, automotive industry as well as in further, very specific fields of applications.

Founded in 1905, Mayer & Cie. generated a turnover of EUR 110 million in 2022 with about 450 employees worldwide. In addition to its headquarters in Albstadt, Germany, where around 350 people work, and subsidiaries in China and the Czech Republic, sales partners for circular knitting and braiding machines in around 80 countries represent Mayer & Cie.

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Mimaki Europe B.V.

Direct-to-Film Technology – Shaking Things Up in Digital simple and affordable Textile Printing

Marc Verbeem, Supervisor Product Management, Mimaki Europe

In the printing industry, direct-to-film technology is having a transformative impact on the apparel decoration space. It provides a simple and affordable garment printing process that facilitates vibrant, dynamic, full-colour designs with a durable print. It opens up opportunities for digital print service providers (PSPs) to expand their product offerings in the textile industry, their network of potential customers, and thanks to the versatility of the process, expand the range of fabrics they can print on. As its popularity grows in the textile sector, Mimaki recognised the need for a quality solution that utilises our core technologies to take the process to the next level, combined with our well-established manufacturer support.

Direct-to-film vs. Screen Printing

Direct-to-film printing is the process of digitally printing directly onto a special transfer film sheet. The printed filmis subsequently sprinkledwith a hot-melt powder and heated. Once the transfer sheet is cured and dried, it can be heat-pressed onto a variety of fabrics to create premium transferred designs for customised merchandising, sportswear, and an array of other promotional applications for the textile market. Compared with traditional screen printing, the plate creation required for that process is far too time-consuming. Not only this, but it does not matchdirect-to-film's ability to produce vivid colours and quality details such as shapes, lettering, and motifs often sought after in the promotional and merchandising space for bespoke textiles.

Why DTF?

For Mimaki, the move into direct-to-film technology is an exciting venture into a brand-new segment. Why did we choose to go down this path? For one, we knew we could offer a market-leading solution with our core technologies and the technical proficiency of the digital printers in our textile portfolio. In addition to this, there is a market need for a stable, reliable direct-to-film printing solution; for a complex print process like this, a trusted partner with dependable aftercare is paramount. Mimaki's reputation is synonymous with support, which is what direct-to-film customers can expect every step of the way.

The Mimaki TxF150-75

Mimaki's first direct-to-film inkjet printer is the TxF150-75, a fitting extension to the 150 series, with a maximum printing width of 80cm. Offering a stable printing plotter, the model's built-in ink circulation system and degassed ink pack are resolutions to common direct-to-film challenges such as poor ink ejection and white ink clogging. The new printer also includes core Mimaki features including NCU (Nozzle Check Unit) and NRS (Nozzle Recovery System) for stable, uninterrupted print production. Operating in harmony with the textile printer itself is Mimaki's ECO PASSPORT by OEKO-TEX® certified water-based pigment textile inks, formulated especially for the TxF150-75. Coupled with Mimaki'sRasterLink7 RIP software, users are offered end-to-end oversight and efficiency from creative design to final product.

In addition, and in line with Mimaki's collaborative approach to meeting customer needs, Adkins has developed an 80cm wide powder shaker cure unit to complete this 'A brand' direct-to-film printing solution. By offering the printer and post-processing unit at 80cm wide, customers can print larger garments with less waste and quicker production times, making the process much more cost effective.

The Mimaki TxF150-75 solution represents an exciting opportunity for Mimaki customers who are active in the decorated apparel sector or are looking for the right solution to facilitate entry into the digital textile printing market.

SCIENCE IN INDUSTRY

The TxF150-75, Mimaki's first direct-to-film inkjet printer

About Mimaki

Mimaki is a leading manufacturer of wide-format inkjet printers and cutting machines for the sign/graphics, industrial, textile/apparel and 3D 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.

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Basant Fibertek

Fiber Opening Solutions for Nonwovens applications

Basant Fibertek specialises in fiber opening solutions for all types of natural and synthetic fibers, whether it is long staple, short staple or recycled fibers. It is a market leader in the field of Pins and Pinned Products for Textile Machinery including Pinned Rollers used in Blow Room and Carding machines, supplying to OEMs and leading Spinning and Recycling Mills and also exporting to more than 40 countries worldwide. Its product range also includes components for Open-End Spinbox, Finishing Stenters and Perforation of plastic films, nonwoven and paper.

In the manufacture of nonwovens also, there is a specialised requirement for opening of a variety of fibers, including metal fibers at times. Following are the solutions Basant offers for nonwoven applications:

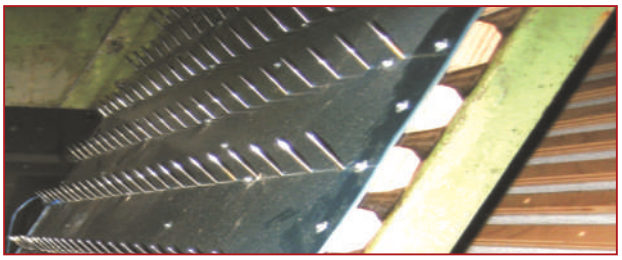
Opening Rollers

To process synthetic, metallic & natural fibres, non-woven waste, rags and clippings etc. Length upto 3.2m, diameter upto 600mm.

Lattices

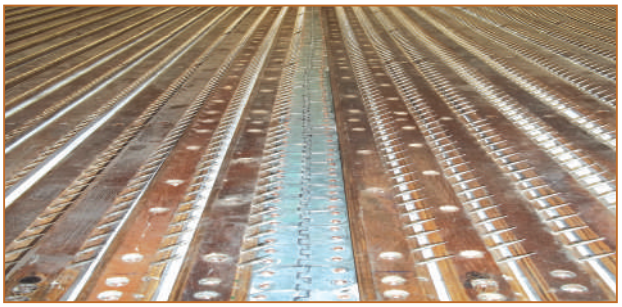
Lattice upto 3m width in wooden & aluminium endless or with joint.

For makes Dilo, Asselin, Andtritz, Trutzschler, DOA, Fehrer, Cormatex, Befama, Bematic and others.



Spiked Lattice Apron type

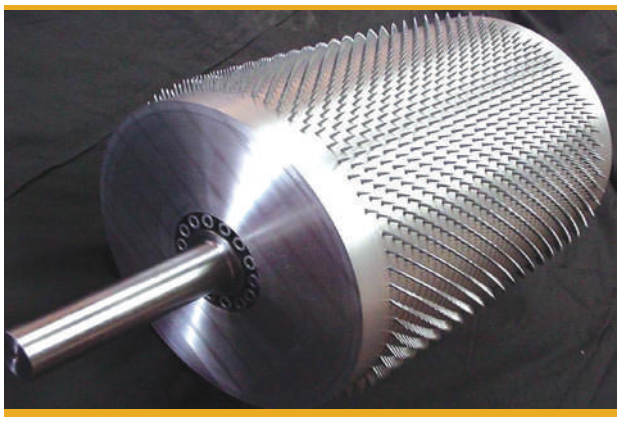
Spiked lattice endless



Spiked lattice with Alligator joint

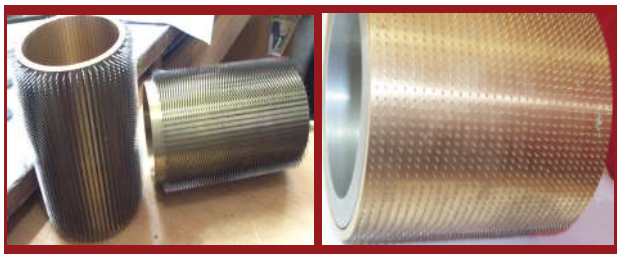
Selvedge Trim Roller

We supply these for opening fibers from edge trims. can be made for Trim Recycling machines as per OEM specifications.



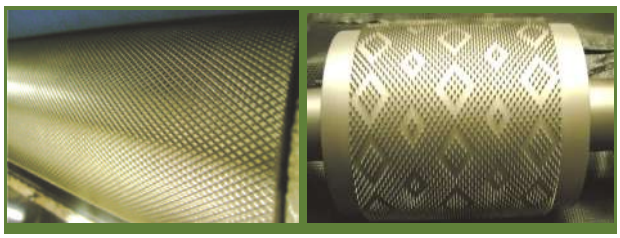
Brass Pinned Perforating Sleeves

We also supply custom designed Pinned Brass Sleeves for perforation of nonwovens. We can also design and supply perforating equipment that can be easily fitted in existing production line or rewinder.



Embossing Rollers

We can make customized design of embossing rollers for applying patterns on the nonwoven fabrics.



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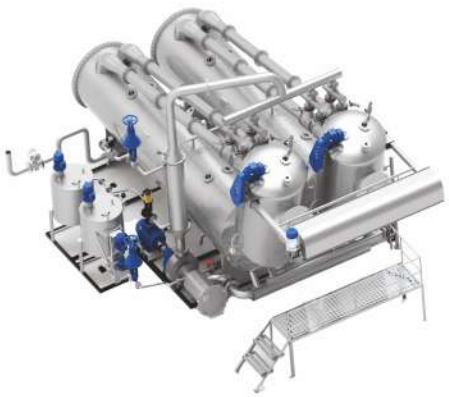





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