Textile Trends

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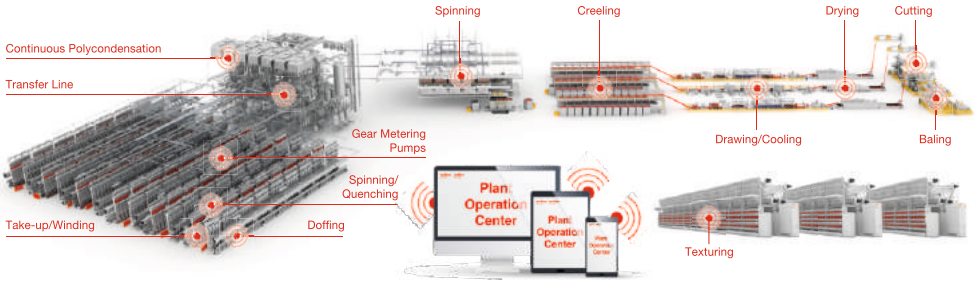

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EDITORIAL

Reviving handloom, pride of India

Indian handloom industry carries on rich heritage, culture and diversity of the nation. Its mass-acceptance can be traced back to thousands of years. Known for its enthusiastic liking and craft-man ship, it has earned a lot of fame to India. The handloom industry is highly labour-intensive, it has become second high source of revenue generation for people in India.

The "Make In India" initiative has proved to be a major thrust for the country's thriving handloom industry. The COVId-19 pandemic has hit hard the industry in numerous ways. In order to mitigate the challenges faced by the handloom industry, the central government announced special economic package as part of AaatmaNirbhar Bharat Abhiyaan initiated for boosting the economy of the country and making India self-reliant.

In light of shifting customer demand pattern and high cost of production, the handloom sector is becoming more inventive. Industry adopts 4.0 use of technology and AI in textile business is enhancing efficacy. However in this regard well planned and organised and effective schemes are needed to be in implementations to promote handlooms and crafts.

Presently, the handloom industry experiencing the negative impact of the pandemic. Thus, it is no surprise that industry has started evaluating different digital solutions to make up for the losses. The various schemes implemented by the office of Development Commissioner for Handloom address the needs of weavers and concerted efforts are being made through the schemes and programs to scale up production, productivity and efficiency of the handloom sector and enhance the income and socio-economic status of the weavers.

In the wake of pandemic and subsequent lockdowns, many social organisations have come forward with online market places for the handloom weavers and have also helped to train the weavers to make online catalogue. Many associations have come out to support weavers in buying back their unsold stock and promoting them in their market places.

Growth turns around to eurozone with healthy rebound in Q2

Europe emerged from a double-dip recession in the second quarter with stronger-than-expected growth of 2 per cent over the quarter before, according to official figures released recently, as hard-hit southern European economies Spain, Italy and Portugal delivered surprisingly strong results. But the economy in the 19 countries that use the euro currency still lagged pre-pandemic levels and trailed the faster recoveries in the US and China, with the Delta variant continuing to cast a shadow of uncertainty over the upturn. The growth figure for the April-June quarter announced of late by the European Union's statistics agency Eurostat compared to drop of 0.3 per cent in the first quarter as the 19 countries that use the euro endured a double-dip recession after a rebound in mid-2020. The second-quarter growth figure was stronger than the 1.5 per cent foreseen by market analysts. Italy was a major positive surprise, growing 2.7 per cent and Portugal boomed with 4.9 per cent, while growth returned in major economies France, which grew 0.9 per cent compared to the previous quarter, and Germany, which saw growth of 1.5 per cent after a sharp drop of 2.1 per cent in the first quarter. German auto companies in particular have shown strong profits despite a shortage of semi-conductor components as global auto markets recover, particularly for the higher-priced vehicles sold by Mercedes-Benz and by Volkswagen's Audi and Porsche luxury brands. Yet the recovery lags the one in the US, where the economy surpassed its pre-pandemic level during the quarter. Recent figures leave the eurozone 3 per cent smaller than before the virus outbreak, according to Capital Economies. ❐

China's growth may slow due to virus, floods : Official

China's economic growth will soften this year due to summer flooding and anti-coronavirus controls, an official said recently, after consumer sales and other activity weakened in July. China's economy still is in a "recovery trend" from last year's pandemic-induced slowdown but is likely to weaken after a relatively strong first half, said Fu Linghui, a spokesman for the National Bureau of Statistics. "This year's main economic growth trend will be low after high," Fu said at a news conference. Fu gave no growth forecast. Private sector forecasters say the world's second-largest economy should easily achieve 8% growth over last year's depressed level. Growth in July retail sales softened to 8.5% over a year earlier, below the consensus forecast of 10.9% and down from the previous month's 12.1%. Factory output grew 6.4%, below the forecast of 7.9%. "Growth momentum weakened sharply," Louis Kuijs of Oxford Economics said in a report. The economy was disrupted by unusually severe summer flooding than 300 people in Henan province. More floods hit Hubei province to the south in August, killing at least 21 people. Meanwhile, authorities have reimposed some travel and business controls to fight outbreaks of the coronavirus's more contagious delta variant that began in late July. ❐

Asia's economies showing surge in Delta Variant : Data

Asia's economies are already showing a hit from the surging delta variant of Covid-19 as consumers stay at home and airplanes idle on the tarmac. Early warning signs are showing up in Google mobility data capturing the impact of government restrictions on movement. Flight capacity in China is pointing to a slump in travel, manufacturing in Southeast Asia is hurting and Australian business sentiment has tumbled. That's why Goldman Sachs Group economists are warning of a "negative delta in Asia" and have lowered their growth forecasts for China, along with JPMorgan Chase & Co and others. HSBC Holdings warn that the electronics cycle has already peaked in Asia, meaning bumper technology exports may be cooling. While the latest nowcast readings from Bloomberg Economies show the global economy is poised for acceleration this quarter, they also warn that the delta flare-up in China alone is affecting areas that account for more than a third of gross domestic product in the world's No 2 economy. "Asia's outlook has deteriorated notably upon the delta variant outbreak. In China, the latest outbreak — not

the biggest since the national lockdown, but the most wide-spread — looks set to have the most severe impact yet this year. The hit is most direct on consumption and contact intensive sectors, but it comes at a time when the downward pressures on the economy on production have started showing," said Chang Shu, chief Asia economist. To gauge how the latest wave is playing out, we asked economists for a snapshot of which indicators in Aisa they are watching. Social-mobility restrictions will hit consumers the hardest and especially affect spending on services. Australia's two-largest cities are in lockdown while China is imposing curbs in the middle of the summer break. Economists look to the Google data for a read on how retail and work is being impacted. ❐

US job growth surpasses forecast as unemployment rate falls

US employers added the most jobs in nearly a year and the unemployment rate declined faster than forecast, showing the labour market is making more robust gains toward a full recovery. Payrolls climbed by 943,000 after an upwardly revised 938,000 increase in June, a Labour Department report showed recently. The median estimate in a Bloomberg survey of economists called for a 870,000 gain. The unemployment rate dropped by a half percentage point to 5.4%. The dollar and 10-year Treasury yields advanced while stock futures erased gains as traders bet a strengthening labour market will lead Federal Reserve officials to begin pulling back monetary support, including bond buying. A resurgence in economic activity has sparked a surge in labour demand, particularly in the leisure and hospitality industry, since the beginning of the year. At the same time, payrolls remain 5.7 million short of pre-pandemic levels and many employers have struggled to fill a record number of vacant positions. Americans classified as long-term unemployed, or those who have been unemployed for 27 weeks or more, declined by 560,000 in July, the biggest drop on record. The figures mark a big step toward the Fed's goal of "substantial" further progress in the labour market recovery. Fed officials including Chair Jerome Powell and Governor Lael Brainard have indicated the labour-market recovery had some way to go before the central bank could begin tapering asset purchases. Fed Governor Christopher Waller said recently that if the September and October employment reports show continued gains, he could back such a move. ❐

US freezes $9.5B Afghanistan Central Bank Asset to keep away Taliban from accessing the money

The US has frozen nearly $9.5 billion in assets belonging to the Afghan central bank and stopped shipment of cash to the nation as it tries to keep a Taliban-led government from accessing the money, an administration official confirmed recently. The official said that any central bank assets that the Afghan government has in the US will not be available to the Taliban, which remains on the Treasury Department's sanctions designation list. Ajmal Ahmady, acting head of Da Afghan Bank, the nation's central bank recently tweeted that he learned recently that shipments of dollars would stop as the US tried to block any Taliban effort to gain access to the funds. DAB has $9.5 billion in assets, a sizeable portion of which is in accounts with the New York Federal Reserve and US-based financial institutions. ❐

Euro zone industry outputs decline as Germany falters

Euro zone factory output fell in June as Germany, the bloc's industrial powerhouse, faltered amid supply bottlenecks, EU estimates released recently showed. The EU's statistics office Eurostat said industrial output in the 19 countries sharing the euro fell 0.3 per cent month-on-month, more than the 0.2 per cent decline forecast by economists polled by Reuters. The drop followed a 1.1 per cent fall in May, which Eurostat revised downward. It had previously estimates a 1.0 per cent decine. The fall in production was largely due to Germany's unexpected decline in output which Eurostat estimates at 1.0 per cent on the month, less than the 1.3 per cent for calculated recently by the country Federal Statistics Office. ■

RBI made record purchase of gold this year

The Reserve Bank of India (RBI) has increased its gold purchases, as part of its foreign exchange (forex) reserves. In the first half (H1) of calendar year 2021 (CY21), the addition of gold to India's forex reserves has been the highest—on a half-yearly basis — at 29 tonnes. Now, the RBI's gold holding — as a proportion of its forex reserves — has for the first time crossed 700 tonnes. The central bank's gold reserves stood at 705.6 tonnes as on June 30. The gold reserves were at 558.1 tonnes in the beginning of 2018. The share of gold in the RBI's forex reserves was 7 per cent at the end of the March 2021 quarter, which, however, is down to 6.5 per cent in the June quarter. In June 2021, the latest available data with the World Gold Council (WGC) revealed that global central banks had purchased 32 tonnes of gold, of which India alone had purchased 30 per cent, or 9.4 tonnes. In March 2018, the RBI added 2.2 tonnes of gold to its forex reserves, which was its first purchase after November 2009, when it had bought 200 tonnes from the IMF for adding to its reserves. A senior banking economist said, "Since the past few years, the RBI has started (after almost a decade) buying gold for forex reserves as a modest port-folio diversification, in line with many other central banks. India's forex reserves still have the largest share of US dollars, while the share of gold has increased in the past two years from a little over 5 per cent to 6.5 per cent." Since March 2018, around 26.5 per cent, or 147 tonnes, of gold has been added to the country's forex reserves. In H1CY21, around 29 tonnes has been added, compared to an annual average of 39.5 tonnes of gold-buying in the previous three calendar years. This is the RBI's highest half-yearly addition. Apart from portfolio diversification, gold — as a part of forex reserves — also helps in protecting sovereign creditworthiness. The India Gold Policy Centre at IIM-Ahmedabad carried out a research to examine whether the central bank gold reserves reduce the sovereign credit default swap (CDS) spreads during crises. "Specifically, we examined the effect of central gold holdings on a country's risk during episodes of high global volatility, as well as country-specific debt crises, inflation crises, and currency crises episodes. Sovereign CDS quanto spreads indicate the financial markets's view of the interaction between a country's likelihood of default and associated currency devaluations. We show that increased central bank gold holdings not only help reduce a country's credit risk during normal times, but also mitigate the effect of global and domestic crisis on sovereign creditworthiness," said the report released of late. With over 705 tonnes, India ranks 10th among central banks holding gold as part of their forex reserves. This rising trend of central banks adding more gold to their reserves is expected to continue. WGC said in its latest report, "Central banks are likely to continue buying gold on a net basis in 2021 at a similar or higher rate than in 2020, driven by a continued focus on diversification and risk management. ❐

Exports rise 49.9% to record $35 billion in July

India exported goods worth $35.43 billion in July, the highest ever in a month, due to recovery in key global markets and robust demand, according to the data released by the commerce and industry ministry recently. Outbound shipments grew by nearly 50 per cent as compared to July 2020, which can also be partly attributed to a favourable base. The growth was 35 per cent from July 2019. Merchandise exports and imports had plummeted in the first few months of 2020-21, with the imposition of lockdown measures to curb the spread of Covid-19. On a sequential basis, outbound shipments grew at their fastest this fiscal year, witnessing a 9 per cent jump. The growth was led by higher demand for engineering goods, gems and jewellery, textiles and apparels, chemicals and electronic goods. "Higher value of petroleum products accounted for more than one-third of the YoY rise in merchandise exports in July 2021. The merchandise trade deficit in July 2021 was almost entirely contributed by petroleum products and precious metals and stones, with the net deficit of the balance items limited to a muted $0.6 billion, shrinking from an average of $2.2 billion in the previous quarter," Aditi Nayar, chief economist, ICRA, said. Merchandise imports widened to $46.4 billion in July, up 63 per cent on-year, resulting in a trade deficit of $10.97 billion. Non-oil imports were estimated at $33.51 billion, up 52.73

per cent on year, while oil imports in July were $12.89 billion up 97.45 per cent in July. Non-petroleum and non-gems and jewellery exports were $26.12 billion in July, up 28.18 per cent on-year. As compared to July 2019, non-petroleum and non-gems and jewellery exports registered a growth of 32.26 per cent. "An interesting trend witnessed is the growth in the export of non-petroleum and non-gems and jewellery items in July 2021. The exports of non-petroleum and non-gems and jewellery items have grown at 32.3 per cent over the pre-Covid level (July 2019), much greater than the growth of 28.2 per cent over the July 2020-level," Prahalathan Iyer, chief general manager, research & analysis, India Exim Bank, said. On a cumulative basis, India exported goods worth $130.82 bilion this year, up 74 per cent on year. This accounts for close to a third of its annual export target of $400 billion. Goods worth $172.55 were imported, up 94 per cent on-year. ❐

Industry output surged 13.6% on low base effect

India's industrial production grew 13.6 per cent in June from the year-ago period due to the low-base effect, data released by the Ministry of Statistics and Programme Implementation showed. The impact of a low-base declined in June as compared to the last two months. In April and May, growth was 134.6 per cent and 28.6 per cent, respectively, thereby portraying an exaggerated picture of industrial activity. Factory output, measured by Index of Industrial Production (IIP), has been growing sharply since March due to a favourable base effect as industrial activity came to a virtual halt a year ago following the nationwide lockdown. In June 2020, IIP contracted 16.6 per cent. On a sequential basis, IIP grew 5.7 per cent from May, in line with the opening up of the economy, with states gradually easing restrictions after region-wise lockdown during the second wave in April-May. However, it still remained below April's level, indicating that the pace of recovery is slow. "The steep decline in the number of daily confirmed coronavirus cases and increased economic activity have driven the sequential improvement in industrial activity in June 2021. This improvement has continued in July 2021 as reflected in the manufacturing PMI which was back in the expansion territory after having contracted in June," CARE Ratings said in a note. The cumulative growth during April-June (2021-22) was 45 per cent, compared to a contraction of 35.6 per cent during the same period a year ago. However, it remained nearly 7 per cent lower as compared to April-June (2019-20), or pre-Covid level. Manufacturing sector output, which accounts for more than 77 per cent of the entire index, grew 13 per cent YoY in June as compared to a contraction of 17 per cent last year. On a sequential basis, it grew 7.4 per cent. "Interestingly, the sequential rise in manufacturing in June 2021 (7.4 per cent) was muted as compared to the sharp pickup in the generation of GST e-way bills (36.8 per cent) that month, just as the month-on-month fall in the manufacturing index in April and May 2021 had been narrower than the decline in the e-way bills," Aditi Nayar, chief economist at ICRA, said. "This confirms that manufacturing activity was less affected during the second wave than the movement of goods across the country, suggesting that the sequential trend in GST e way bills may not always be a good lead indicator of IIP," Nayar said. Growth in electricity generation stood at 8.3 per cent on-year in June as compared to 10 per cent contraction a year ago. Mining activity, which accounts for over 14 per cent of the entire index, grew 23.1 per cent on-year, as compared to contraction of 23.1 a year ago. However, on a sequential basis, it declined 2.3 per cent from May. "This can be attributed to the lower demand. However, gradual resumption of economic activities in June 2021 restricted the downside," the note said. In case of user-based classification, consumer durables output witnessed the sharpest expansion of 30.1 per cent in June as compared to a contraction of 35 per cent in June last year and fell nearly 28 per cent sequentially. Consumer non-durables output witnessed a degrowth of 4.5 per cent in June, as compared to a growth of 6.9 per cent last year. Capital goods output, which is reflective of the private sector, investment secnario, grew 25.7 per cent, as compared to 37.4 per cent contraction a year ago. "Capital goods and consumer durables continued to clock the worst performance in June 2021 relative to the pre-Covid level, reflecting the impact of the pandemic on both investment plans and demand for big-ticket items," Nayar said. ■

Shining future of India's fashion & retail sector

India's fashion and retail sector is led by zestful entrepreneurs. Little wonder it is one of the fastest growing markets in the world, home to every kind of consumer from stylish to conscious. One brand that has elevated its status to match every consumer's need in the country is Killer Jeans. Launched in 1989, Killer has become a youth, cult, fashion and lifestyle favourite. Today, the brand boasts not just the trendiest denim offerings, but an entire exclusively designed lifestyle range. The flagship brand of the Kewal Kiran Clothing Company, one of India's largest denim makers, is spearheaded by the Joint Managing Director, Hemant Jain. He also oversees the operations of KKCL brands, supervising their notable early success.

Killer Jeans has always brought innovation and superior design into their product ranges, appealing to the bold, brash, rebellious, unique, creative and sustainable audience. Like Worn-Out jeans (2003), with a broken-in look for those who prefer to stand out in the crowd. Revealingly Low jeans (2004), with inherent sex appeal, for those who never have to try too hard, for anything. Shreds (2005), with an unfinished look, for those who dare to be themselves, Jeanos (2017), Sunwash (2018), Or Water Saver Jeans, for those who believe that style should be sustainable. The brand has a wide range of casual wear products, hardy gear with cutting edge style, a variety of vibrant washes, treatments, cuts and fits that reflect the attitude of the wearer — stylish and sexy, cool and comfortable.

Killer is one of the first truly international Indian brands, created and owned by Kewal Kiran Clothing Limited. A brand that is youthful, trendy, vibrant and with the right attitude. The focus of the brand is the 16-30 years' segment. Killer enjoys a leadership position in the premium menswear segment. Today, Killer is a power brand, one of the largest selling denim brands in India. The Killer product portfolio today includes men's ready-to-wear jeans, trousers, cargos, capris, shirts, jackets, t-shirts, innerwear (vests and briefs), footwear (shoes, socks), eye-wear, personal care products and other addictive accessories (belts, bracelets etc).

Today, Killer Jeans has completed over 30 years of business, establishing itself as a mainstay of the country's fashion and clothing market — and the only Indian denim brand that continues to thrive for this long. This success has been on the back of immense hard work, patience, ability to understand the market trends, timely development of new products, innovations and an ability to innovate. Over these past decades, Killer has introduced products that have changed the way people look at fashion and denim in particular. This ability for novelty and reinvention is true to the brand promise, and keeps Killer ticking. The brand, built on a foundation of trust and quality, continues to serve a growing set of customers.

Kewal Kiran Clothing Limited is one of India's largest branded apparel manufacturers, engaged in the designing, manufacturing and marketing of branded jeans and a wide range of western wear, with roots dating back to 1980. The company prides itself on the contributions made to the ever-evolving denim culture in India, with multiple in-house brands — Killer, Integriti, LawmanPg3, Easies, Desi Belle and K-Lounge. Killer, the flagship brand of the company, contributes 60% of the company's total revenue. The company has been into listed domain since 2006 and has a track-record of healthy and category best profitability, amongst peers in the industry. The last Financial Year, despite the pandemic, saw the company achieve 60% revenue from FY 19-20 and profitability, whereas peers struggled to break-even. Such strong performances are possible thanks to the 125+ active and strong distributor support from across India, 250+ EBO outlets and the brand's strong presence in 1200+ NCS counters. In the last financial year (2020-21), the business has witnessed a 60% growth in store base points as well, with future plans set to add another 30+ stores to the company's network in the months to come. These include everything from outlets in premium shopping malls of metro cities like Mumbai, Delhi, Bengaluru and Chandigarh, to larger than life concept-driven brand flagship stores across prominent markets all over India.

While KKCL's strategy seeks to expand its external footprint, there is plenty of internal restructuring and development planned as well, that feeds into the company's overall growth. New and innovative business models are being formulated and put to practice, new brands are being visualised and market penetration is being strategized with keen acumen backed by a balance of experience and modern thinking. Much of this is being applied to the brand Easies, the smart casual meanswear brand that sits primed for today's consumer and world context. It is little wonder then, that despite the tricky times, Kewal Kiran Clothing Limited is already projecting double digit growth for the year 2021-2022.

The future of India's fashion and retail sector is in great shape, thanks to the dynamic approach of its leading business minds. ■

Policy maker should take initiatives towards improving cotton yield

In the decade ahead till 2030, India (25 per cent), China (22 per cent), the US (15 per cent) and Brazil (10 per cent) in that order will continue to dominate the global cotton production which is expected to reach 28.4 million tonnes (mt), while five Asian countries — China, India, Pakistan, Bangladesh and Vietnam — will account for 75 per cent of the total mill consumption (28.3 mt) during the period, the latest OECD-FAO report on Agriculture Outlook 2021-2030 has forecast.

World cotton export is expected to expand by a quarter to top the 11 mt mark by the end of this decade, by which time sub-Saharan Africa with a share of 15 per cent is set to occupy the third position after the US and Brazil, edging India down to the fourth position. Bangladesh, Vietnam, China, Tukey and Indonesia will continue to be major importers of the fibre.

India will continue to be the world's largest cotton producer with the increase in production resting mostly on relatively higher yields, while area expansion is expected to be limited in line with recent trends.

By 2030, India's cotton production is projected to expand to 7.2 mt (approximately 43 million bales of 170 kg each) compared with current output of 6 mt equivalent to roughly 36 million bales. India will contribute to as much as 40 per cent global increase in cotton production during the outlook period.

However, production will continue to face challenges including land constraints, water shortage, climate change and crop's susceptibility to pest and desease attacks.

No wonder, raw cotton productivity has remained stagnant in recent years and yields are among the lowest. The OECD-FAO Outlook assumes a growth in yield that reflects increased use of smart mechanisation, varietal development, and pet management practices.

In India, pink bolloworm appears to have become resistant to Bt cotton (a genetically modified variety of cotton seed), resulting in significant crop losses. Better genetics and adoption of better agronomic practices for sustainable cotton production could bring improvement over the coming decade, but yield growth could remain a challenge, the report has noted. Growing demand from the domestic apparel industry continues to spur investments in the sector. Support to the sector in India is expected to result in continuous growth in cotton mill use.

The industry, however, faces several challenges, including technological obsolescence, high input costs, and poor access to credit.

To address these issues, the government has implemented several subsidy schemes and is currently developing a new textile policy for the overall development of the sector, the report has added. As a natural fibre, a big challenge to cotton could be from synthetic fibres such as polyester.

As a critical raw material, cotton will have to price itself in as a competitive product for mill consumption. That can happen with infusion of technological intervention for improved efficiency along the value chain starting from higher productivity through processing efficiency. Indian policymakers must take cognisance of the challenges and work towards ensuring higher production through improved yields and generating genuine export surplus to feed the world market. Sustainability principles have to be advanced. ■

Centre to launch degree course in handloom and textile technology in IIHT Bargarh

The union government has decided to introduce a four-year degree course in handloom and textile technology in the centre-run Indian Institute of Handloom Technology (IIHT) in Bargarh, widely regarded as the hub of handloom weaving in the State.

"As per feasibility of introducing the degree courses in handloom and textile technology, the central government has taken a policy decision to introduce the said degree course in IIHTs including at Odisha's Bargarh", the Union Minister of textiles Piyush Goyal replying to a query by BJD MP Prasanna Acharya informed the Rajya Sabha.

There are six Indian Institutes of Handloom Technology (IIHTs) at Varanasi (Uttar Pradesh), Salem (Tamil Nadu) Guwahati (Assam), Jodhpur (Rajasthan), Bargarh (Odisha) and Fulia-Shantipur (West Bengal) under the Ministry of Textiles, Government of India.

The information on handloom courses under different nomenclatures being run by the private sector is not centrally maintained. Around 340 students are awarded diplomas, post diplomas, degrees each year by six Central Governmentrun IIHTs. These institutes invite companies for campus placement for students. Significant numbers of students are recruited from the campus. The placement office continues to assist and guide the remaining students, if any, in finding gainful employment, added the union minister Goyal. ■

Pipili's 'Applique art' to the status of Odisha's cultural identity

An inescapable riot of colours calls for a quick stop at Pipili, a town in Odisha. Only 45 kilometres from Bhubaneswar, on the way to Puri, an array of shops selling vibrant embroideries is bound to attract one's attention. Popularly known as *chandua bazaar*, the market is rich in original applique crafts. With their unique stitches based on a variety of themes, every household there looks like an art studio. Recognised by a geographical indication tag and the Limca Book of Indian Records crediting it with producing "the world's largest thematic applique work", almost every resident of Pipili is involved in creating magic with threads and cloth.

Odisha owes its heritage status to the applique art of Pipili, just like Bihar does to Madhubani painting and Bengal to terracotta modelling. Very little record, however, remains regarding the origin of the craft. Its history can be traced to the 17th century, when it started blooming due to the famous Rath Yatra festival held every year at the Jagannath temple in Puri. The unique works of applique are evident in the intricate and colourful tapestry used as a canopy or *shamiyana* on the chariots, and the umbrellas shading deities from the sun. They are ornate with decorative metal and mirror-works.

Since then, around 15 artisan families were patronised by the king for producing such needle-art during the festival. Till today, descendants of those families continue to make sprawling covers of needlework during the Rath Yatra. With time, however, the art was no longer confined to the temple and chariots. Beyond serving its purpose as religious decor, it entered and adorned local residences and all kinds of knicknacks too.

Today, the craft of Pipili can be seen in handbags, garden umbrellas, show pieces, pillow covers, wall hangings and lamp shades, among other objects. It has also become a fashion statement in *kurtas*, skirts and blouses among other dress materials. Even stationery items like files, folders, envelopes and bookmarks come with the artistic touch of Pipili applique. The colourful applique lampshades of Pipili light up public places like the airport lounge, film festival arenas and Durga puja pandals.

The dominant themes of Pipili's needle-art are floral desings and Hindu motifs. Apart from that, animals, birds, and characters from Hindu mythology are weaved in as well. Of them, the peacock, Lord Jagannath, and the elephant-headed Lord Ganesha, are the most common motifs.

The community traditionally involved in Pipili art is called "doraji", meaning tailor in Odia. Today, however, people from other communities are also mastering it. A good part of such artefacts is also made in another heritage village of Odisha, called Raghurajpur. Surprisingly, Delhi has become a major destination, where local people are leaning the skill of needle and creating Pipili-like appliques.

The mind-blowing crafts of Raghurajpur, just 26 km from Pipili, are painted on Tussar silk and *tal patra,* or palm leaf. Originally, it was a form of miniature painting done with natural colours, although nowadays, artists use chemicals too. Its dominant subjects are human figures, followed by floral patterns and references from the mythological stories of Radha-Krishna, Hanuman and the Ramayana.

Despite its significance and recognition, the applique art of Pipili is currently undergoing a crisis due to a development project. The National Highway 316 diverts vehicles from the town, which was earlier accessible *en route* to Puri. It has adversely impacted artisans in the village as their shops have reduced to 54 from 72. Those remaining are also considering shutting down due to a sharp fall in demand and rise in cost of product. The *karigars* who lost their shops became contract labourers or took odd jobs.

After working as a hired *karigar* for many years, Ajay Kumar Mahapatra opened a small shop in 2007 with the help of a loan from the government. Before the new expressway was operational, the village drew a massive footfall of tourists and pilgrims, and his business thrived. Today, he hardly gets a customer even during the festive season.

Standing at his colourful shop of handicrafts that grey afternoon, I saw the gloom in Kumar Mahapatra's face surpass that of the weather as he said, "I haven't earned even Rs. 50 in the last six hours, though I have to pay the daily wage to four employees, apart from supporting a family." After graduating in law, he started working as an artisan 12 years ago. Those were good times

Pipili's 'Applique art' to the status of Odisha's cultural identity

as even an income of Rs. 30,000 a day was not unusual, especially during winters and Rath Yatra.

Apart from not getting many customers or tourists, another reason for bad business is that now Pipili appliques are easily found all over India, following its production in Delhi.

Raj Kishore Mahapatra is a second-generation trader of Pipili art. Boasting the grandest stock in both Pipili and Raghurajpur artefacts, the shop which he now owns was founded by his father 45 years ago. He, too, was in low spirits as it takes a lot of effort to find a customer and strike a fair deal these days.

Utkalika, the state-run art chain which sources stock from Pipili and Raghurajpur, however, remains a silver lining for artisans. "We are no longer dependent on tourists. Rather we look forward to government orders, and demand during Rath Yatra and Durga puja," said Kishore Mahapatra.

While development projects may prove to be a boon for some, it can be a bane for many, the artisans of Pipili in this case. It is said how after elevating it from mere temple art to the status of a cultural identity, the originators of Pipili's applique craft grope in the dark today. ■

CCI finds little scope for market intervention in wake of rising cotton prices

As cotton prices continue to rule high, state-run Cotton Corporation of India Ltd (CCI) sees no scope for market intervention in the new season starting October. CCI, which made a record purchase of cotton at the minimum support price (MSP) during the 2020-21 season, expects its carry forward stocks for the next year to be in the range of 2-3 lakh bales.

Ahead of the cotton harvest season starting mid-September, the raw cotton (*kapas*) prices are currently ruling high at over ₹ 7,000 per quintal. Also, cotton-seed prices are hovering around ₹ 4,500-5,000 per quintal.

"Everything is in a booming mode, and I think the CCI's intervention may not be required as farmers are already getting 30 per cent more than the MSP rates. Next year, they may be fully satisfied with the market forces," PK Agarwal, chairman and managing director, CCI, told recently.

"However, as per our duty, CCI would be fully preparing for the MSP operations," Agarwal said, adding that the intensity will certainly be lower. "In case our intervention is required, may be in the interior or far-flung places, where the competition is not there, we may have to help the farmers in those areas," Agarwal said. Further, Agarwal believes that the current high prices will not sustain for a longer period.

CCI has purchased 92 lakh bales at MSP during the pandemic-hit 2020-21 season. "Farmers were protected through the MSP operations as they got an assured price," he said.

In 2021, CCI disposed of a record 140 lakh bales on good demand from the mills. It also exported about one lakh bales during 2020-21. "It was more than a good year. Because of the booming market and price improvement, the MSP losses have also come down substantially to around ₹ 17,000 crore," Agarwal said. The 2020-21 season started with around ₹ 40,000 per bale in October, higher than the corresponding previous year's ₹ 36,000. "Now, the cotton prices are ruling between ₹ 53,000-55,000 range on good demand in the market as the mills have started operations, and their requirement has improved," Agarwal said.

Further, Agarwal said that CCI currently has stocks of around 8 lakh bales. "We wish to keep these stocks till September end to avoid any starvation like situation. We are selling about 1,000-2,000 bales daily and by mid-October we may be finishing our stocks," he said.

"The situation is very comfortable because, in the past there had been no occasion when the carry forward stocks were more than 40 lakh bales. This is because of the pandemic situation, India may end up with 60-70 lakh bales, which is almost two-month requirement. The position is not as worse as people are visualising it," he added. By September end, the new crop will hit the market in North India, he said. ■

STUDIES ON PHYSICO-CHEMICAL PROPERTIES OF KRISHNA RIVER WATER PARTICULARLY IN SANGLI AND KOLHAPUR DISTRICTS OF WESTERN MAHARASHTRA

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Being continued from August Issue

7.8 Sodium

Water crosses cell membrane rapidly till osmolality is equal on both sides of the membrane. Defense of tonicity involves thirst and excretion or conservation of electrolyte free water. Control of tonicity is sensitive, responding to 1-2% changes. Change in tonicity is synonymous with sodium ions in plasma. Typical sodium toxicity symptoms are leaf burn, scorch and dead tissue outside edges of leaves. In contrast, the symptoms of chloride toxicity occur initially at the extreme leaf tips. High concentration of sodium in irrigation water can induce calcium and potassium deficiency in soil, low in these nutrients, and crops may respond to fertilization with these nutrients[19]. High concentration of sodium are undesirable because sodium absorbs on the soil cation exchange sites, causing soil aggregates to breakdown sealing the pores of the soil and making it impermeable to water flow. Virtually all of the sodium present in water and foods is rapidly absorbed from the gastrointestinal tract. When it combines with OH^-, it causes corrosion in boilers under certain conditions and it adds to the solid content of water. In the present study, as represented in Fig. 7. the mean value of total hardness was recorded to be 0.20 ppm. The standard deviation in the result was 0.02. There are no recommendations by WHO or BIS about Sodium Chloride content in drinking water. The amount of sodium present in given water sample can be determined using Flame photometer. The sodium in the studied area lies from 19 ppm to 30 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum sodium content and then we calculated average sodium content in the studied area. The average sodium content was found to be 23.5 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of sodium content with other studied parameters which is shown from table number 4 to 8. Herein, we have tried to plot a graph of sodium content verses locations. There is gradual increase in the sodium content as we move from Sangli to Aurwad. The possible reason may be as river progress more and more amount of minerals containing sodium might have been added.

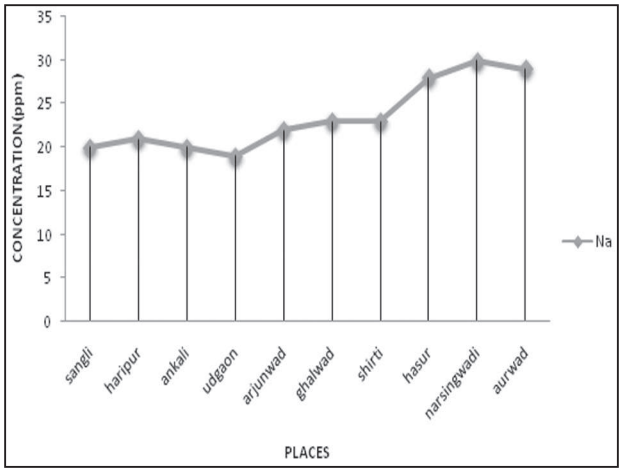

Figure Number 12 : Sodium Variation at Different Locations

Flame photometry is based on measurement of light emitted when a metal is introduced in the flame. The instrument can be used for qualitative analysis i.e. wavelength of emitted light gives information about nature of element, also intensity of emitted light gives an idea about quantity of element present in the sample. This instrument can be used for detection of Sodium, Potassium, Barium, Calcium, Lithium etc. Flame photometry is used for detection of alkali metals and alkaline earth metals[20]. Figure 4. Represents the schematic of a flame photometer setup.

Table No.7. Table showing correlation values of different parameters from Krishna river water in rainy season

Sr No.	Parameters	Dissolved Solid (ppm)	Suspended solid (ppm)	Dissolved oxygen (percent)
1	Air Temperature	0.425809345	0.586541435	0.526316656
2	Water Temperature	0.568188321	-0.493424848	0.405089856
3	pH	0.644457965	0.071528594	0.580753985
4	EC	0.860401978	0.120441466	0.620859239
5	Total hardness, ppm	0.46914406	-0.665043808	0.547533775
6	Ca Hardness (ppm)	0.750641692	-0.683745745	0.696755125
7	Mg Hardness (ppm)	-0.046602293	-0.358967842	0.145991831
8	Permanent Hardness (ppm)	0.661581416	-0.43834236	0.614088249
9	Chloride (ppm)	0.712160072	-0.120519661	0.368139986
10	Sulphate (ppm)	0.325008291	0.716998259	-0.051147717
11	Alkalinity (ppm)	0.693343518	-0.376569721	0.504541125
12	Total Solid (ppm)	0.013701182	0.996326316	-0.2307338
13	Dissolved Solid (ppm)	1	-0.071979145	0.72366732
14	Suspended solid (ppm)	-0.071979145	1	-0.292136175
15	Dissolved oxygen (percent)	0.72366732	-0.292136175	1
16	Na (ppm)	0.858096713	-0.301037046	0.695840119
17	K (ppm)	0.739222242	-0.297724242	0.580688515
18	Fe (ppm)	0.822695035	-0.275464491	0.744827184
19	Mn (ppm)	0	0	0
20	Zn (ppm)	0.880057	-0.209100468	0.643716539
21	Cu (ppm)	0	0	0

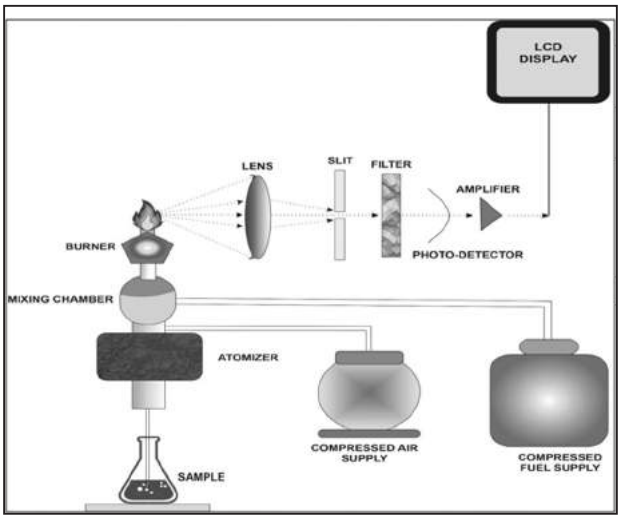

Figure Number 13 : Schematics Of Flame Photometer

7.9 Dissolved Oxygen

Dissolved oxygen has very weak correlation with water temperature and with carbon dioxide. Free carbon dioxide is an important parameter after dissolved oxygen. The source of molecular Oxygen in any water system may be from

a) Aquatic plants :

We are pretty aware that plants produce molecular oxygen during the process of photosynthesis. This is the process in which plants produces complex organic molecules like carbohydrates and molecular oxygen from simple inorganic molecule like carbon dioxide and water in presence of chlorophyll and sun light. The biochemical reaction of photosynthesis can be summarized as below :

$$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2\uparrow$$

Table No. 8. Table showing correlation values of different parameters from Krishna river water in rainy season:

Sr No.	Parameters	K (ppm)	Fe (ppm)	Mn (ppm)	Zn (ppm)
1	Air Temperature	0.006688	0.172351	0	0.142037
2	Water Temperature	0.491654	0.47595	0	0.679356
3	pH	0.190879	0.249892	0	0.526462
4	EC	0.748122	0.842	0	0.896527
5	Total hardness (ppm)	0.291282	0.400152	0	0.607559
6	Ca Hardness (ppm)	0.694638	0.776706	0	0.792907
7	Mg Hardness (ppm)	-0.28437	-0.19223	0	0.139906
8	Permanent Hardness (ppm)	0.824379	0.753468	0	0.809174
9	Chloride (ppm)	0.567782	0.521743	0	0.670744
10	Sulphate (ppm)	0.018849	0.021429	0	0.343109
11	Alkalinity (ppm)	0.490856	0.574968	0	0.866449
12	Total Solid (ppm)	-0.235	-0.20552	0	-0.13406
13	Dissolved Solid (ppm)	0.739222	0.822695	0	0.880057
14	Suspended solid (ppm)	-0.29772	-0.27546	0	-0.2091
15	Dissolved oxygen (percent)	0.580689	0.744827	0	0.643717
16	Na (ppm)	0.885398	0.935105	0	0.933567
17	K (ppm)	1	0.926367	0	0.749111
18	Fe (ppm)	0.926367	1	0	0.851668
19	Mn (ppm)	0	0	1	0
20	Zn (ppm)	0.749111	0.851668	0	1

The aquatic plant like algae produces this oxygen[21].

b) By aeration :

The aeration results the dissolution of Oxygen. Oxygen gets dissolved in water. The dissolved Oxygen can be determined by following methods :

a) By using DO meter

b) Using titration method.

In the presence study DO of water sample has been determined by DO meter Lavibond-made Senso Oxi 200 and cross checked by using titration method.

» DO meter :

The maximum concentration of Oxygen that can be dissolved in water is function of temperature and therefore may vary from place to place and time to time. In India average tropical temperature is 27°C. the corresponding average DO saturation concentration reported is 8 ppm (met calf and Eddy 1992). This represents 100% concentration. The ranges are in terms of percentage DO.

» Titration method :

In 250 ml of water sample 2 ml $MnSO_4$ and 2 ml alkaline azide solution is added. The water sample is titrated against standard sodium thiosulphate solution using starch as an indicator. The end point of the titration is blue to colorless[22]. The DO in the studied area lies from 0.21 ppm to 0.24 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum DO and then we calculated average DO content in the studied area. The average DO content was found to be 0.226 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of DO content

with other studied parameters which is shown from table number 4 to 8. Herein, we have tried to plot DO content verse locations. We observe minimum value of DO at Haripur whereas highest value is at Aurwad.

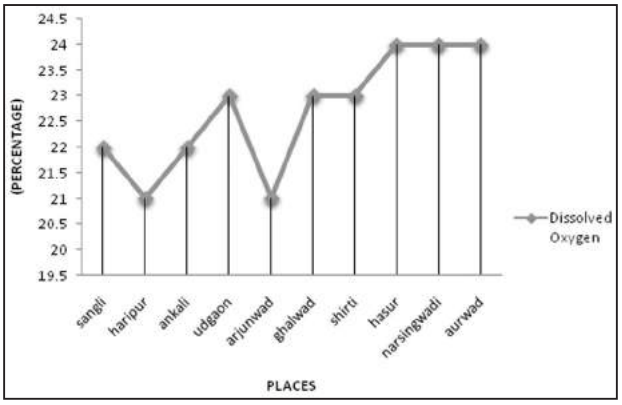

Figure Number 14 : DO Variation at Different Locations

$MnSO_4 + 2KOH \rightarrow K_2SO_4 + Mn(OH)_2$

$Mn(OH)_2 + O_2 \rightarrow MnO(OH)_2$

Dissolved oxygen Basic Magnesium oxide

$MnO(OH)_2 + H_2SO_4 \rightarrow MnSO_4 + 2H_2O + (O)$

$2Na_2S_2O_3 + I_2\downarrow \rightarrow 2NaI + Na_2S_4O_6$

- **Calculation :**

$$DO \text{ in ppm} = \frac{\text{Vol. of thiosulphate} \times N \times 8000}{\text{Volume of water sample in ml}}$$

- **Effects of DO :**
  - High DO in water is good for drinking purposes.
  - Increase in DO increases rate of corrosion, thus high DO is not good for water to be used for industrial purposes.
  - High DO in water is good for aquatic life.

7.10 Alkalinity

Alkalinity of water is the measure of its capacity to neutralize acid. The alkalinity of water can be determined by neutralization. An alkalinity teat is the measure of the level of carbonates, bicarbonates and hydroxides in water. These compounds get into the water from geological materials of the aquifer from which the water is drawn, such as limestone and dolomite. The sample of water can be titrated against N/50 H_2SO_4 using phenolphthalein or methyl orange as an indicator[23]. Alkaline water is not suitable for drinking and industrial purpose. The alkalinity in the studied area lies from 130 ppm to 139 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum alkalinity and then we calculated average alkalinity in the studied area. The average alkalinity was found to be 135 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical corellations of alkalinity with other studied parameters which is shown from table number 4 to 8. Herein, we have tried to plot alkalinity verses locations. We observe there is irregular increase in alkalinity values as we move from Sangli to Aurwad.

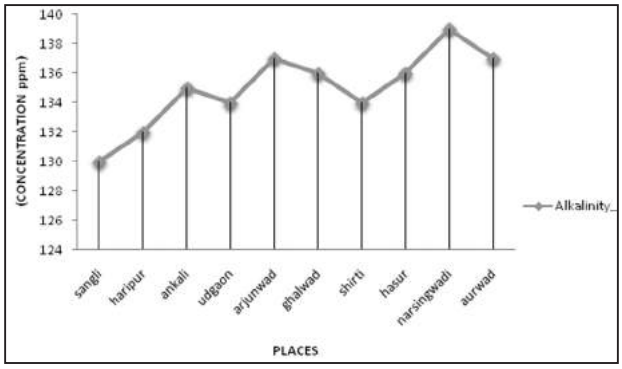

Figure Number 15 : DO Variation at Different Locations

1. Carbonate and Bicarbonate alkalinity causes temporary hardness (Ca/Mg bicarbonate)
2. Alkaline water causes digestive problems when used for drinking.

All HCO_3^- are neutralized in second stage giving final equivalence point

$OH^- + H^+ \rightarrow H_2O$

$CO_3^- + H^+ \rightarrow HCO_3^-$

$HCO_3^- + H^+ \rightarrow H_2O + CO_2$

After determining the equivalence point the alkalinity is calculated with formula[24, 25],

$$\text{Alkalinity (P)} = \frac{MBR \times \text{Normality of Acid} \times \text{Eq.wt of } CaCO_3}{\text{Volume of Water Sample}}$$

- **Disadvantages of high alkalinity :**

a) Effect on domestic activities :

- Alkaline water causes digestive disorder when used for drinking.
- Carbonate and bicarbonate alkalinity causes temporary hardness.

b) Effect on industrial activities :

- Alkalinity of water may cause damage to constructions like bridge, buildings etc
- Alkaline water results in scales and sludge formation.

c) Effect on agricultural activities:

- Alkaline water causes spoil of soil due to change in pH.

7.11 Total Hardness

One class of impurity that is of special interest is hardness. As water moves through the soil and rock, it dissolves very small amount of mineral and holds them in solution. The property of water by which it resists the formation of foam or lather when soap is added in it is called hardness. Thus the water which produces foam or lather freely is soft, and the water which can't form foam or lather readily is hard. In short hardness can regarded as soap destroying capacity of water. Hard water is the water that has high mineral content. Total hardness of water is mainly due to the presence of bicarbonates, chlorides and sulfates of Calcium and Magnesium dissolved in water. Soap is Sodium or Potassium salt of higher fatty acid. In hard water Sodium or Potassium ion in soap is preferentially exchanged with Calcium or Magnesium ion from hard water producing insoluble compounds that do not allow the soap to produce lather easily when agitated.

The hardness of water can be classified into types such as Temporary hardness and Permanent hardness. Temporary Hardness is due to the bicarbonate ion (HCO_3^-) of Calcium and Magnesium being present in the water system. The water-soluble inorganic salts get precipitated when the water sample containing these salts is boiled. Finally, the precipitate (e.g. $CaCO_3$) can be removed by filtration. This type of hardness can be removed by boiling the water for about 15 minutes, which expels CO_2 to form calcium carbonate which gets precipitated and thus removed by filtration. The chemical reaction of this process is as indicated by the following equation.

$$Ca(HCO_3)_2 \rightarrow CaCO_3\downarrow + H_2O + CO_2\uparrow$$

Permanent hardness in water is hardness due to the presence of the chlorides, nitrates and sulfates of Calcium and Magnesium, which will not be precipitated mere by boiling. Thus this type of hardness cannot be eliminated by boiling but can be eliminated by some special chemical treatments.

Generally, the hardness of water is greater at the origin of the river and decreases gradually along downstream. This is because as water flows through rocks and mountains, various inorganic salts get dissolved in it. As the water flows downstream of the river, these salts gradually get adsorbed in the river bed. Also there is action of sunlight which may result decrease in total hardness of water.

The hardness can be determined by two methods- Spectro-photometric method and Titration method[26]. In the present study, the hardness of the water sample has been determined by the titration method. The water sample has been titrated against standard EDTA solution in presence of EBT indicator and in alkaline medium. The endpoint of the titration is appearance of sky blue colour. From titration readings, the total hardness of the water sample can be calculated. Although many times, we have discussed the adverse effect of hardness. However, it is observed that hard water can have positive impact on some area especially health related issues. Hard water has no side effects, WHO say at its Geneva conference. The health effects of hard water are mainly due to the effects of salts dissolved in it. Some studies suggest there was a significant protective effect of calcium intake from drinking water on the risk of gastric cancer. Magnesium also exerted a protective effect against gastric cancer. It is observed that there is reduced prevalence of arteriosclerotic heart disease when hard water is consumed. Also there is decrease in degenerative heart disease, preventing osteoporosis, hypertension and tenty with intake of hard water. Hard water is better for drinking as it contains minerals. Thus hardness is important for drinking water from the point of view of both aesthetic acceptability and operational consideration. Although, there is some evidence from epidemiological studies for a protective effect of magnesium on hardness on cardiovascular mortality, the evidence is being debated and does not prove fatal incidence.

(a) Adverse Effects of hard water on mankind and animals :

- If hard water is consumed, it can produce kidney stones.
- If hard water is used for cooking purposes it can form white encrustations inside utensils.
- If hard water is used for washing purposes it produces scum or white precipitate.
- When hard water is used for bathing purposes it produces scum or white precipitate.
- It is unsuitable for cooking certain vegetables, dal and meat. They take very long time to cook in hard water.

- With hard water cloths are not cleaned properly.
- It is harmful to health as in certain cases it may lead to diarrhea and other digestive disorders.
- It is not advisable t use hard water in washing fabrics since it tends to stain white fabrics by making them appear them gray.
- Hard water foams annoying lime scales in containers such as kettles, pots and pipes etc.

(b) Adverse Effects of hard water on industrial activities :

- Textile industry: The precipitate of Calcium and Magnesium soap adheres to the fabric. These fabrics when dyed do not produce an exact shade of colour. Water containing iron and manganese salt may cause coloured spots on the fabric.
- Sugar industry: When hard water is used in the sugar refining process, then a problem may arise in the crystallization.
- Dying industry: The dissolved Calcium and Magnesium salts in hard water may react with dyes forming undesired precipitates which yield impure shade and give a spot to the fabric.
- Pharmaceutical industry: If hard water is used for preparing pharmaceutical products, it may produce certain undesirable products that may be fatal.

In the present study, as represented by Fig. 8. the mean value of total hardness was recorded to be 38.38 ppm. The standard deviation in the result was 5.98. Thus, this value is well within the maximum limit prescribed by IS 10500-2012 (BIS) and SLS 614: 2013. The total hardness in the studied area lies from 35 ppm to 42 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum hardness and then we calculated average total hardness in the studied area. The average total hardness was found to be 40.2 ppm. Table number 3 shows variance, standard deviation, poission and average deviation.Then we applied statistical corellations of total hardness with other studied parameters which is shown from table number 4 to 8.

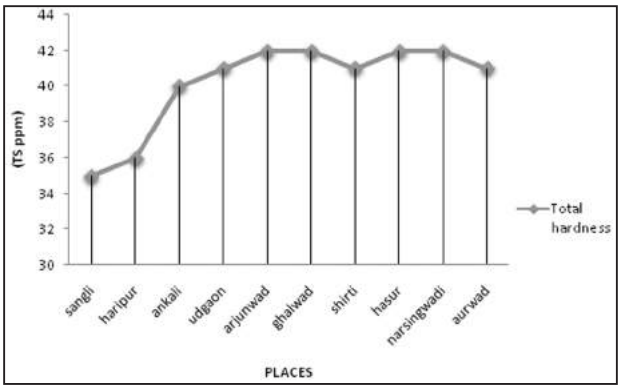

Figure Number 16 : TH Variation at Different Locations

7.12 Calcium

Calcium can be leached from practically all rocks but is much more prevalent in water from region with deposits of limestones, dolomites and gypsum. Regions where granite or siliceous sand predominates have very low calcium concentration in water. Normally calcium is found in the form of carbonates or bicarbonates. This is major element which contributes to develop hardness in water. In fact, Calcium is biologically important element essential for formation of bone and teeth. During lactation high amount of calcium is required. The calcium deficiency in dairy animals leads to disease called milk fever. Usually, it is present in the form of carbonate and bicarbonate salt dissolved in water and contributes to the hardness of the water. In the present study, as represented by Fig. 9. the mean value of total hardness was recorded to be 0.70 ppm. The standard deviation in the result was 0.17. Thus, this value is well within the maximum limit prescribed by BIS. The calcium in the studied area lies from 20 ppm to 24 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum calcium content and then we calculated average calcium content in the studied area. The average calcium content was found to be 22.3 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of calcium content with other studied parameters which is shown from table number 4 to 8[27].

7.13 Magnesium

Magnesium in natural water comes mainly from the leaching of igneous and carbonates rocks. In areas where these sources are common, magnesium concentration in water often ranges from 5-50 mg per liter. Generally, Magnesium is found in the form of its carbonates and bicarbonates. This

is the second largest element which contributes to develop hardness in water. This is a bivalent element. Usually, it is present in the form of carbonate and bicarbonate salt dissolved in water and contributes to the hardness of the water. Magnesium hazard is caused by magnesium excess can lead to soil alkalinity, resulting in declining crop yield. In the natural water system, magnesium and calcium maintain a state of equilibrium. High value of any one of cation can increase soil Ph and reduces infiltration capacity of soil, which adversely influence the crop yield. In the present study, as represented by Fig. 10. the mean value of total hardness was recorded to be 0.71 ppm. The standard deviation in the result was 0.26. Thus, this value is well within the maximum limit prescribed by BIS. The magnesium in the studied area lies from 15 ppm to 20 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum magnesium content and then we calculated average magnesium content in the studied area. The average magnesium content was found to be 17.9 ppm. Table number 3 shows variance, standard deviation, poission and average deviation.Then we applied statistical corellations of magnesium content with other studied parameters which is shown from table number 4 to 8.

7.14 Potash

Potassium was discovered by Sir Humphrey Davy in 1807 in England. It is believed that the word originated from English word pot ash. Potash was isolated through the electrolysis of very dry molten caustic potash. It is very reactive metal. The primary function of potassium in our body is to serve as an electrolyte. Potassium is the main electrolyte inside the cell along with outside the cell sodium. This creates phenomenon of membrane potential. The membrane potential allows an electric current to pass from one cell to the next. Thus potassium plays important role in contracts muscle fiber – including those in heart and transmit nerve signals. The low potassium level can cause weakness as cellular processes are affected. The deficiency of potassium reflects the symptom of weakness, cramp in muscles, or inability to move arm or leg as in paralysis. Potassium permanganate is used for water treatment that oxidizes dissolved iron, manganese, and hydrogen sulfide into solid particles that are filtered out of the water. It can also be used to control bacterial growth. According to the WHO, the excess amount of Potassium leads to potassium toxicity may cause chest tightness, nausea, vomiting, diarrhoea, shortness of breath and heart failure. In the present study, as represented by Fig. 11. the mean value of total hardness was recorded to be 0.03 ppm. The standard deviation in the result was 0.007. There are no recommendations by WHO or BIS about Potassium content in drinking water[28]. The potassium in the studied area lies from 1.8 ppm to 2.1 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum potassium content and then we calculated average sodium content in the studied area. The average potasium content was found to be 1.93 ppm. Table number 3 shows variance, standard deviation, poission and average deviation.Then we applied statistical corellations of potassium content with other studied parameters which is shown from table number 4 to 8.

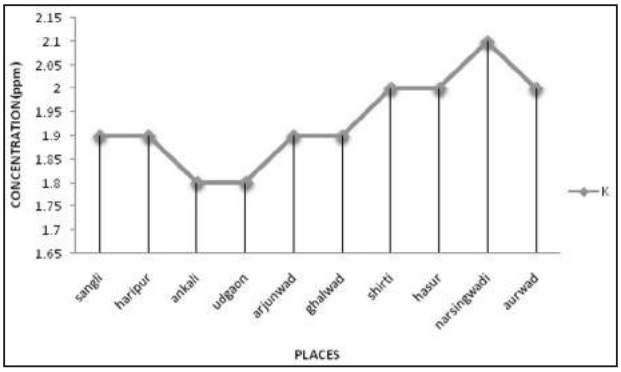

Figure Number 17 : Potassium Variation at Different Locations

7.15 Carbonate

It is present in the form of calcium carbonate and magnesium carbonate in water. In the present study, as represented by Fig. 12. the mean value of total hardness was recorded to be 0.26 ppm. The standard deviation in the result was 0.31. There are no recommendations by WHO or BIS about carbonate content in drinking water[27].

7.16 Bicarbonate

It is present in water in the form of Calcium and Magnesium bicarbonates and contributes to temporary hardness. It is possible to remove temporary hardness using simple techniques like boiling and filtration. When water sample containing soluble bicarbonate is heated then formation of insoluble carbonate with evolution of carbon di oxide takes place. The insoluble calcium carbonate forms a layer of lime stones. The removal of temporary hardness is cheap as compared to removal of permanent hardness. In the present study, as represented by Fig. 13. The mean value

of total hardness was recorded to be 0.09 ppm. The standard deviation in the result was 0.11. There are no recommendations by WHO or BIS about bicarbonate content in drinking water.

Table No. 9. Table showing a comparative study of some observed parameters with BIS standards in rainy season:

Parameters	BIS desirable limit	BIS Max Limit	Average Observed Value
pH	6 - 8.5	No relaxation	7.13
Total hardness (ppm)	300	600	40.2
Ca Hardness (ppm)	75	200	22.3
Mg Hardness (ppm)	30	100	17.9
Chloride (ppm)	250	1000	23.9
Sulphate (ppm)	200	400	85.2
Dissolved Solid (ppm)	500	2000	105.4
Fe (ppm)	0.3	1	0.235
Mn (ppm)	0.1	0.3	0
Zn (ppm)	5	15	22
Cu (ppm)	0.05	1.5	0

7.17 Chloride

The ionic compounds of Chlorine with other elements are known as chloride. Calcium and Magnesium chloride imparts permanent hardness to water and may cause damage to the visceral organs. Intake, output and metabolism of sodium and chlorine run in parallel. The homeostasis of sodium, potassium and chloride are interrelated. Chloride is important in formation of hydrochloric acid and gastric and gastric juice. Chloride ions are involved in chloride shift. Chloride concentration in plasma is 96-125 mEq/L. Chloride concentration of CSF is higher than any body fluids. Chloride is increased to maintain Donnan membrane equilibrium. Excretion of chlorine through urine is parallel to sodium. Hyperchloremia is seen during dehydration, Cushing's syndrome, and severe diarrhea which leads to loss of bicarbonate and compensatory retention of chlorine. Hypocholremia is seen during excessive vomiting. As HCl is lost, plasma chloride is lowered. There will be compensatory increase in plasma bicarbonates. But chloride is not much more harmful as arsenic. It makes water salty test. When much more chloride contaminated water is used for irrigation purposes, it is harmful for crops. Also heavily chlorinated water is harmful for fisheries. More amount of chloride may cause itching in eyes and nose. It also makes problem in digestion. Excessive consumption of chlorine may cause nausea, vomiting, confusion and convulsion. The chloride ions are most dominant in very high salinity water. Chloride ions neither effects on physical properties of the soil nor absorbed by the soil. The amount of chloride ions also effects on industrial uses. It has been observed that high chloride forms sludge and scales in the boiler. Saline water permanently spoils the soil for irrigation purpose. The amount of chloride content in water is determined using an argentometric titration method. In this method, we titrate water sample using silver nitrate in presence of potassium chromate as an indicator. The titration reaction can be represented as below[29] :

$$Cl^- + AgNO_3 \rightarrow AgCl\downarrow$$

$$AgNO_3 + K_2CrO_4 \rightarrow Ag_2CrO_4\downarrow + KNO_3\downarrow$$

When silver nitrate reacts with chloride ions formation of silver chloride takes place. There is formation of white colored precipitate. Once all the chloride ions get reacted further added silver nitrate reacts with indicator and formation of brick red color precipitate takes place. Thus the appearance of brick red color precipitate is the endpoint of the titration. When in 50 ml of water sample potassium chromate is added, the solution becomes yellow. When titration is continued the chloride gets precipitated and a white precipitate is formed[30].

$$AgNO_3 + MCl^- \rightarrow AgCl\downarrow + MnO_3$$

When all chloride ions are used for the above reaction, then $AgNO_3$ reacts with potassium chromate

$$2AgNO_3 + K_2CrO_4 \rightarrow Ag_2CrO_4\downarrow + 2KNO_3$$

Thus the appearance of a brick-red precipitate is the endpoint of the titration. In the present study, as represented by Fig. 14. the average value of chloride content 1.1 ppm with the standard deviation of just 0.38. Thus, this value is well within the maximum limit prescribed by BIS. The chloride in the studied area lies from 21 ppm to 28 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum chloride content and then we calculated average chloride content in the studied area. The average chloride content was found to be 23.9 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical corellations of chloride content

with other studied parameters which is shown from table number 4 to 8.

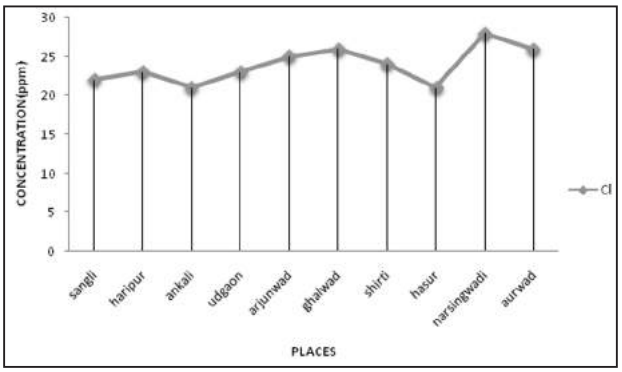

Figure Number 18 : Chloride Variation at Different Locations

7.18 Sulfate

In most natural water, sulfate is the second most common anion, being derived from most sedimentary rocks. In water bodies, being derived from most sedimentary rocks, Dissolved sulfate is derived from dissolution of gypsum or oxidation of sulfate minerals such as pyrites. Sulfate can combine with calcium to form scale in water heaters and boilers. In water bodies, sulfur is cyclic and involves organically reduced forms as well as the common free SO_2 ions. Sulfate ion is a polyatomic anion with the empirical formula SO_4^{-2}. Acid sulfate soils are naturally occurring soils, sediments or organic substrates that are formed under water logged conditions. Soils containing large amount of sulfate when exposed to air or water form sulfuric acid. This acid further leads to release of heavy metals and both these acid and heavy metals lead to effects such as degrading ground water, degrading the quality of soil. Sulfate may also enter the food chain and may adverse effect on biodiversity. Although Sulfates add to the total solid content of water, it doesn't significantly impair the water quality. But it can combine with calcium to form calcium sulfate and increase the permanent hardness of the water. The sulfate content in water can be reduced by treatments such as demineralization, reverse osmosis, electro-dialysis, evaporation, etc. Sulfates are generally present in water in the form of calcium sulfate and magnesium sulfate. These inorganic salts are highly soluble in water. When hot $BaCl_2$ is added in water sample containing SO_4^- then precipitation takes place[31].

$$Ba^{2+} + SO_4^- \rightarrow BaSO_4$$

This can be separated by using Whatmann filter paper No. 42. The dissociation of $BaSO_4$ does not take place as it requires a high amount of bond dissociation energy. In the present study, as represented by Fig. 15. The mean value of Sulfate content is 0.31 ppm with the standard deviation of only 0.38. Thus, this value is well within the maximum limit prescribed by BIS. The sulfate in the studied area lies from 81 ppm to 89 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum sulfate content and then we calculated average sulfate content in the studied area. The average sulfate content was found to be 85.2 ppm. Table number 3 shows variance, standard deviation, poission and average deviation.Then we applied statistical correlations of sulfate content with other studied parameters which is shown from table number 4 to 8.

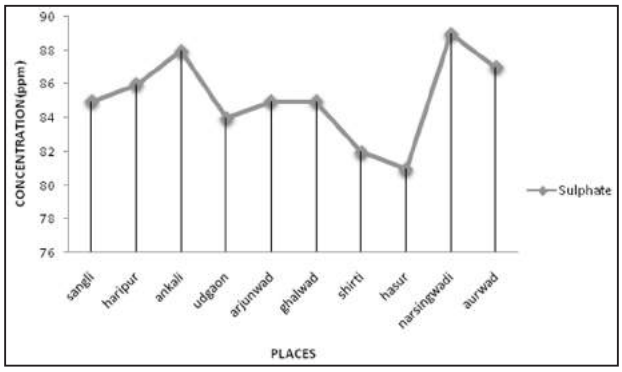

Figure Number 19 : Sulfate Variation at Different Locations

7.19 Sodium Absorption Ratio

Sodium is an essential element for plants and can be used in small quantities like micronutrients to aid metabolism and synthesis of chlorophyll. In some plants it can be used as partial replacement for potassium and aids opening and closing of stomata this helps to regulate internal water balance. Soil provides sodium to the plants. There is the natural accumulation of sodium in soil from fertilizer and pesticide. Sodium toxicity appears as necrosis or scorching of leaf tips and margins similar to micronutrient toxicities. Sodium absorption ratio describes the tendency of sodium cations to be absorbed at cation exchange sites in the soil at the expense of other cations. SAR parameter is used to determine the stability of colloids in suspension. Sodium absorption ratio is the measure of the amount of sodium relative to calcium and magnesium in the water[32]. Mathematically, it can be expressed as the ratio of Na+ concentration

divided by the square root of one half of the Ca^{2+} and Mg^{2+} concentration[33].

Table No.10. Table showing a comparative study of some observed parameters with ICMR standards in rainy season.

Parameters	ICMR desirable limit	ICMR Max Limit	Average Observed Value
pH	6 - 8.5	No relaxation	7.13
Total hardness (ppm)	300	600	40.2
Ca Hardness (ppm)	75	200	22.3
Mg Hardness (ppm)	50	-	17.9
Chloride (ppm)	200	1000	23.9
Sulphate (ppm)	200	400	85.2
Dissolved Solid (ppm)	500	1500-3000	105.4
Fe (ppm)	0.1	1	0.235
Mn (ppm)	0.1	0.5	0
Zn (ppm)	0.1	5	22
Cu (ppm)	0.05	1.5	0

$$\text{Sodium Absorption Ratio} = \frac{Na^{+}}{\sqrt{0.5(Ca^{2+} + Mg^{2+})}}$$

In the present study, as represented by Fig. 16. the average value of Sodium absorption is 0.24 ppm with the standard deviation of only 0.03. There are no recommendations by WHO or BIS about carbonate content in drinking water.

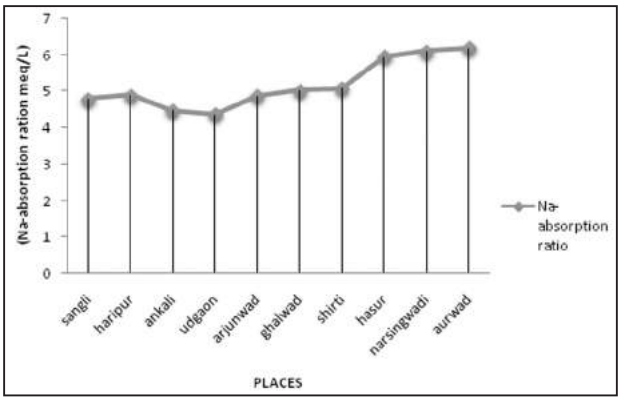

Figure Number 20 : SAR Variation at Different Locations

7.20 Zinc

This constitutes approximately 0.02% of earth crust. Zinc is poor conductor of electricity and heat. According to available evidence metallic zinc was first time produced in 1400s in India. Industrially zinc can be produced through galvanization process, roof cladding etc. The literature review reveals that activity of about 300 enzymes is controlled by zinc. Zinc is required for the activity of enzymes such as carbonic anhydrase, alkaline phosphatase etc. Zinc is an anti-oxidant nutrient. It is necessary for synthesis of certain types of proteins and wound healing. It is also responsible for the development of reproductive organs, prostate function and male hormone activity. It governs the contractility of muscles. It is important for blood stability. It helps to maintain alkaline balance in body. It helps in normal body tissue function. It helps in digestion and metabolism of phosphate. The deficiency of zinc result in development of several types of diseases such as acrodermatitis enteropathia, hypogonadism, alopecia, impaired wound healing, decreased immune responses, altered mood etc. Zinc sulfate has been shown to have an antimicrobial effect on enteric pathogens. It is commonly observed that deficiency of zinc results in the development of diarrhea. For infants and young children with acute diarrhea, zinc supplements result in clinically important reduction in the duration and severity of diarrhea. Zinc is especially important in adolescence because of its role in growth and sexual maturation. Zinc is an essential component of various enzymes such as carbonic anhydrase, alcohol dehydrogenase, superoxide dismutase for energy production, protein synthesis and growth regulation. Zinc plays important role in the synthesis of IAA. Also it is essential for water uptake and plays important role in stabilization of protein. The deficiency of zinc results in development of khaira disease in Oryza sativa, white bud in Zea maize, little leaf in Gossopium herbarium[34, 35]. The zinc in the studied area lies from 20 ppm to 25 ppm which is shown in table number 1. Table number 2 shows ,maximum and minimum zinc content and then we calculated average zinc content in the studied area. The average zinc content was found to be 22 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of zinc content with other studied parameters which is shown from table number 4 to 8.

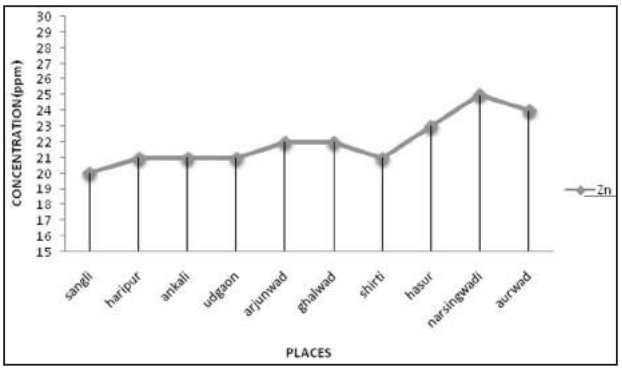

Figure Number 21 : Zinc Variation at Different Locations

In natural surface water, the concentration of zinc is usually below 10 ppm and in ground water 10-40 ppm. In tap water the zinc concentration can be much higher as a result of the leaching of zinc from piping and fitting. The amount of zinc in given water sample can be determined through Atomic Absorption Spectroscopic methods.

Atomic Absorption Spectroscopy: It is a very common technique for determination of metal ions in water sample. This technique is widely used in chemistry, environmental sciences and agro-chemistry etc. Atomic absorption spectroscopy quantifies absorption of ground state atom in gaseous state. The atoms absorb in ultraviolet and visible range and make transition to higher electronic stage. The analyte concentration is determined from the amount of absorption. The element to be analyzed should be in atomic state[36, 37]. Fig. 5 illustrates the actual setup of a Atomic Absorption Spectroscopy.

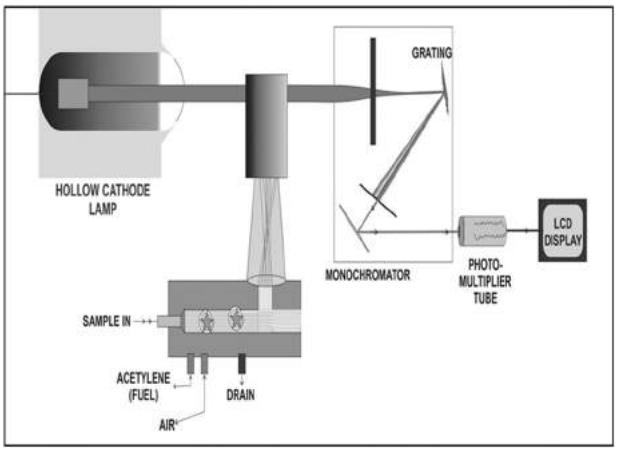

Figure Number 22 : Atomic Absorption Spectroscopy

7.21 Iron

Generally, presence of iron in water does not cause health hazardous. But iron can cause reddish brown staining of laundry, porcelain, dishes, utensils and even glassware. Iron deposition will build up in pipeline, pressure tanks, water heaters and water softeners. This reduces available quantity and pressure of water supply. Iron accumulates and creates an economical problem. Surface water contains very little or no iron. But majority of water we use come from ground water. Water continuously circulates through the cycle known as hydrological cycle. The water that steeps in the ground passes through various stages and eventually gets collected in saturation zone. As the soil varies from location to location the water also changes its taste and other properties. Iron will always try to get back in its natural state and will precipitate out of the solution in solid form[38]. The precipitate is ferric hydroxide and will turn water red. It is important constituent of two group of proteins i.e. heme-protein and Fe-S protein. Iron is involved in the production of chlorophyll. It also acts as oxygen carrier and takes part in nucleic acid metabolism. It is required for nitrogen fixation. The iron deficiency leads to development of certain diseases in plants such as white eye disease in paddy, yellow blotch in citrus and green rating in potato. The iron in the studied area lies from 0.15 ppm to 0.35 ppm which is shown in table number 1. Table number 2 shows ,maximum and minimum iron content and then we calculated average iron content in the studied area. The average iron content was found to be 0.235 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of iron content with other studied parameters which is shown from table number 4 to 8[39].

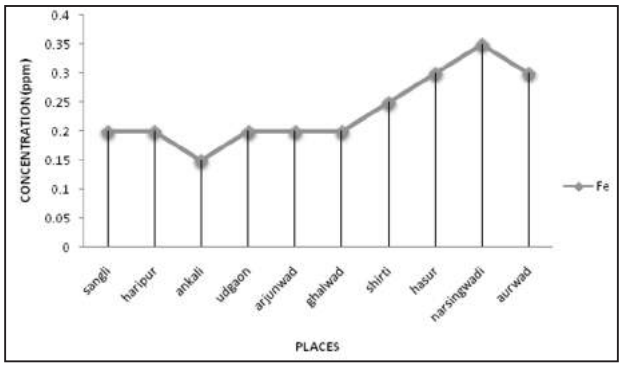

Figure Number 23 : Iron Variation at Different Locations

7.22 Copper

The copper content at a maximum available level of 1.3 mg per liter of drinking water, to protect against short term gastro-intestinal tract problem. However, there are many side effects of copper also

such as nausea, diarrhea, headache, an irregular heart beat etc. Excessive does of both Cu and As can induce toxic effects on living organisms such as heterotrophic microorganism. There is strong evidence that increasing concentration of Cu and As impact bactericidal effects. Copper is necessary in carbohydrate and nitrogen metabolism. It is used in electron carrier in oxidation –reduction reaction. It assists in utilization of iron in chlorophyll synthesis. It enhances the fertility of mala flower. It enhances disease resistance in plants. The copper in the studied area is 0 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum copper content and then we calculated average copper content in the studied area. The average copper content was found to be 0 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of copper content with other studied parameters which is shown from table number 4 to 8.

7.23 Manganese

Actually iron is more common than manganese. But generally they both occur together. In fact, iron and manganese none can produce any problem especially related with health. But presence of manganese causes change in taste of potable water sample. Manganese causes brownish stain. Such stains cannot be removed using soaps and detergents. Iron and manganese are concentrated in water by contact with rocks and minerals. The Iron and manganese may exist in many different chemical forms. The presence of a given form of iron and manganese in geological material or water depends upon many environment factors. As the general rule surface water or ground water does not contain much amount of manganese. This is because there is availability of oxygen and often it forms oxides which are insoluble. It is observed that some type of bacteria derive their energy by reacting with soluble form of iron and manganese. Manganese is necessary in photosynthesis, nitrogen metabolism and to form other compounds required for plant metabolism. It takes part electron transport in photosystem. Mn acts in enzyme activation. The manganese in the studied area is 0 ppm which is shown in table number 1. Table number 2 shows, maximum and minimum manganese content and then we calculated average manganese content in the studied area. The average manganese content was found to be 0 ppm. Table number 3 shows variance, standard deviation, poission and average deviation. Then we applied statistical correlations of manganese content with other studied parameters which is shown from table number 4 to 8 [40].

Table No. 11. Table showing comparison of water parameters with WHO standards in rainy season:

Parameters	WHO Standards	Average
Air Temperature	No guidelines	37.25
Water Temperature	No guidelines	31.04
pH	No guidelines	7.61
EC	2.50 µS/Cm	377.65
Total Hardness (ppm)	No guidelines	42.4
Ca Hardness (ppm)	No guidelines	25.8
Mg Hardness (ppm)	No guidelines	17.6
Permanent Hardness (ppm)	No guidelines	16.9
Chloride Content (ppm)	250 ppm	12.572
Sulphate Content (ppm)	500 ppm	59.1
Alkalinity	No guidelines	141.5
Total Solid	No guidelines	190
Total dissolved Solid	No guidelines	134
Suspended Solid	No guidelines	56
Percentage DO	No guidelines	0.2143
Na (ppm)	200 ppm	25.7
K (ppm)	No guidelines	2
Fe (ppm)	No guidelines	0.351
Mn (ppm)	0.5 ppm	0
Zn (ppm)	3 ppm	23.8
Cu (ppm)	2 ppm	0

8. Results and Discussion

There are various national and international organizations which have set standards for quality of drinking water. We have compared our result with the Bureau of India Standards (IS 10500-2012) and all the parameters were found to be within limits prescribed [11]. Finally, we compared the observed and calculated values with BIS, ICMR and WHO and standards which are shown in table 9, table 10 and table 11 respectively.

9. Conclusion

The water quality analysis of Krishna river was undertaken in the mansoon season in year 2008 with a view to investigate the various changes in its hydro-biological features. For confirming good quality of water resources large number of physico-chemical parameters, magnitudes and source of any pollution load must be known for which monitoring of physico-chemical and pollutants is essentials.

The first objective of the research work was to find the quality of Krishna river water w.r.t drinking and agricultural purpose. From the experimental results of water quality analysis of Krishna river, it can be concluded that the water quality is good and most of the parameters are within the limits set by organizations like WHO and Bureau of Indian Standard (BIS) [12]. From the experimental observations and statistical analysis it can be concluded that Krishna river is suitable for drinking and agriculture purposes in the studied duration.

10. Conflict of Interest

There are no conflicts of interest to declare.

11. Acknowledgement

The authors pay sincere tribute to Late Ms Deepika Rai Dhirendra Prasad who suddenly left this world and lived very short span of life, we the authors remember her on this occasion and pray Almighty God for peace of her holy soul. The authors are thankful to Shri Netaji Pawar from Vanita Agrochemicals Takwade and A. S. Patil Shri Datta Sugar Factory, Shirol who provided laboratory facility without any charge. They are also thankful to Dr. J M Patil for technical supports during experimentation.

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EXPORT PROSPECTS AND MARKETS

PDS multinational fashions looking to expand its footprint in UK, US markets

PDS Multinational Fashions (PDS), which witnessed a seven per cent sales decline in FY21, is expecting a growth in its topline this year, backed by market expansion and diversification into new product categories.

The ₹6,200-crore company, which is into apparels, is looking to expand into home fashion and active wear categories.

PDS offers a global plug-and-play, design-led sourcing, manufacturing and supply chain platform and caters to over 190 leading brands and retailers globally.

Sanjay Jain, CEO, PDS said, the lockdown induced due to Covid-19 pandemic impacted supply chain and led to a decline in sales during the first half of last year. However, the company recovered in the latter part.

Its turnover increased by around nine per cent in Q4FY21 at ₹1,765 crore, up from ₹1,626 crore in Q3. "We looked at new opportunities and ventured into PPE gears. We arrested the decline in sales (on a year-on-year basis) to around seven per cent last year and also managed to bring down cost," Jain told recently.

With some of its key markets in the UK, Europe and the US opening up, there has been good traction (in demand) during the first quarter of this fiscal. The company is hopeful of getting "back on track", he said refusing to divulge further details.

With a presence in over 22 countries, PDS is looking to expand its footprint in the US market and has onboarded business leaders, according to its latest annual report. It is also building teams focused on Australia, New Zealand and Scandinavian countries.

Europe and the UK are predominant markets for PDS accounting for nearly 84 per cent of its total business. The US, which accounts for around eight per cent, should increase to around 20 per cent over the next three-to-five years.

The company also plans to focus on turning around its manufacturing facilities in Bangladesh by increasing utilisation and enhancing efficiencies. PDS also has manufacturing facilities in Sri Lanka and India (via a minority stake).

Close to 10 per cent of the company's topline comes from its own manufacturing while the remaining comes from sourcing primarily from Bangladesh, China, Egypt and Myanmar among others.

The company has also set up a team to enter home textile category. "We hope to start by October this year and by March, we expect a small part of our turnover to come from this segment," he said. ❐

Home textile exporters to touch 20-25% growth in FY22 : Report

Home textile exporters are set to clock a 20-25 per cent growth in 2021-22 with healthy margins, according to a report.

The pandemic-induced lifestyle changes stemming from heightened consciousness about hygiene and increased prevalence of stay-at-home options are likely to result in a robust performance for Indian home textile exporters, Icra said in the report recently.

Home textile exporters are set to register 20-25 per cent growth during FY22 with healthy margins, it added. "For the past three quarters, sales for the sample set have averaged 25-40 per cent higher than the 3-year average for the pre-Covid period.

"Home textile exports was one of the first few textile segments to recover from the impact of the pandemic last fiscal, with companies reverting to year-on-year growth from the second quarter of FY21 itself and reporting three consecutive quarters of double-digit growth thereafter," Icra Senior Vice President and Co-Group Head, Corporate Sector Ratings, Pavethra Ponniah said.

"Besides faster opening up, increase in exports to the US is partly attributable to the distribution model for these products, with a meaningful share accounted for by the large departmental chains that remained open even during the lockdown phase," Ponniah added.

Moreover, expectations of a strong festive demand this year, backed by favourable vaccination coverage across key markets are reflected in the healthy order book position of Indian home textile exporters, the report said. ❐

Pace of apparel exports to key markets picks up

Apparel exports to major markets such as the U.S., Europe, U.K., Saudi Arabia, Canada, Japan and Australia were recording healthy growth and the sector would contribute significantly in achieving India's $400 billion exports target for the current fiscal year, AEPC said recently.

Apparel Export Promotion Council (AEPC) Chairman A. Sakthivel said apparel exports were picking up in every western market.

"Exports to the U.S. increased by 22% during January-May 2021 as compared with the same period of previous year," he said at the council's 42nd Annual General Meeting.

"India's exports face a duty disadvantage of 9.6% for exports to EU vis-a-vis exports from other countries like Bangladesh, Cambodia, Turkey, Pakistan and Sri Lanka," Mr. Sakthivel said.

"In the U.K., Bangladesh continues to enjoy preferential trade benefits after the U.K.'s departure from the EU," he added. ❐

Govt approved extension of RoSCTL scheme for garment exporters

However, exporters of the textiles products that are not covered under the RoSCTL scheme will get the RoDTEP benefits, along with those of other goods. The Cabinet had approved the extension of the RoSCTL scheme on July 14.

The scrips are to reimburse the exporters for various embedded taxes and levies (not subsumed by GST) contained in the exported product to keep such exports zero-rated, in sync with global best practices. Exporters can use this scrip to pay basic customs duty for the import of equipment, machinery or any other input.

A Sakthivel, chairman of the Apparel Export Promotion Council (AEPC), said the move will help the country realise the lofty merchandise export target of $400 billion for FY22.

"The decision adds to the stability of the export policy of textiles. The scheme will promote start-ups and entrepreneurs to start exporting their products. It will rejuvenate the textiles sector and, in three years, the Indian textile value chain can attain annual exports of $100 billion," Sakthivel said.

Having shot up sharply in April and May, primarily due to a favourable base, growth in the country's garments exports lost pace in June. Such exports grew just 25% year-on-year, against a 48% jump in overall merchandise exports. Overall textile and garment exports had recorded a 10% contraction. ❐

Garment exporters scare, part of Biz may shift to other Mkts

Garment exporters fear that a portion of their business may shift to countries like Bangladesh, Thailand and Vietnam, as a steep increase in local cotton and cotton yarn prices over the last seven months has made their products less competitive in global markets.

Unchecked export of cotton and cotton yarn, particularly to countries such as Bangladesh, Vietnam and Thailand that are India's direct competitors, and even to China, with an advance agreement, is causing a local short supply of these raw materials and driving up their prices, they said.

These exports are done at a fixed price for seven months with assurance of availability. This in turn is hurting India's garment exporters who too have six month agreements with importing countries for the finished products, they said.

"The industry is currently facing a shortage of cotton yarn and fabrics, thus hitting production, employment and exports," said Lalit Thukral, president of the Noida Apparel Export Cluster. "The steep rise in the price of cotton, ranging from 30% to 60%, over the past six months has also led to increased cost of production, making it even more difficult for the industry to compete globally." India's export of Indian cotton and cotton yarn has increased by 56% in the past six months, whereas apparel shipments to global markets have risen by just 24%, he said. "Had this cotton and cotton yarn export diverted to the domestic market, the Indian apparel export would have increased many times, with proportionate increase in employment generation." ❐

Govt sets target worth Rs. 10K cr of handloom exports

Textiles minister Piyush Goyal recently called for increasing handloom exports to ₹10,000 crore and doubling the production to ₹1.25 lakh crore in the next three years with a view to promoting the growth of the sector.

At present, handloom exports are worth ₹2,500 crore and production is about ₹60,000 crore.

"Let us all resolve collectively that we will go for a ₹10,000 crore target for exports of handloom products and a target to increase our production to ₹1.25 lakh crore in the next three years," he said at the National Handloom Day celebrations.

He also suggested forming a team under the chairmanship of Sunil Sethi of Fashion Design Council of India (FDCI) consisting of weavers, trainers, equipment makers, marketing experts and other stakeholders to recommend ways and means to promote the growth of the sector.

The sector should become strong and prosper without depending much on state support, Goyal said.

EXPORT PROSPECTS AND MARKETS

"We have to look for new ways to boost handloom production and explore new markets," he added.

Speaking at the event, textiles secretary U P Singh said the ministry is working on ways to ensure artisans and weavers get the right price for their products.

"We are trying to onboard more and more handloom players on GeM (government e-marketplace). Over 1.5 lakh handloom weavers are there on GeM," he said. ❐

Exports surge 50.45% in first week of August

Led by engineering goods, gems and jewellery, and petroleum products, India's exports rose 50.45% to $7.41 billion during August 1-7. Imports rose 70% to $10.45 billion, leaving a trade deficit of $3 billion, tentative data released recently by the commerce and industry ministry showed.

The top export destinations were the US, UAE and Saudi Arabia while the highest rise in imports was seen from the UAE, China and Nigeria.

Outbound shipments of engineering goods increased 63.2% and petroleum product grew 145.3%. Gems and jewellery exports witnessed a growth of 121% whereas iron ore, oil meals, oil seeds saw the steepest decline in exports.

In the first four months of FY22, merchandise exports were $130.56 billion, which is 32.64% of the $400 billion target set by the government for this fiscal and up 73.8% over the corresponding period last year. Imports of oil in the first week of August rose 141% to $1.8 billion while those of electronic goods were up 31% to $308 million. However, gold imports declined 12.48% to $100 million.

Non-petroleum, non-gems and jewellery imports — an indicator of domestic demand — grew 53.3%.

The Trade Promotion Council of India (TPCI) said lf late that increasing container freights would push the overall cost of domestic goods in the international markets, which would make it less competitive and hurt the country's merchandise exports.

"New records have been hit in container freight spot rates of all carriers, as the Asia-Europe route continues to rise. The industry is worried that if this situation persists, there can be a 5-8% increase in the cost of goods from India," the council said in a statement. ❐

Cotton prices surge, textile trade seeks zero duty

With cotton prices rising, the textile industry has sought removal of 10% import duty on the produce.

Southern India Mills' Association (SIMA) chairman Ashwin Chandran said in a press release that the increase of ₹3,800 a candy of cotton over the past 15 days by the Cotton Corporation of India (CCI) and the 10% import duty on cotton were affecting the entire textile value chain. It had made textile exports 'expensive' in the global market, he said.

Though the CCI offered three months' lock-in for bulk purchase, textile mills could not benefit due to a liquidity crunch and uncertainty in cotton prices, he said. The import duty has encouraged price speculation, he claimed. For some varieties, prices of Indian cotton had exceeded the international price.

Pradeep Kumar Agarwal, CMD, CCI, said international cotton prices and MCX prices had risen by ₹7,500 and ₹6,000 a candy, respectively, in the last one-and-a-half months. But, he pointed out, CCI had raised prices by ₹2,200 to ₹2,500 a candy for the same period, except for 1-2 varieties where it is higher. In the last few months, 40% of the cotton sold by CCI were purchased by textile mills directly. ❐

RoSCTL extension to facilitate textile exporters ink long-term contracts

The extension of the Rebate on State and Central Taxes and Levies (RoSCTL) scheme for garments and made-ups exports till 2024 would help exporters to sign long-term cotracts and achieve the target of $100 billion set by the government.

Manoj Patodia, Chairman, The Cotton Textile Export Promotion Council of India, said the government has recognised the potential of the made-ups and home textiles sector as an engine of economic development by providing employment, promoting inclusive growth and ensuring empowerment of women.

The continuation of the RoSCTL Scheme till 2024 lays down the foundation for reaching the target of $100 billion in the textile and apparel sectors, he added.

With a stable policy regime, he said, the exporters will also be encouraged to enter into long-term contracts with their buyers which will lead to higher export growth.

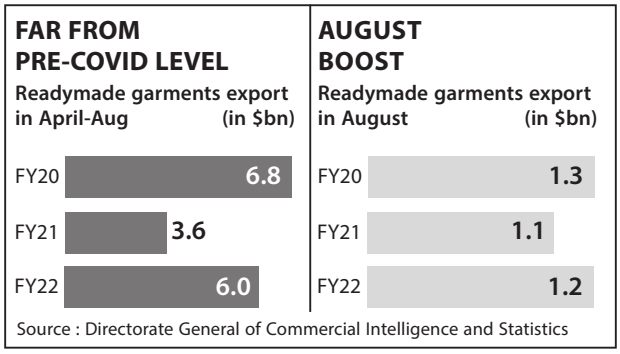
The textile and clothing sector will make a significant contribution realising the overall export target of $400 billion by 2024, he said. ❐

China plus one sees India's textile sector in a sweet spot

Despite container shortage and a shipping crisis capsizing the sector, India's textile industry has managed to weave a revival story. It is in a sweet spot, largely because of the China Plus One policy of European and US apparel brands, and the ban on Chinese cotton by the US.

Based on the latest available data, the export of ready-made garments (RMG) of all textiles increased 67 per cent during the first five months of the current fiscal year, showing signs of recovery.

From April-August this fiscal year, revenue from RMG exports was seen at $6.02 billion, up from $3.6 billion during the same period in 2020-21. This is still 11 per cent lower than $6.8 billion during the April-August period of 2019-20. This comes on the back of reports of a 36-per cent year-on-year rise in clothing exports during the first half of this year and textile and apparel exports to the US — India's single-largest market — too seeing a spike of 55 per cent during the first seven months of 2021, compared to the same time the previous fiscal year.



Source : Directorate General of Commercial Intelligence and Statistics

"There is a huge sentiment in favour of India in the past few months globally. We are seeing a major rise in exports to the US as they are trying to shift to India, despite a shipping and container crisis," said A Sakthivel, chairman of Apparel Export Promotion Council. Based on industry estimates, there is a huge shift of garment exports from China and Vietnam to India.

In September, Textile Minister Piyush Goyal had indicated that the Cabinet may soon clear a ₹10,683-crore production-linked incentive scheme for technical textiles and man-made fibre products that will boost domestic manufacturing and exports. ❐

Textile traders scared over pending payment in Afghanistan

Following reports that textile traders in Surat are struggling due to pending payments from Afghanistan, the Apparel Export Promotion Council (AEPC) said around ₹200-300 crore is stuck in that country for almost a year. There were media reports that said that the pending payments were to the tune of ₹4,000 crore. When asked, A Sakthivel, chairman, AEPC, clarified, "It is hardly ₹200-300 crore. There is no reason to panic. "When contacted, Champalal Bothra, general secretary, Federation of Surat Textile Traders Association, said ₹4,000 crore has been pending since 2016. According to Narain Agarwal of the Synthetic and Rayon Textiles Export Promotion Council, the figure was unlikely to be high since most exports happened via letter of credit. ❐

Cabinet approved PLI scheme

The Union Cabinet approved a production linked incentive (PLI) scheme for man-made fibre segment and technical textiles with a financial outlay of ₹10,683 crore over five years to boost domestic manufacturing and exports from the sector, an official said. The proposal is expected to come up before the Union Cabinet meeting recently, the official added. The Cabinet had earlier approved PLI schemes in 13 key sectors for enhancing India's manufacturing capabilities and exports. After the approval, the textiles ministry would come with detailed guidelines of the scheme for these sectors. ■

LRT participated at ITMA Asia 2021, Shanghai, China

Replies from the learned Readers

Explain the steps to be taken care in spinning while increase in Micronaire Value in cotton ?

Mr. S. Vijayan, Factory Manager, Kiwi Cotspin Pvt. Limited, Annur, Tamilnadu

If we are using higher Micronaire cotton, yarn is having lesser number of fibers in cross section. So, the strength will be decreased drastically. We should improve the strength of yarn by increasing TPI.

If we increase the TPI, Spindle speed should be increased to compensate the production because of higher TPI. So, we have to use one or two number finer Traveller. Meanwhile, hairiness will not increase while using the lighter Traveller because of short fiber content is low in high MIC cotton.

Higher bow height Traveller may be used to avoid the tension breaks in spinning. For example, if we are using UL Traveller, we have to try ML or UM. Roving hank to be maintained slightly finer to reduce draft. If we give higher draft, spinning breaks and thin place will be increased due to lower number of fibers in cross section.

Break draft should be increased to avoid the running breaks in spinning. Drafting pressure to be increased slightly and Cop building tensions should be increased to avoid the slough-off in Auto-coner.

Slightly higher temperature to be maintained in spinning because moisture content is more in High Micronaire cotton. Traveller clearer setting should be widened.

Roving TM to be increased to avoid thin places in yarn. Stretch or creel breaks also reduced in spinning while using higher TM Roving in spinning.

Cots should be in the nominal diameter and buffing schedule should not be deviated and lower diameter cots should not be used.

Mr. D. Nagaeswararao, Manager-QAD, Idupulapadu Cotton Mills P Ltd, Guntur, Andhra Pradesh

The given below steps to be taken care, while Micronaire value is high in cotton, care to be taken in Bale Management, Selection of Cotton, Precautions in process, Humidification control and controlling Hairiness.

The Micronaire is the weight of one-inch length of fiber expressed in micro grams. Micro gram = 10 – 6 = 0.000001 grams, this will decide the number of fibers in yarn cross section. If Micronaire is in finer side, the number of cross section of fibers will be increased & the elongation and the strength will be increased. If it is in course side, the number of fibers in cross section of yarn will be dropped and gets lower CSP.

In the course Micronaire the fiber entanglements are very less, it is not required more beating points, hence, it is better to reduce beater speeds at blow room. Maintaining the degree of opening as good as better. And also reducing the licker in speed in carding and reducing the cylinder speed 350-400 RPM is better to control the fiber stress during processing. Maintaining the course hank in carding it will increase numebr of fibers in cross section at card sliver.

The process parameters to be little bit-fine-tuned, the speeds and the TM to be applied as per the norms. Select proper ring Traveller, choose heavy Traveller to reduce the Hairiness and the ring diameter should be 42 MM. To maintain RH in all stages and proper air circulation needed. Generally, in spinning RH 50-55%, preparatory and other departments not less than RH 65% to be maintained to avoid fly generation.

The final package of cones should be kept on the floor without using covers then apply the fog evaporation of water buds. The course Micronaire will fully observe the water evaporators and giving additional strength to the yarn which is produced by course Micronaire.

Mr. M. Thamarai Kannan, Maintenance Manager, Dwarkadhish Cotspin Pvt Limited, Chuli, Gujarat

Micronaire : It is a measured of the air permeability of compressed cotton fibers. It is often used as an indication of fibre fineness and maturity. If Micronaire value increased, the number of fibres in the cross section of the yarn decreased & bulky and vice versa.

Blow room beater speed should be minimised to avoid the fibre rapture. Suction pressure of both input and delivery side to be checked and if it is in higher side, it should be reduced to avoid neps generation.

Carding Licker in and cylinder speed should be minimized and hank to be made finer to improve spinning process in breaker drawing, lapformer

and finisher drawing, the number of doubling to be reduced to get uniformity and paralyzed in comber, feed per nip to be reduced along with lap weight to get better opening and finer the dense in the top comb. In speed frame, TM to be increased to reduce the thin fault and also break draft to be fine-tuned further.

Finally, in Ring frame, care to be taken in selection of Traveller while increasing Micronaire value in cotton, higher bow height Traveller to be used. Also, wider spacer to be used, TM to be increased, Chase & Winding length to be fine-tuned if requires.

Mr. T. Ravi, Factory Manager, Acsen Tex Pvt Limited, Athur, Tamilnadu

The following points to be taken care while increase in Micronaire value in cotton.

- Blow room all beater setting should be increased.
- Blow room all grid bar and wing setting also to be opened.
- Carding licker-in and cylinder speed should be increased.
- Carding hank should be fixed depending upon number of cross section.
- Feed plate to licker in setting should be opened.
- Breaker drawing ends may be increased based on trials.
- Unilap, lap weight to be increased based on trials.
- Comber noil % to be reduced.
- Comber hank, break draft, setting may be changed depending on trials.
- Spinning spacer may be closed to 0.25 MM.

Mr. S. Murugaraj, Quality Manager, Vaibhav Ginning & Spinning Mills P Limited, Gondal, Rajkot, Gujarat

Among all the cotton quality parameters, Micronaire value decides the cotton fineness and number of fibers in yarn cross section and Spinnability of yarn count. In order to reduce variation of fibers in yarn cross section better control in process is important. Accordingly, the following steps to be taken care while increase Micronaire value in cotton.

In Blow room, Beater speed to be increased up to 150 RPM. A thump rule is maximum beater speed, but fiber rupture should not be beyond 4%.

In first picking bales moisture% should be over 9%, mixing laydown to be done before 24 hours and the blow room RH% to be maintained around 50% with higher temperature of around 36.5C.

Coarser Micronaire fibers normally having single fiber strength more, it is kept closer setting between feed roller to beater i.e. up to 2 to 2.5 MM in order to better individual.

In Carding maximum cylinder speed i.e. 500 to 550 RPM, Higher Licker in speed i.e. 1200 RPM will help better individuation. Carding, Drawing and Comber Hank to be made coarser side i.e. 0.100 Hank. If we maintain, number of fibers in sliver are below 30000 in cross section, thin places will be more in final yarn.

Because of coarser hank and bulkiness of higher Micronaire cotton, it is suggested to reduce the number of doubling in lap former, if it is beyond this 18 doubling, there is no gap between sliver which is the reason of air passing along with sliver and there is no way of escaping the air in winding zone and creates abnormal lap licking.

All the cots to be cleaned timingly, since dust deposition occurred frequently. Drafting pressure to be maintained higher side than breaker to reduce fiber slippage. Roving TPI to be increased maximum to avoid undrafted ends in spinning. In spinning closer spacer helps to better fiber control and higher TPI to maintain strength and hairiness.

Mr. R. Jayaramaraj, D.G.M, PBM Polytex, Petlad, Gujarat

In Blowroom speed and grid bar setting to be changed based on waste%.

In Carding cylinder speeds one step to be increased. Sliver hank to be on coarser.

In Simplex TM one step to be reduced. Roving hank to be on coarser.

Spinning TM one step to be reduced. In parallel speed also to be slightly increased.

One number heavier Traveller to be used.

Spinning draft one step to be reduced and bobbing holder's conditions to be checked.

Spinning Spindle tape conditions to be checked & lean tapes immediately replaced.

Smooth material travel paths required everywhere.

CORPORATE NEWS

Mr. B. Srikanth, OSD, Vantage Spinners P Ltd, Gollapalli, Andhra Pradesh

The following measures we want to take care in spinning while increase in Micronaire value in cotton.

The higher degree of opening and cleaning is required in blowroom stage.

In Carding we want to increase carding elements speeds in cylinder and licker-in.

In Preparatory go for coarser hank for maintaining the cross section of fibers in the material.

In simplex, higher TM to be maintained for better fiber binding.

Also, Creel draft of simplex to be reduced for reducing the stretch in passage of feed material.

In Ringframe, we want to adopt Higher TM and go for heavier Traveller for minimizing Hairiness.

Adopt suitable yarn tension and drum speeds in auto coner for minimizing Hairiness.

Maintain little bit Wet RH% for avoiding fiber liberation inside the department.

For further information, please contact :
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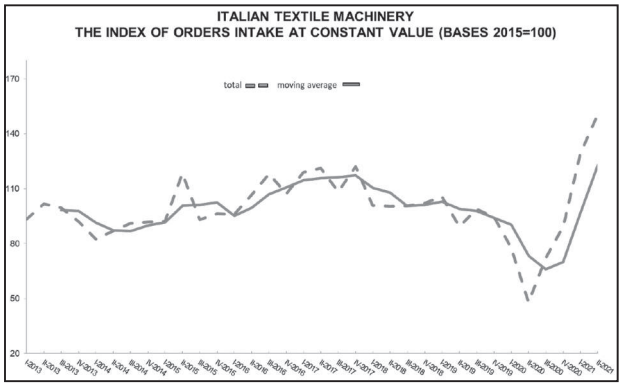
Orders intake bounces back sharply for 2nd quarter 2021

The index of orders intake for Italian textile machinery, as processed by ACIMIT, the Association of Italian textile machinery manufacturers, for the period ranging from April-June 2021, was up 214% compared to the same 2020 period. The value of the index was attested at 150.7 points (basis: 2015 = 100), a result that was no doubt influenced by the comparison with a quarter, from April-June 2020, in which orders were obviously at a minimum, due to the Covid-19 pandemic.

An analysis of the index of orders intake for the first six months of 2021 confirms a clearly positive business dynamic for Italian manufacturers. An overall growth rate of 122% compared to the first half of 2020 regarded both the domestic and export markets.

Alessandro Zucchi, president di ACIMIT, comments: "The data are certainly positive, bearing witness to a renewed climate of confidence." On the domestic market, in addition to a physiological rebound following the collapse in 2020, the boost generated by 4.0 incentives is being felt. "The push towards digitalization in the business sector," adds Zucchi, "is being perceived as creating a competitive edge for the entire textile industry, especially here in Italy."



In spite of these encouraging signals, a sense of uncertainty persists nonetheless on the actual solidity of this recovery. "There is no lack of obstacles facing our machinery producers during this phase," states ACIMIT's president. "The sharp rise in the price of raw materials does not seem to be stopping, to which we can add the limited availability of components, making it difficult for our manufacturers to fulfil the many orders they've received. Finally, the limitations imposed on the business travels of our staff persist, above all qualified assembly technicians." These are all issues that affect the sector's order forecasts for the third quarter of 2021. To this end, ACIMIT's survey have revealed a substantial stability compared to the previous three months for domestic orders (as expressed by 59% of companies), and a prevailing caution also abroad, where forecasts of stable or decreasing orders make up 74% of the answers given by Italian companies in the sector.

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Knitwear firm, Rupa & Co focuses on sales growth

Knitwear-maker Rupa & Company Ltd is expecting around 18 per cent growth in sales in FY22 backed by premiumisation of portfolio and entry into newer markets, besides strengthening presence in existing markets.

The company had registered around 35 per cent growth in standalone turnover in FY21 at ₹1,261 crore, although sales were disrupted in March last year due to the Covid-19 induced lockdown.

According to Ramesh Agarwal, ED & CFO, Rupa, March is a strong month for knitwear sales. However, the nationwide lockdown in March 2020 impacted sales. Barring last fiscal, the company has been registering an annual turnover of ₹1,100-1,200 crore over the last few years on a standalone basis.

"We are expecting 17-18 per cent growth in sales this fiscalon the back of a huge demand for athleisure and casual wear ahead of the festival season and for thermal wear with winters round the corner," Agarwal told recently.

The company, which registered less than one per cent growth in standalone turnover at ₹207 crore in the first quarter of this fiscal, is hopeful of 20-22 per cent sales growth in Q2 FY22.

"In the first wave, after the lockdown, was lifted we saw a very good demand. But in the second wave, the demand has been low as the rural markets were affected. But we have been witnessing an improvement since June onwards," he said.

Rupa, which has a diversified product basket comprising innerwear, thermal wear, casual and athleisure, and a bouquet of brands across price segments spanning economy and super-premium.

Plans are afoot to ramp up its offerings across mid-premium and super premium currently account for nearly 30 per cent of the total turnover.

"Going ahead, the will increase focus on women wear, casual, and thermal wear," it said in the investor press release.

"In south, we are currently present in Karnataka and Telangana, we are looking to strengthen our presence further in these markets and also look at other markets including Kerala and Tamil Nadu. This apart, we are also looking at strengthening our footprint in Madhya Pradesh and Chhattisgarh," he said.

The company has close to 1,300 dealers and distributors across the country and it plans to add 100-odd distributors during the current year primarily in central and south India. Rupa's products are available across 1,25,000 outlets at present.

On the exports front, it currently exports to markets in UAE, Saudi Arabia, Kuwait and Iraq and it has also added newer markets like Myanmar, Ukraine, Algeria, Indonesia, Nigeria, Congo and Singapore among others. According to information available in investor presentation, the company's exports stood at close to ₹25 crore in FY20. It plans to double its exports by FY22 by expanding to new international geographies. ❐

Wet Wipes Producers Commit to Further Revise Labelling

Consumer campaigns to raise awareness and promote correct disposal also planned

EDANA and member manufacturers of wet wipes have committed to revise on pack labelling to further raise consumer awareness on types of wipes and optimal disposal methods. This commitment will also see EDANA and pertinent members lead national awareness raising campaigns in the UK and a number of selected EU countries, beginning with the Netherlands in 2022.

Our sector has long been active in trying to address the serious problem caused by marine litter and of the role the industry has a duty to play in helping tackle it. In fact, EDANA has already invested in efforts to reduce wet wipe litter, raise consumer awareness on correct disposal, adopt a Code of Practice for labelling wet wipes and produce wipes that do not impact sewers. Now increased efforts, in conjunction with key stakeholders, and centred on a sound, science-based and collaborative approach can greatly help progress in this direction.

Further detail on the planned revisions and awareness campaigns is available here.

About EDANA

EDANA helps its members to design their future, serving more than 320 companies in the nonwovens and related industries, across 39 countries. Its mission is to create the foundation for sustainable growth of the nonwovens and related industries through active promotion, education, and dialogue.

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CORPORATE NEWS

MAGnificient 30 Years Journey....1991 to 2021

MAG Solvics Private Limited is celebrating 30 successful years in the field of textile testing instruments and online monitoring system. Commitment towards quality of products and servicesto customers are the MAG's strongest driving forces which result in sustaining in the competitive field over 3 decades.

The vision of MAG is to deliver happiness through innovative solutions to customers. Innovation and continuous improvement are the two key mantras which made MAG as one of the known brand icon in the textile industry and particularly at testing instrument field and online monitoring system.

MAG Solvics has around 8000+ installations with a strong base of 3000+ satisfied customers from 15+ countries and keep attracting more customers in its fold by supplying quality products.

Uniqueness of MAG is having 72 distinct testing Instruments for entire textile value chain such as Ginning, Spinning, Weaving, Knitting, Processing, Apparels and Garmentswith 130+ models of instruments to cater the exact needs of the end users which will be value for money without compromising quality.

Few of the present products range are :

From Left to Right :

1. Fiber Testing – HVT Expert 1401
2. Yarn Testing – UH Expert 2012
3. Tensile Testing (Yarn) – TensoMaster
4. Fabric Tensile Testing – UniStretch 500
5. Process Testing –WashFast
6. Online Spindle Monitoring System - SPinFo

On the occasion of the 30th year anniversary, MAG sincerely thanks to all valuedcustomers for having the trust on theirproducts and making the success in the path of journey. Also MAG thanks to their channel partner and associates for their valued support rendered all along its journey.

To mark this occasion of 30th Anniversary, MAG is planning to launch a truly innovative product soonto delight the customers further.

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❐

Donear Group leverages growth momentum with acquisition of Mayur Brand and PV suiting global distribution Network from RSWM

Riding high on its continuous growth momentum, the new-age textile and apparel maker and creator, DONEAR Group has announced the acquisition of MAYUR Fabrics and PV Suiting Global distribution network from RSWM. This move will solidify DONEAR Group's comprehensive product basket and global augmented geographical footprint. DONEAR Group has enforced a consistent growth policy since 2017, with two world-famous textile brands, GRADO & OCM already gathered under its portfolio. Having a strong presence in over 30 + countries, DONEAR Group boasts its 3rd acquisition in a short span of three years, hence strengthening its conglomerate status with an extensive distribution and retail network. By focusing on the Group's inherent strength of manufacturing and distribution of premium quality branded fabrics, DONEAR Group will be able to scale up MAYUR brand exponentially. Furthermore, MAYUR Brand's strong presence in the institutional and uniform supplies will compliment DONEAR Group's agile manufacturing facilities and robust distribution network.

Touted to be 'MAYUR - Stars ki Pasand' a household name for trend - conscious buyers offers classic fabrics at an affordable price. The collection is used by some of the world's leading fashion brands, including Kenneth Cole, Marks & Spencer, Perry Ellis, Ann Taylor and H&M to name a few. Moreover, PV Suiting distribution network from

RSWM's presence in overseas markets will help expand the proportionate market share of Donear as a group. PV Suiting distribution network from RSWM has achieved long strides in the UK and Middle East which will serve as catalysts for Donear group to have a strong foothold in these regions.

Speaking about the acquisition, Mr. Rajendra Agarwal, Promoter & Managing Director of Donear Group stated, "Sabka Saath, Sabka Vikas is not just a slogan for us, it is a way of life at Donear. We have given ourselves a vision of sustained growth and we are working towards it as a team and as a family. I have had the opportunity to interact with LNJ family since I started business. I too very happy to handover this business to DONEAR Group."

Commenting on this new acquisition, Mr. Rahul Rajendra Agarwal, Director, Donear Group said, "We are delighted to announce the acquisition of Mayur Fabrics and PV Suiting distribution network from RSWM Ltd. It is very exciting and at the same time inspirational for us to focus on our own businesses i.e. Yarn and Fabrics respectively. We find ourselves committed to construct further on Mayur brand and make it an integral brand of Donear group and strive to take it to the next level of success. Substantiating our mission of standing tall as a textile and apparel global conglomerate, we aim to grow from strength to strength with Mayur and PV Suiting Distribution Network on our side. This highly scalable and sustainable infusion will serve as our next giant growth engine to further enrich our portfolio and expand the market share of branded fabrics offering."

Mr. Ajay Agarwal, Executive Director of Donear Group stated, "We have a great share in the Market having other brands like GRADO & OCM working under our group. Having Mayur Fabrics and PV Suiting distribution network, will project us as a textile and apparel titan, empowering our clientele as well as retailers' network." The addition of Mayur and PV Suiting Distribution Network is driven by our desire to expand our business both PAN India as well as in global markets. After Mayur's infusion in our group, we are expecting enhancements in the existing distribution chain and market value of our conglomerate."

Mr. Riju Jhunjhunwala, Joint Managing Director/ CEO of RSWM Ltd. affirmed, "It is a matter of pride for us that Mayur Brand is now a part of Donear Group. We could not have found a better organization than Donear to pass on our legacy to. I have seen the way Donear has taken over other brands, the way Donear has cultivated and helped prosper other brands in the past. I am telling you from the bottom of my heart, that no one would be happier than me to see Mayur Brand growing, prospering and flourishing under Donear group, our distribution network widening with time and employees at Mayur prospering in their careers with the inspiration and support of Donear Group. I just want to say that I am very happy with this transition. Like Rajendra ji said we have been sharing business and family relations starting way back from my Grandfather's time, I wish that our relation keeps growing as well."

The textile focused Donear Group further consolidates its position amongst the top three players in the synthetic fabric business in India. Donear Group continues to scout for larger addressable market with additional product categories. The terms of the transaction are not announced yet and will be disclosed at the appropriate forums through wider communication to all stakeholders.

About Donear Industries Limited

Donear Industries Limited is well-recognized in India and outside as one of the best-quality product makers and innovators, who have been in business for 30+ years. The promoters treat textiles as the Group's core business and have been putting best efforts to grow year on year. It has a production capacity of around 60 million meters annually with the latest technologies and machinery at Surat. Apart from being a leader in India, Donear also has a strong presence in 30+ countries globally. With a comprehensive product basket, the company is able to supply fabrics to India's largest brands including Louis Phillipe, Van

CORPORATE NEWS

Heusen, Peter England, Blackberry, Arvind, Wills Lifestyle, Future Group and more. In retail, the Donear Group has a strong network of 265+ stores, marketing textiles under the D'Cot & Donear NXG brands with positive cash flow.

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Arvind Fashions curbs focus to branded apparel

Even as it raised funds to deleverage and exit brands and business to focus on only six marquee brands, Arvind Fashions (AFL) is back to doing what it does best — branded apparel.

Be it a division of its parent firm Arvind or a separate demerged entity, there was a time when Arvind Fashions was dabbling into several things. For instance, it has more than a dozen brands, including private labels, across multiple categories. It had even divided brands and retail businesses into segments like power brands, emerging brands and specialty retail. While power brands included US Polo Association, Arrow, Flying Machine, and Tommy Hilfiger, emerging ones included Calvin Klein, Aeropostale and Ed Hardy.

Along with speciality retail like Unlimited (erstwhile Megamart), GAP and Sephora, it was operating over 1,400 stores in FY19. Unlimied also sold its private brands like Newport, Ruf & Tuf, Excalibur and Ruggers. Earlier, it also had brands like GANT, Nautica, Hanes, and Izod, among others. However, branded apparel and retail experts like Wazir Advisors' founder and managing director Harminder Sahni pointed out that it resulted in AFL trying to do too many things at the same time.

"Running apparel brands, retail and e-commerce are different from each other. The company was not only into multiple brands but also engaged in value-retail business like Unlimited as well as it tried to build its omni-channel platform Nnnow.com into an e-commerce player like Myntra. By existing multiple strategies and businesses to focus only on six brands is the safest bet it has taken," Sahni said.

The six high-conviction brands on which it now wants to build profitability don't just include apparels like US Polo Association, Tommy Hilfiger, Calvin Klein, Arrow and Flying Machine but also beauty brands like Sephora. But by its own admission, AFL believes these six brands have enough firepower to yield not just profitability but untapped growth, going ahead.

According to Shailesh Chaturvedi, CEO, Arvind Fashions, each of the six brands carry their own consumer equaty and have the potential to tap smaller towns from where the company's next phase of growth is expected. "Our data shows traction in smaller towns, which is why we are making efforts and accelerating store opening from 100 to 200 annually in these towns," Chaturvedi said. ■

India ITME Exhibition scheduled for December 2021 postponed to December 2022

S. Hari Shankar, Chairman
India International Textile Machinery Exhibitions Society

Dear Friends and colleagues from industry,

Greetings to you and hope this letter finds you in good health and spirits.

We regret to inform you that the India ITME exhibition scheduled for December 2021 had to be postponed again to December 2022 due to the continued uncertainty brought about by the global pandemic.

At the present time, live exhibitions and large gatherings continue to present a monumental challenge. ITME society believes that a proper event should justify the time and resources, especially since the India ITME flagship event is the primary business event for the Indian Textile industry providing a one stop solution for trade, Joint ventures, technology transfer and investments connecting textile businesses from over 90 countries with India.

We are very hopeful that a large-scale global vaccination drive that's ongoing will allow a return to normalcy by 2022. The situation will presumably be less intimidating by then to allow participants to partake in our flagship event.

India's textile industry has been impacted with the uncertainties and challenges created by the ongoing Pandemic. Uncertainty in terms of supply chain disruptions, logistics issues raw material costs shooting up due to the fluctuating demand and supply conditions, mandatory closures in retail stores etc etc., In brief, the entire textile chain has been disrupted.

Despite the setbacks, I am committed to take swift measures to address the promising potential in our industry. In such trying times, the India ITME society stands steadfast in its commitment to the Textile Engineering industry. ITME society is cognizant of its responsibility and has committed to amplifying its efforts to enable our exhibitors to reach out to potential customers. With over 40 years of dedication to serving the Indian Textile Industry, the ITME society's support is irrefragably a positive sign for its participants and patrons.

In order to do so, India ITME Society will continue organizing virtual substitutes for our exhibition series of events to maintain and forge new business relationships. Life must move forward with the use of technology in these testing times.

We strive to encourage each other to work, network and consolidate the resilient operations we have established across the globe. We will continue to connect businesses to the global market, empowering business communities and also to reinforce the global textile network with fresh technical research, concepts and products.

I am pleased to inform you, that over the past 9 months India ITME Society has conducted the following events to create fresh networking opportunities and to impart technical knowledge.

- Buyer Seller Meet & Technical seminar – Dec 2020
- Textiles Exchange 2021 – April 2021
- Seminar on "The future of the Textile and apparel sector – An Indo-African perspective" – June 2020
- Webinar on "Designing for Impact: South-South trade and Investment – A tool for revitalizing the Global Economy Post Covid-19" – October 2020

In December 2020, we held a 3-day Virtual B2B event inaugurated by Ms. Roop Rashi Mahapatra, the Textile Commissioner of the Indian Government. On Day 1, Participants attended a webinar comprising of a technical paper report and a panel discussion between industry stalwarts. Days 2 and 3 included the main event: the buyer-seller meet with 284 exhibitors from 18 nations and 1767 buyers from 57 countries. A grand total of 4,192 business interactions.

In April 2021, along with the International Trade Center (ITC), a joint agency of the United Nations and the World Trade Organization, we held the 3-day "Textiles Exchange 2021". This facilitated more than 700 meetings between buyers and sellers. It was primarily organized for close to 250 African and Indian Textile businesses looking to maximize on trade partnerships and opportunities, following the guidelines of the Supporting Indian Trade and Investment in Africa (SITA) initiative.

These virtual business events enabled connectivity between parties across the entire globe from Singapore to the West Coast, USA. AI- matchmaking enabled

TEXTILE EVENTS

the best matches based on participant profiles giving participants the opportunity for brand promotion. A big hit was the virtual networking lounge facilitating informal interactions.

For a robust future in our industry, strong education and exposure to the latest technology is absolutely vital. India ITME Society is committed to support, motivate and encourage the overall growth and prosperity of the textile industry for not just business houses but also for the future development of the talent pool. India ITME Society conducted a certified technology lecture by Prof. Dr.-Ing. Yves-Simon Gloy from Clemson University, Germany enabling students and academicians to update themselves on some of the latest topics and trends in Textiles.

Not to sit on our laurels, but we have more work charted out for the near future. Besides being alert to new opportunities, it is crucial to adapt and adopt the changes to stay on top of the game in order to have a competive advantage. Through its various events and programs, ITME Society shall continue to diligently execute its responsibilities in supporting all round growth and success of Textiles & Textile engineering industry.

In the pipeline, we have planned interviews with the top brass of several textile companies. Through these interviews we hope to glean knowledge of their success in dealing with these uncertain times of the ongoing pandemic. It is an opportunity for both brand building and knowledge sharing.

Our industry works hard to produce and deploy it's many technologies and products – be it Spinning Machinery and accessories, Weaving looms, Jacquards, Kniting machines, dobbies, yarn trimmings, etc etc – Puting us on the path to a more sustainable and equitable future while creating thousands of jobs in the larger society. We do not want any of this hard work to get suspended or derailed in the uncertainty of the current global pandemic.

For ITME December 2022, we are committed to reducing the cost burden on exhibitors. We value your position and wish to create the conditions in which your success is ensured. At the end of the day, we can only hope that these platforms we have set up for you will help you achieve all your goals and ambitions.

Once we move past the ongoing crisis, combined with Government's efforts I am confident that India's diverse demography and infrastructure shall open up ample new opportunities for the country. India's strength in Manufacturing competency, Skilled manpower availability, uninterrupted supply chain, political stability, strong economic indicators, export potential etc., surely offers favourable conditions for India to be the "destination" for textiles and textile machinery manufacturers. All our efforts and decisions are to ensure a well-timed and fruitful event in Dec 2022 in India for our valued exhibitors and participants.

For the past 41 years, India ITME Society has been playing a pivotal role to strengthen the domestic as well as international Textile industry by facilitating the exchange of knowledge technology transfer and joint ventures. We want to continue to be good stewards of the healthy industrial ecosystem in place, and to further nourish it, not only for generations to come, but also for nations and markets that need the anchor of our resources.

Together we keep moving forward!

From the Desk of
S. Hari Shankar, Chairman
India International Textile Machinery Exhibitions Society
Website: https://www.india-itme.com ❐

International Business Matching Week

In a Virtual Avatar

15|16|17|18|19 November 2021

7 Editions. 1000+ Textile Suppliers. 10,000 Buyers. 30 Countries.

Intex South Asia is the largest and most established international textile sourcing show in South Asia. With 7 successful editions in Sri Lanka and Bangladesh, connecting 1,000+ global textile suppliers with 10,000+ leading buyers from 30 countries & regions, Intex South Asia has been successfully showcasing manufacturers and suppliers of fibers, yarns, apparel and denim fabrics, clothing accessories and allied services to discerning buyers in South Asia and other international economies.

It fulfills the growing demand for innovative, trendy fabrics & accessories for South Asia - one of the biggest apparel manufacturing regions in the world. Intex South Asia is endorsed by major Government bodies, Chambers of Commerce and Associations in South Asia and is the most sought after annual industry event for the textile & apparel industry.

Going Virtual in 2021

The pandemic has impacted businesses worldwide. At the same time businesses have to find ways to reconnect and revive. Welcome to Intex South Asia – International Business Matching Week, in a virtual avatar.

We understand that virtual is not the best way to connect but it is the next best. With travel restrictions and the pandemic not yet showing any early signs of fading away, virtual is still the best way to keep in touch with the industry, showcase your latest collections and meet with potential buyers.

Virtual shows allow you to conduct business from the safety of your own surroundings at a fraction of the cost of physical shows. So, till the time we are unable to get you to physically visit our trade shows let's get you started virtually.

Show Highlights

- Participation from 200+ International Textile Suppliers
- International Participation from 15+ countries/ regions
- Country Pavilions from India, China, Taiwan, Korea, Thailand, Turkey and more
- Showcase of Innovations, Designs & Sustainable Textiles
- Fashion Trends & Sustainable Products Showcase
- Interactive Business Forum Webinar Series

Bee2Bee

We have developed 'Bee2Bee' – a smart and user-friendly virtual trade fair and business matchmaking platform. It creates opportunities for global buyers & suppliers to connect and explore trade and business, preview latest product innovations, foster business cooperation and partnerships. Since its launch, Bee2Bee has successfully hosted several online trade exhibitions, buyerseller meetings, business matching activities & trade promotion webinars.

Growth Opportunities in South Asia

- Clear signs of economic rebound in South Asia with regional growth set to increase by 7.2% in 2021 and set to regain its historical growth rate by 2022.
- Per-capita income is expected to revert to pre-COVID levels by 2022.
- Gifted with growing populations, incomes and economies creating a huge market comprising 487 million youth who are firm believers in fast fashion
- 26% of the world's working adults live in South Asia and more than one million young workers enter the labour market each year.
- 2nd largest market for garments & textiles in the world after China.

What to expect in the Virtual Avatar

Exhibitors

- One Virtual Booth with Company Details
- Pre-fixed Business Matching Meetings
- Interact with Potential Buyers through Text/ Video Chat
- Receive Buyers' Meeting Request during the Show
- Generate Enquiries through RFQ Feature
- Upload Corporate Brochures / Product Catalogues (Max. 5)
- 30 Products Showcase to Display Your Latest Collections
- Upload Corporate Video & Brand Logos
- Display Promotion Banners on Booth
- Multiple Logins to attend Meetings & Manage Booth (Max. 5)
- Send Personal Invitation to Existing and Potential Buyers
- Attend Opening Ceremony & Webinars @ Bee2Bee Auditorium
- Complimentary Listing in the Show Directory
- Complimentary Promotion on Social Media Pages
- Receive Booth Analytics and Buyers Details who Visited Your Booth
- Remain Active for 30 days after the Show
- Receive 24/7 Technical Support

Buyers

- Free Access to Virtual Platform
- Meet with Global Suppliers from All Over the World
- Simple and Interactive Floor Plan
- Find Target Suppliers using Search Filters
- Preview 5000+ Product Showcase with Details
- Complimentary Pre-fixed Meetings with Interested Suppliers
- Live Text Chat with Suppliers on the Booth
- Make Video Calls & Connect with Suppliers on the Booth
- Schedule Meetings with Suppliers during the Show
- Request for Quote (RFQ) & Sample Enquiry
- Exchange Business Cards
- Bookmark Exhibitor/Products for future reference
- Download Brochures and Catalogues
- Download E-Show Directory with Suppliers Details
- Access to Market & Industry Reports
- Stay Connected with Suppliers for 30 days after the Show
- 24/7 Technical Support & Assistance

Exhibitor Profile

Fibers Yarns Apparel Fabrics Denim Fabrics Clothing Accessories Dyes &

TEXTILE EVENTS

Chemicals ◆ Software & ERP Solutions ◆ Testing Equipments & Compliance Solutions ◆ Design Studios ◆ Trends & Fashion Forecasters ◆ Allied Services

Buyer Profile

◆ Garment Exporters ◆ Garment Manufacturers ◆ Apparel Brands ◆ Fashion Labels ◆ International Sourcing Offices ◆ Buying Houses ◆ Buying Agents ◆ Retail Chain Stores ◆ Textile Trading Houses ◆ Textile Manufacturers & Exporters ◆ Sales & Marketing ◆ Consultants

Exhibiting Countries

◆ India ◆ Sri Lanka ◆ Bangladesh ◆ Pakistan ◆ Taiwan ◆ China ◆ Korea ◆ Hong Kong ◆ Indonesia ◆ Malaysia ◆ Thailand ◆ Singapore ◆ Vietnam ◆ United Kingdom ◆ USA

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TME Istanbul 2021

International Textile Machinery Exhibition

08-11 September, 2021

Demas Makine at Istanbul Textile Machinery Fair TME 2021

During the fair, Demas Makine is preparing for the launch of its new product, which will exhibit the fabric cutting machines that have attracted great attention recently, as well as the fully automatic quality-controlled fabric packaging machine.

Demas Textile Machinery, which was established in 2012 as aresult of 45 years of experience and accumulation in the production of textile machinery, provides many textile machinery production and technical service to the textile sector such as Fabric Control, Fabric Cutting, Fabric Wrapping, Fabric Packaging.

After starting to manufacture textile machinery, Demas, which has participated in many fairs in the country and abroad as part of its promotional activities, will show its success inthe TME 2021 Textile Machinery Fair, which will be held inIstanbul.

Enes Haşıloğlu, the general manager of Demas Makine, who will exhibit the fabric cutting machines that have attracted great interest recently, as well as the fully automatic quality-controlled fabric packaging machine during the fair, said, "We are making the preparations for the TME 2021 fair, similar to the preparations we made for the Itma fair in order to turn the TME 2021 Fair intoan opportunity. Haşıloğlu said that in addition to the machines they announced during the fair, they also have another machine that they have recently developed and that they want to launch, "We do our job with love, we see the benefit of doing it with love. I wish our fair to be beneficial for our industry." He said.

Demas Tekstil Makine, which took a 200m2 stand by participating in the International Textile Machinery TME 2021 fair, which will be held in Istanbul between 8-11 September 2021 as part of its promotional activities, invited all stakeholders in the sector to the fair to see new technologies.

For further information, please contact :
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GFT 2021

1-4 November 2021 (Mon-Thu) 10.00-18.00 hrs

BITEC, Bangkok

Functional Textile

"Functional Textile such as PPE suit, fire suit, chemical protective suit. It is used in the factory Industry and chemical companies, nonwovens are also used in the automotive industry. It is therefore good to have a GFT event along with the industry event.

Manufacturing industry Buyers in hospital, hotel or factory sectors have the opportunity to come and meet the entrepreneurs."

The role of the special properties fabric increased until it became a ground factor current base Whether it's dressed in everyday life or in the production process of the industry. Various industries have made Functional Textile well known and used widely. Widely used in many businesses to optimize functions to use and meet the needs Various functions such as protection from weather, protection against fire, radiation, chemicals and germs, ventilation of humidity. temperature regulation, skin care, and more At

GFT 2021 you are ready to meet innovation. Special properties fabric from the manufacturer There are 7 main groups of special properties, including medical apparel. Antibacterial clothing, sportswear, clothing with collagen recycled textile non woven fabric and uniforms from leading companies and brands to fill the To create a new boss and chargers.

PERMA CORPORATION CO., LTD.
PERMA FINISHED GOODS
Brand : PERMA

- Antibacterial properties throughout the service life non-toxic more sun protection environmentally friendly

ERAWAN TEXTILE CO., LTD.
NIGHTINGALE BY ERAWAN
Brand : ERAWAN

- inhibit the growth of MRSA bacteria
- Filters and reduces UV rays
- reduce sweat odor protect with confidence
- Friendly body and environment together.

GEP SPINNING CO., LTD.
FILAGEN FIBER : COLLAGEN FIBER
(FIBER, YARN AND FABRIC)
Brand : FILAGEN

- Collagen fibers extracted from fish milk Fish and natural extracts
- Versatile (moisture absorbent, antiodor, anti-UV, Q-max)
- Properties of filamentous filaments that do not expire.
- Environmentally friendly, recyclable

KNC TEXTILE CO., LTD.
SMOOTHEX NO.8346
Brand : SMOOTHEX

- Extendable in 4 directions recyclable polyester Solotex Antibacterial properties level used in the hospital

NARULA NONWOVEN CO., LTD.
NONWOVEN
Brand : NARULA

- Manufacturer of nonwoven and functional fabrics.
- There is a wide variety of products. Covers all needs for textiles and nonwovens.
- reasonable price help customers to compete in the market

KLOPMAN INTERNATIONAL SRL
OXFORD VIROFF-TEX
(ANTIVIR AL TENCEL)
Brand : KLOPMAN

- Viroff-Tex, a new antiviral coated fabric Effective against Covid-19
- Highly efficient coating guaranteed level of protection against bacteria excellent rea
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- Fibres
- Yarns
- Apparel Fabrics
- Denim Fabrics
- Clothing Accessories
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Oerlikon

In the series of webinars Oerlikon Group's Man made Fibres solutions to focus on customer service

Improving quality with service products

The series of webinars of the Swiss Oerlikon Group's Manmade Fibers Solutions business unit will be focusing on services for manmade fiber systems. If you are interested in these webinars, you can register by going to www.oerlikon.com/polymer-processing.

How ceramics within the yarn path improve the quality of your yarn

September 01, 2021 : 2 – 2:45 p.m. CET

Catering to the ever-greater requirements in terms of yarn quality and production speeds requires specially-designed yarn guides made from new materials. They help optimize the yarn production process. Here, the yarn guide and yarn oiler become two of the most important components coming into contact with the yarn within spinning and texturing machines. Regional Service Sales Director Ingo Scholz and Technical Project Manager Michael Kochanek illuminate how the right selection of the ceramics used here can guarantee superlative yarn quality with maximum production speeds and outstanding durability.

With the myOerlikon service portal, Oerlikon customers across the globe have access to all machine and sales documents, drawings and operating instructions. At the same time, myOerlikon is the Manmade Fibers Solutions business unit's e-commerce platform.

myOerlikon – tailored digital services provide a comprehensive overview

September 13, 2021 : 2 – 2:45 p.m. CET

Ingo Scholz, Regional Head of Service Sales at Oerlikon Barmag, and Oerlikon Neumag's Regional Service Sales Manager Finn-Eric Jordt introduce the myOerlikon service portal and ecommerce platform. With this solution, Oerlikon customers across the globe have access to all machine and sales documents, drawings and operating instructions via the Web-based portal. The team of speakers from both brands will demonstrate how to quickly and easily order spare parts and how e-learning offerings, videos and machine-accompanying information can be accessed.

Always by your side – with Oerlikon Remote Services

September 22, 2021 : 2 – 2:45 p.m. CET

Professional service is relevant in all phases of a system's life. And it also plays a decisive role above all with regards to unforeseen events and incidents. Within the context of a presentation by Thomas Arnold, Head of Technical Services at Oerlikon Barmag, and Jan Pauer, Technical Service Manager for Modifications at Oerlikon Neumag, attendees will discover how yarn producers can utilize the Manmade Fibers Solutions business unit's Remote Service to avoid longer downtimes.

Better safe than sorry – maximize productivity and minimize downtimes with regular machine check-ups

September 29, 2021 : 2 – 2:45 p.m. CET

Superlative performance is the result of the interaction of numerous factors. Preventative equipment maintenance work is a simple way of avoiding unplanned machine downtimes. Oerlikon Neumag Expert for Industrial Services Christopher Hansen and Michael Schwarz, Technical Sales Manager for Modifications at Oerlikon Nonwoven, explain how services can be improved, future proof system concepts developed and cost potentials tapped into.

About Oerlikon

Oerlikon (SIX: OERL) is a global innovation powerhouse for surface engineering, polymer processing and additive manufacturing. Its solutions and comprehensive services, together with its advanced materials, improve and maximize the performance, function, design and sustainability of its customers' products and manufacturing processes in key industries. Pioneering technology for decades, everything the company invents and does is guided by its passion to support its customers' goals and foster

a sustainable world. Headquartered in Pfäffikon, Switzerland, the Group operates its business in two divisions – Surface Solutions and Polymer Processing Solutions. It has a global footprint of more than 10,600 employees at 179 locations in 37 countries and generated sales of CHF 2.3 billion in 2020.

For more information: www.oerlikon.com

About the Oerlikon Polymer Processing Solutions division With its Oerlikon Barmag, Oerlikon Neumag, Oerlikon Nonwoven and Oerlikon HRSflow brands, the Oerlikon Polymer Processing Solutions Division is focusing on manmade fibers plant engineering and flow control equipment solutions. Oerlikon is one of the leading providers of manmade fiber filament spinning systems, texturing machines, BCF systems, staple fiber systems and solutions for the production of nonwovens and – as a service provider – offers engineering solutions for the entire textile value added chain. Furthermore, Oerlikon has a high precision flow control components business that offers a large selection of gear metering pumps for the textile and other industries, including the automotive, chemical and paint markets. With Oerlikon HRSflow the division develops innovative hot runner systems for the polymer processing industry. In cooperation with Oerlikon Balzers, highly-efficient and effective coating solutions are offered here from a single source.

As a future-oriented company, the research and development at this division of the Oerlikon Group is driven by energy efficiency and sustainable technologies (e-save). With its range of polycondensation and extrusion systems and their key components, the company caters to the entire manufacturing process – from the monomer all the way through to the textured yarn and other innovative polymer processed materials and applications. The product portfolio is rounded off with automation and Industrie 4.0 solutions.

The primary markets for the product portfolio of Oerlikon Barmag are in Asia, especially in China, India and Turkey, and – for those of Oerlikon Neumag and Oerlikon Nonwoven – in the USA, Asia, Turkey and Europe. Oerlikon HRSflow is particularly at home in the core automotive markets. These include Germany, China, Korea and Brazil. Worldwide, the division – with more than 4,500 employees – has a presence in 120 countries with production, sales and distribution and service organizations. At the Research and Development centers in Remscheid, Neumünster (Germany), San Polo di Piave, Treviso (Italy) and Suzhou (China), highly-qualified engineers, technologists and technicians develop innovative and technologically leading products for tomorrow's world.

For more information: www.oerlikon.com/polymer-processing

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A.T.E. Enterprises Private Limited

An Article on Zimmer Digital Printing Machine

ZIMMER AUSTRIA is a group of companies established in the year 1874 in Warnsdorf, Bohemia, part of the then Austro-Hungarian Empire. Triggered by the turmoil of World War-II in the Czech-Slovakian Republic, the company was re-established in Kufstein, Austria, in 1951. Rapid growth required a second factory, which was established in Klagenfurt, Austria. Over the years additional sales and service stations have been established in the USA and China.

Today, the ZIMMER Group has separate R&D centers dedicated to the product lines, including at its engineering and manufacturing locations in Klagenfurt and Kufstein, Austria. The Klagenfurt plant is the competence center for screen printing,

steaming, drying, coating and finishing, whereas Kufstein has become the competence center for digital printing and carpet needs. The Kufstein plant includes 5 business units: Textile Printing, Floor Covering, Narrow Fabrics, Technical Textile, and Specialties. Made in Austria is not just a slogan but is part of the culture and a daily practice at Zimmer Austria. In cooperation with the customer, ZIMMER print and coating lines can be configured as 100% made in Austria or as engineered in Austria with complementary domestic products to economize the investment. Research and development centers with an accumulated space of nearly 5,000 m² among the group, guarantee up-to-date engineering and a visionary process technology.

ZIMMER AUSTRIA – MARKET PRESENCE in India

Already in the 1920's, the first roller printing machines from ZIMMER were sold in India. ZIMMER'S India business, however, came to a complete standstill with the outbreak of World War II.

The decades from1940 to 1960 brought lots of changes in the political scenario and the business alike. After the smoke caused by these turbulent times settled down, the economy started to rise, and prosperous times came back to the textile industries.

In the mid-1960's, ZIMMER AUSTRIA introduced rotary and flat-screenprinting installations to the textile industries in India. From the mid-1960'sto the end of 1980's, the screen-printing business was the base for ZIMMER AUSTRIA's market presence in India, and it still is to this day. With the latest generation of flat and rotary screen printers, as well as coating systems, based on the MAGNOPRINT, ROTASCREEN and MAGNOROLLbrands, ZIMMER AUSTRIA's market position improved drastically. The population of ZIMMER printing and coating machines are still continuously on the rise.

With a trusted name and being associated with best market performance and excellent service, ZIMMER AUSTRIA has started to introduce the first digital carpet printers in India at the beginning of the second millennium. Several CHROMOJET printers have been supplied within a few years and the printed carpet business started to flourish. CHROMOJET printers with pressurized ink injection through valve-based technology have been a revolution for the Indian carpet and blanket

industry. There was no other system available that could achieve such penetration like that of ZIMMER's CHROMOJET technology.

The market was hungry for this world-class technology. Several machines of ZIMMER AUSTRIA make, including some secondhand equipment have come to the Indian market. It does not matter whether the machines are imported directly from ZIMMER AUSTRIA or supplied as secondhand machinery through a dealer, the fact remains that ZIMMER AUSTRIA is the right choice when it comes to carpet printing!

High resolution carpet printing by COLARIS piezo-based technology was introduced in India in 2016. It was clear that ZIMMER will be the trusted partner for this latest technology again. By that time, several installations of COLARIS printers where successfully running in the textile industry already. Proven quality, excellent samples produced on customer's carpet substrates, renowned service and knowhow in carpet printing, paired with an excellent reputation, made ZIMMER AUSTRIA Digital Printing Systems the first choice of the customer again.

Today there are around 20 digital carpet printers from ZIMMER AUSTRIA installed in the market and all are serviced by the manufacturer with additional support by their partner – A.T.E.

ZIMMER's esteemed clientele includes Bajaj Carpet, Bansal Industries, Dharmesh Textile, DC Mills, Liberty, Raj Overseas, Rhodenium, Welspun, William Goodacre and others.

Additionally, several pile fabric printing installations such as the COLARIS Terry Towel Printers are installed in the market. The COLARIS towel printing technology is proven by the names such as Golden Terry Towel, ShrinathCotfab, and the Welspun Group.

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A.T.E. Enterprises Private Limited

Goller Spun Oil Washing Range — A Success Story Worldwide

Emerging trend : Open width knit processing

The Indian athletic apparel market grew by a whopping CAGR @ 19% between 2009 and 2017, while the Indian footwear market, which includes sports footwear, grew at a CAGR @ 24% during the same period. India will again be no exception to the growth in this sector.

These growth prospects of athleisure products are encouraging Indian knit processors to consider expansions and diversifications to cater to the needs of this segment. Many investments are therefore being planned to tap the huge potential presented by this segment, especially as there is not much competition so far.

Garment properties like protection, insulation, moisture permeability, stretch, shape retention, optimum heat and moisture regulation, rapid drying, dimensional stability even when wet, durable, easy care, light weight, soft touch, etc., are intrinsic to active wear garments. However, these properties are not readily achievable in 100% cotton, circular knitted fabrics. Hence the need for synthetic circular or warp knitted fabric production and processing becomes inevitable for addressing the opportunities in the active wear segment.

The very first step in synthetic active wear processing or spandex processing is spun oil washing. Goller is a major international player in this segment and as major supplier to high end synthetic fabric manufacturers worldwide.

Goller – a brief introduction

Goller was founded in Germany and manufactured its first open width textile processing range in 1948. Goller became a member of the CHTC Fong's Group in 2006. The integration of Goller into the CHTC Fong's Group helped it to develop and spread at a tremendous rate its highly engineered textile wet finishing ranges for the textile industry. Today, Goller is a global market leader in the manufacturing of open width textile processing ranges. Goller's wet processing ranges including those for spun oil washing are widely used to produce high quality woven and knitted fabric in world-wide textile dyeing factories.

Objectives of spun oil washing

Spun oil washing is a treatment of synthetic woven or knitted (circular/warp knit) fabrics with de-oiling chemicals to remove lubricating oils from the fabric structure. These lubricants are needed in spinning and remain on the fabric through the knitting process. The purpose of open width spun oil washing is to pre-shrink the fabric, reduce and even out the oil distribution on the fabric, and to thus ensure uniform dyeing and finishing results in subsequent finishing steps.

If a grey fabric with oils on it is heat set, there is an accumulation of these oils in the stenter. This creates chances of fire in the exhaust pipelines and in the heat exchangers. Oil dripping further creates quality problems in subsequent processing. But after

spun oil washing, if the cleaned fabric is pre-heat set, the stenter remains oil-free and safe, eliminating risks of fire and improving fabric quality.

The benefits of Goller spun oil washing ranges:

- Avoids fire hazard in stenter while pre-setting
- Even dyeing results
- Pre-shrinkage of fabric
- Suitable for wide range of fabrics from light to heavy GSM
- Environment-friendly process
- Technical and utility data of Goller spun oil washing range:Fabric type: warp knit/ circular knit
- Fabric quality: polyester/nylon with Lycra
- Machine speed: up to 40 m/min
- Chemicals: soda ash, washing agent, acetic acid (optional)
- Water consumption: approx. 4-8 L/kg
- Steam consumption: approx. 0.3-0.7kg/kg

Success story

Goller has successfully installed more than hundred high productivity spun oil washing ranges worldwide for processing undergarments, swimwear and activewear, which also includes a modular unit that has been installed in front of a Monfongs stenter at a knit process house in Kolkata.

Investment in continuous open width processing requires a lot of planning. Goller with a wide range of different modules and a team of skilled engineers can custom-build ranges to meet specified needs of customers in the field of continuous open width processing. A long history, worldwide experience, continuous innovations have made Goller a popular choice with the industry for continuous open width processing for both woven and knit goods.

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Baldwin Technology Company Inc

Baldwin showcases key innovative technologies for corrugated flexo printers at ConneXion

Solutions enhance productivity through automation, quality improvements and increased safety

Baldwin Technology Company Inc. will showcase its key innovative technologies for optimized corrugated high-graphics package printing at the ConneXion virtual expo, taking place from June 1 to 8. In Baldwin's virtual exhibit, visitors will experience fully automated flexo plate-cleaning systems, an energy-efficient IR (infrared) drying solution and LED-UV curing systems, all of which increase print quality and productivity, with operator safety and sustainability in mind.

The FlexoCleanerBrush™ is Baldwin's flagship solution to enhance print quality and improve worker safety in corrugated printing. It automatically removes dust and contamination from the plate in seconds during production, without stopping the press, and it produces virtually no waste. It also performs full end-of-job plate cleaning and drying in fewer than four minutes, enabling increased uptime and sustainability. Because the FlexoCleanerBrush is fully automatic and spans the entire width of the plate cylinder, it improves safety by eliminating routine operator contact with the machine, and reduces the risk of operator contact with wash agents and cylinder nip injuries.

The FlexoCleanPick™ system is an industry-leading innovation designed to automatically remove hickeys—typically caused by paper fibers,

dust and ink contamination, and other causes of printing defects—from the plate during the print run without stopping the press or requiring operator skin contact with wash agents. The system lightly touches the plate with a dry microfiber cloth to remove the hickey-causing particles, enhancing print quality and productivity without any waste.

The FlexoDry2™ is a fully integrated IR drying system, specifically developed for corrugated flexo printing presses, that reduces energy consumption by up to 30 percent over standard IR dryers via the use of patented Diamond IR™ lamps. The system delivers dramatically improved drying results through a unique optical design that produces higher intensity for enhanced color definition, reducing or eliminating marking altogether, allowing for high-speed and full-confidence printing.

A new generation of LED-UV technology—designed by AMS Spectral UV, a Baldwin Technology company, for wide-format flexo corrugated box printing—represents the latest in solid-state LED curing innovations and offers more than a 50 percent reduction in power consumption, compared to traditional UV systems, in an ultra-compact lamphead that fits at the end of the press or between printing units. Flexo inks, coatings and varnishes specifically formulated to cure when exposed to LED-UV light can provide a high-value decorative solution for brand owners, offering offset-like quality and vibrant color, as well as full-gloss, spot and matte coating effects on a wide range of corrugated stocks, with the added ability to enhance lower-cost papers. In addition, the LED-UV system can increase the throughput of the machine over water-based aqueous coatings that may require slower press speeds to dry conventionally. Baldwin's LED-UV technology is lightweight and designed for the demanding requirements of corrugated printing with instant on/off, minimal heat, zero ozone and zone-width switching to further reduce energy consumption.

Registration for the ConneXion virtual expo is open now at hyperfair.connexion.exchange.

About Baldwin Technology Company Inc.

Baldwin Technology Company Inc. is a leading global manufacturer and supplier of innovative process-automation equipment, parts, service and consumables for the printing, packaging, textile, plastic film extrusion and corrugated industries. As a total solutions provider, Baldwin offers our customers a broad range of market-leading technologies, with a focus on improving the economic and environmental efficiency of production processes. Through a global footprint of 21 company-owned locations and an extensive network of partners, our customers are supported globally, regionally and locally by dedicated sales and service team members who add value by forming long-term relationships. Baldwin is privately owned by BW Forsyth Partners, a Barry-Wehmiller company. For more, visit baldwintech.com.

About BW Forsyth Partners

BW Forsyth Partners is the investment arm of multibillion-dollar global manufacturing and engineering consulting firm Barry-Wehmiller.

Established in 2009, BW Forsyth Partners blends Barry-Wehmiller's unparalleled legacy of value creation and people-centric culture development with keen investing experience to help companies realize their true potential. With a focus limited to areas known well, BW Forsyth Partners seeks to partner with leadership teams to acquire small- to middle-market companies in the capital and component equipment, and professional services sectors. In each of our operating companies, BW Forsyth Partners deploys operational improvements and strategy development without compromising the autonomy, strategic vision and entrepreneurial spirit of their leadership teams. For more information, visit bwforsyth.com.

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Lenzing Group

Lenzing's VEOCEL™ brand leads by example to introduce the first carbon neutrallyocell fiber for the nonwovens industry

A keen advocate totransform the nonwovens industry with greater transparency and sustainability measures, Lenzing's VEOCEL™ brand is marking a new milestone with the introduction of the industry's first carbon neutral VEOCEL™ branded fibers. The new offering for Lyocell fibers will enable the VEOCEL™ brandto support nonwoven industry partners and product brands to reduce climate impact through the use of fibers with a net-zerofootprint.

As a brand that has been dedicated to offering products based on renewable material wood, derived from sustainably managed forests, VEOCEL™ isleading by example, making significant strides in achieving new certification standards and now also reinforcing Lenzing's commitments to carbon neutrality.

"At Lenzing, we are very proud of the progress we have been making to address climate change," said Robert van de Kerkhof, Member of the Board of Lenzing. "The new carbon neutral VEOCEL™ Lyocell fibers will play a big role in contributing to our goal to become a net-zero company by 2050. At Lenzing, we understand that caring for the environment isn't just good business, but good for the business. That is why we are becoming even more dedicated to effecting real change to the industry as we come out of the COVID-19 pandemic, and embrace climate protection through our zero carbon commitments and ongoing innovations."

SCIENCE IN INDUSTRY

Certified CarbonNeutral® product for climate protection

As of June 2021, VEOCEL™ Lyocell fibers are available as certified CarbonNeutral® products with a carbon footprint reduced to net-zero according to The CarbonNeutral Protocol. Achieving certified carbonneutrality was the result of Lenzing's ambitious carbon reduction efforts over the last years and the collaboration with Natural Capital Partners, a recognized global leader in the design, development and delivery of corporate climate action programmes. Together it was possible toreduce carbon emissions to net-zero through a mix of higher production efficiencies, use of renewable energy sources, low-carbon materials and the dedicated support of an external nature-based carbon removal project. These VEOCEL™ branded fibers reinforce Lenzing's commitment to the Science Based Targets initiativearound reduction of total global carbon emissions, a quest driven by the UN Paris Agreement.

"The first step in taking action, is understanding the problem at hand,"said Jürgen Eizinger, Vice President of Global Management Nonwovens at Lenzing. "The VEOCEL™ brand is committed to making the shift to carbon neutrality an ongoing effort. Emission from raw materials is often the biggest part of a product or corporate footprint. To reduce these indirect emissions, a company can either avoid such a material or depends on its value chain to deliver new climate friendly solutions. With our new offer of carbon neutral VEOCEL™ Lyocell fibers, we can certainly help our partners and customers reduce their emission impact."

Partnering for Change

Consumers are holding their brands to higher standards when it comes to carbon neutrality and climate friendly products. As an ingredient brand, VEOCEL™ is committed to guiding and partnering with retailers, brands and the nonwoven industry toward improving the carbon footprint and environmental impact of raw materials and products. Materials and goods produced with VEOCEL™ Lyocell fibers certified as CarbonNeutral® products will benefit from a specially developed VEOCEL™ "climate care" logo. The VEOCEL™ "climate care"initiative signifies Lenzing's commitment to offer climate friendly solutions to limit global warming, reduce its carbon footprint and engage with partners along the supply chain to provide more sustainable nonwovens solutions.

"With the newly minted VEOCEL™'climate care' logo, we hope to build a connection between brands and consumers. When consumerssee products with the 'climate care' logo on the packaging, they will be able to recognize that the product is made of VEOCEL™ Lyocell fibers which have a neutral impact on our climate. This will not only give them confidence about making more informed, eco-conscious purchase decisions, but also reassure that they are taking a proactive step to tackle climate change," added Eizinger.

The VEOCEL™ brand will be sharing more details around Lenzing decarbonization effort for the nonwovens industry and the path forward during the EDANA Outlook event on April 23rd. Please refer to herefor more details.

About VEOCEL™

VEOCEL™ is Lenzing Group's flagship specialty nonwoven brand. Derived from renewable raw material wood, VEOCEL™ provides natural care, every day, and is committed to driving industry standards around sustainability and natural comfort in the nonwoven sector. VEOCEL™ transfers the essence of nature into nonwoven products through the beneficial properties of VEOCEL™ fibers, including natural absorbency, liquid distribution, contribution to breathability, biodegradability and versatility.

The VEOCEL™ product portfolio features VEOCEL™ Lyocell and Specialty Viscose fibers that are tailored for sustainable lifestyles and helps to maintain environmental balance by being fully integrated into nature's cycle. The fibers are certified clean and safe, biodegradable, from botanic origin and manufactured in an environmentally responsible production process. The VEOCEL™ brand is categorized into four branded offers including VEOCEL™ Beauty, VEOCEL™ Body, VEOCEL™ Intimate and VEOCEL™ Surface and its fibers are used in baby care, beauty and body care, intimate care and surface cleaning products.

Fibers under the VEOCEL™ brand are derived from renewable wood sources from certified and controlled forests and plantations and are manufactured in environmentally responsible and

closed loop production processes. All standard VEOCEL™ fibers are certified compostable and biodegradable under industrial, home, soil, fresh water and marine conditions, enabling them to break down safely into raw materials and fully revert back into the environment.

About the Lenzing Group

The Lenzing Group stands for ecologically responsible production of specialty fibers made from the renewable raw material wood. As an innovation leader, Lenzing is a partner of global textile and nonwoven manufacturers and drives many new technological developments.

The Lenzing Group's high-quality fibers form the basis for a variety of textile applications ranging from elegant ladies clothing to versatile denims and high-performance sports clothing. Due to their consistent high quality, their biodegradability and compostability Lenzing fibers are also highly suitable for hygiene products and agricultural applications.

The business model of the Lenzing Group goes far beyond that of a traditional fiber producer. Together with its customers and partners, Lenzing develops innovative products along the value chain, creating added value for consumers. The Lenzing Group strives for the efficient utilization and processing of all raw materials and offers solutions to help redirect the textile sector towards a closed-loop economy. In order to reduce the speed of global warming and to accomplish the targets of the Paris Climate Agreement and the "Green Deal" of the EU Commission, Lenzing has a clear vision: namely to make a zero-carbon future come true.

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Unispin Card Clothing India Pvt Ltd

UCC launched new products

We are delighted to share with the customers about the launch of our new products cylinder wire for cotton, high production cards and doffer wires for universal application

Unimax series cylinder wires

Our Unimax series cylinder wires are made of tough alloy steel raw material to withstand higher production loads in the modern high production cards. The tooth design has been modified to keep the fibres always towards tip. This enables intense carding action between cylinder and flat tops there by resulting in better nep removal and opening of fibre tuft. On field trials the Unimax series cylinder wires reported a maximum nep removal efficiency of 85% at the customers required production rate. Unimax also reported consistency in sliver quality even at the various life stages and production throughput.

Available in 2 points per square inch variations,

860 ppsi – Suitable for count ranges between 20s to 30s counts, 100% cotton

960 ppsi – Suitable for count ranges 40s and above 100% cotton

Doffer wire Unistar DL 4030X0.9 RC – 310

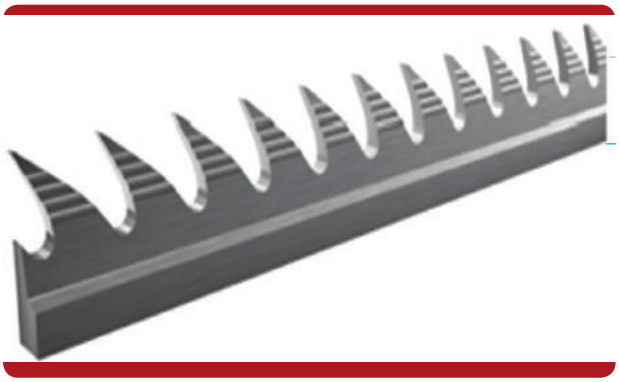
UCC has launched a innovative doffer around a year back. This doffer wire is having a special curved tooth design with enhanced tooth depth

to accommodate and to discharge the air current at high production rates. Due to lesser points per square inch the doffer dissipates the air current better and hold higher volume of fibres. The doffer has been tested successfully up to a production rate of 140 kgs / hour production rate. This doffer has become universal for 100% cotton, synthetics, blends and other applications.

Metallic card clothing for non-woven cards

We offer metallic card clothing suitable for roller clearer carding machines process the below raw materials,

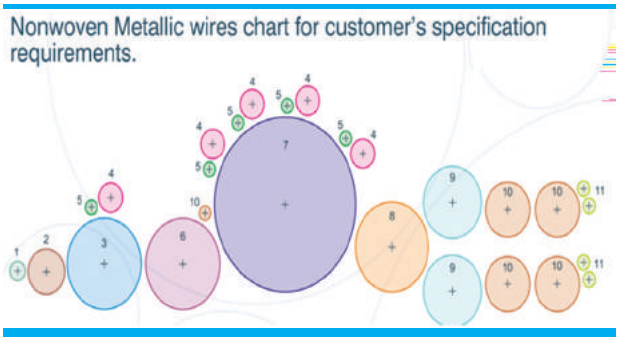
- Carbon fibre material
- Glass fibre material



- High temperature resistant material
- Low interior non-woven
- Carpet materials
- Blended materials
- Hot air non-woven
- Spun lace non-woven
- Island fibre material

And for other synthetic and natural fibre process as per customer requirement.

Nonwoven Metallic wires chart for customer's specification requirements.



Raising fillets for fabric raising applications

We offer raising fillets for processing the below fabrics,

- Knitted fabrics
- Acrylic blankets
- Raising fillets for U.S.A. type
- Brushes for napping machine raising fillet
- Raising fillet for Far East type
- Brushes

UCC offers card clothing products suitable for ring spinning, open end spinning, and cotton, synthetic and blend applications. Customer can visit UCC website www.unispincardclothing.com 24×7 and can access the product catalogue and download the same. UCC continuously develop the existing products and add new products for the emerging needs of customer and to cater new high production cards. With UCC products you can rest assured of consistent sliver quality, performance and life.

For further information, please contact :
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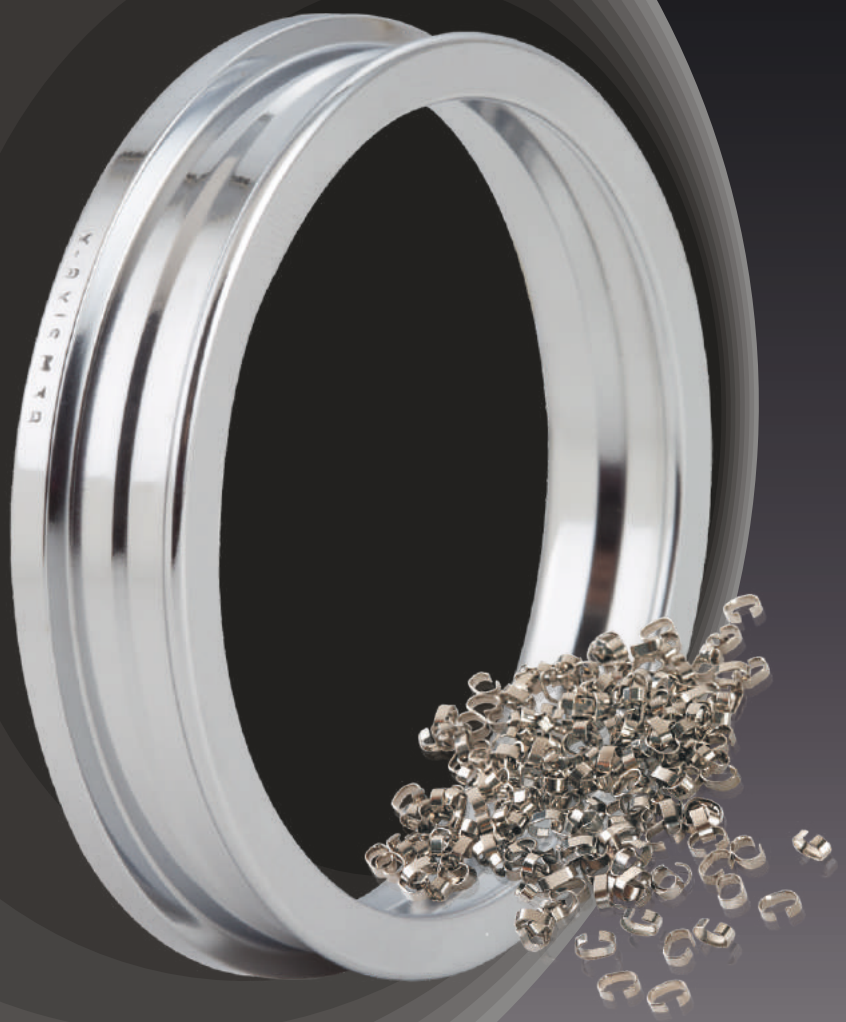
EXPERIENCE THE POWER OF NEXT



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Foundation – Quality & Innovation

MAG laid the foundation stone with Quality & Innovation as its first priority & since three decades of our **MAGnificent journey**, we strive to deliver the best of the product quality to the exact needs of the customer.

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