

support such trends. Demonstrating the latest in Wholegarment knitting technology will be the flagship MACH2XS machine that features the company's original SlideNeedle on 4 needle beds and patented spring-loaded full-time sinker system. Capable of Wholegarment knitting in all-needles, MACH2XS offers great flexibility for knitting beautiful and sophisticated, high-quality Wholegarment products with a seemingly endless variety of knit patterns at very high efficiency. At Meet the Manufacturer, Shima Seiki will show traditionally woven items such as gilets and jackets using a special inlay technique that yields novel knit-weave hybrid fabrics that are suited for such items.

Ahlstrom-Munksjo expects high EBITDA in 2017

Ahlstrom-Munksjo expects its comparable EBITDA in 2017 to be higher than in 2016. The company recently published pro forma financial information for 2015, 2016 and for each of the quarters in 2016 in addition to Q1 in 2017 to illustrate the financial impact of the merger. The merger of Ahlstrom Corporation and Munksjo Oyj was completed on April 1, 2017.

The merger created a global leader in innovative and sustainable fibre-based materials with combined pro forma net sales of approximately €2.15 billion, around 6,000 employees, and 41 production and converting facilities in 14 countries.

The demand outlook for 2017 for Ahlstrom-Munksjo's fibre-based products is expected to remain stable at the current good level for most of the product segments and to reflect the seasonal pattern. However, the price is expected to increase towards the end of the second quarter.

Ahlstrom-Munksjo offers a broad range of fibre-based materials and products and has leading global positions in areas such as filtration, decor papers, release liners, and compostable food and beverage packaging. The company is also working on identifying further business synergies such as integrating the former business area graphics and packaging into the new business area specialties, to develop a combined product and service offering. In 2016, Ahlstrom-Munksjo derived about 60 per cent of its total net sales from Europe, 24 per cent from the Americas and 16 per cent from the Asia-Pacific region. Know-how in fibre-based technology, an efficient manufacturing platform and ability to serve global customers locally helped in competing with its counterparts. Ahlstrom-Munksjo plans to report its interim and annual reports consistently starting from January-June 2017, will be published on July 25, 2017.

Asia-Pacific continues to be leader of global growth according to IMF

The Asia and Pacific region continues to deliver strong growth, in the face of widespread concerns about growing protectionism, a rapidly aging society, and slow productivity growth, says latest regional assessment released by the International Monetary Fund (IMF). The Regional Economic Outlook estimates 5.5 per cent growth this year for the region.

The region registered 5.3 per cent in 2016. Growth is expected to remain strong at 5.4 per cent in 2018, as the region continues to be the leader of global growth, the report states.

The report also cites the more favourable global environment with growth accelerating in many major advanced and emerging market economies—notably the United States and commodity exporters—as supporting Asia's positive outlook. "The signs of growth in the region are encouraging so far.

In China, the region's biggest and the world's second largest economy, policy stimulus is expected to keep supporting demand. Although still robust with 2017 first quarter growth slightly stronger than expected, growth is projected to decelerate to 6.6 per cent in 2017 and 6.2 in 2018.

Japan's growth forecast for 2017 has been raised to 1.2 per cent with support from expansionary fiscal policy and the postponement of the consumption tax hike (from April 2017 to October 2019). The expansion would slow down to 0.6 per cent in 2018 as the boost from the fiscal stimulus wears off.

India's growth is expected to rebound to 7.2 per cent in fiscal 2017-18 as the cash shortages accompanying the currency exchange initiative ease.

In most of the Southeast Asian economies, growth is expected to accelerate somewhat, supported by robust domestic demand—an important driver of growth in these countries. Meanwhile, growth in Korea is projected to remain subdued at 2.7 per cent this year despite the recent pick up in exports, mainly owing to weak consumption.

The region's outlook, however, is clouded with uncertainty. A sudden tightening of global financial conditions could adversely impact Asian economies with high external financing needs and weak private sector balance sheets, including by triggering capital outflows and unwinding of productive investment projects.



is increasing and apparel enterprises are embracing this trend,” it added. According to Toshiba Tec, it offers several solutions that will maximise the synergy effect for real stores and e-commerce sites. The Recommend system is included in its Personalised Recommendation Brochure (PRB), and can analyse a customer’s purchase history at the store in addition to his or her preferences on an ecommerce site.

Ensinger takes over Next Composites

Ensinger in Nufringen has taken over Swiss plastics processing company Next Composites. The small company based in Otelfingen near Zurich, develops technologies for manufacturing products of thermoplastic fibre composite materials. The process technologies from Next Composites will help Ensinger enhance its range of technologies for manufacturing components. Ensinger already offers semi-finished products made of highly filled carbon fibre composite material. Next Composites will benefit from the Ensinger group’s broad customer base. Carbon reinforced thermoplastics are particularly suitable for lightweight construction applications in the automotive industry, medical technology, and mechanical engineering. Sports goods such as bike components or winter sports equipment are an additional growth market for these modern materials.

When high-strength carbon fibres are embedded in a light plastic matrix, a composite with an exceptionally high specific rigidity and strength is created. Compared with thermosets, thermoplastics can be welded and usually offer higher levels of toughness, improved chemical resistance. They can be used effectively as a recycle. By using partial or full automation, higher quantities at competitive prices are within the range of ongoing development.

The Ensinger group is engaged in development, manufacture and sale of compounds, semi-finished materials, profiles and technical parts made of engineering and high performance plastics through extrusion, machining and injection moulding.

Deployable roof, tent dwelling awarded at Tectextil

Deployable roof and tent dwelling for refugees are among the projects selected in the ‘Textile Structures for New Building’ competition at the ongoing Tectextil, the leading international

trade fair for technical textiles and non-wovens. The fair honours students for innovations on building with textiles and textile-reinforced materials.

An international jury of renowned civil engineers and architects selected eight awardees in various categories. With the support of the international TensiNet association, Tectextil honours students and young professionals from the fields of architecture, civil engineering and product design with the awards.

“The award-winning projects were selected by the jury for their inspiration and new architectural perspectives. The spectrum ranges from visually appealing air-inflated halls and improved tent dwellings for refugee camps, via flexible, lightweight exterior shells and textile interior-furnishing systems, to smart façade elements and woven structures made of concrete,” explains Michael Jänecke, brand manager technical textiles and textile processing at Messe Frankfurt.

“The projects illustrate the variety of applications for textile structures in architecture and building,” Jänecke says.

The jury gave three awards in the micro-architecture category, two in the material innovation category and one in the composites and hybrid structures category.

Shima Seiki to partake in Meet the Manufacturer expo

Shima Seiki Mfg., Ltd, a leading computerised knitting machine manufacturer of Wakayama, Japan, together with its European subsidiary, Shima Seiki Europe, Ltd., is set to participate in the Meet the Manufacturer 2017, UK’s leading textile trade show and manufacturing exhibition, to be held in London, England, on May 24 and 25, 2017, in booth K-10. Meet the Manufacturer is a trade show and sourcing event showcasing British manufacturing of clothing, textiles, fashion accessories, homewares and leather goods, and features various manufacturers and suppliers to the UK apparel and textile industries. Shima Seiki will participate as textile machinery supplier while demonstrating its seam-free Wholegarment knitting technology. Recent consumer trends such as increase in online shopping activity have changed supply chain requirements, with growing demand for mass customisation and short turnaround. The combination of Shima Seiki’s pioneering Wholegarment knitting technology that allows a garment to be produced in its entirety without the need for linking or sewing, along with the SDS-ONE APEX3 3D design system offers an ideal manufacturing model to

results of improved drainage rates and sheet quality.

Transform technology is applicable for machines producing, paperboard, containerboard, fluting/corrugating, linerboard, kraft bag, liquid packaging board, food and beverage containers, bleach board, white top paperboard, boxboard, and other related subgrades.

Bemis displays sewfree bonding solutions at Techtextil

Bemis Associates, bonding innovation and design partner for the world's leading performance, technical, lifestyle and luxury brands, is showcasing its complete suite of sewfree bonding solutions including new product LuxeLiner, Nylock, and integrated technology to inspire partners in new industrial markets at Techtextil in Frankfurt, Germany. Displays range from versatile technical applications to cooperative technology and integrated garments from leading partners including Google, Athos, Kate Spade, Huawei and Amazon.

"With more than 107 years in the business of sewfree bonding technology, our goal is to continually ask ourselves what we can be doing now to push the limits. How can we keep designing, constructing, and creating cool stuff? We value our partnerships as the key - striving to harness the combination of imagination and strategic collaboration," said Lacey Johnson, global brand manager.

Debuting at Techtextil, Bemis has launched the next generation of liners for reversible and unlined totes that's six-eight per cent lighter than what is currently on the market. Using LuxeLiner, designers can choose the design, colour and finish to create more durable and customisable handbags - without sacrificing quality or real leather hand-feel. Soft and sturdy, the product also allows designers to cut, bond, and go, eliminating the need for outsourced production.

As debuted at Winter Outdoor Retailer and ISPO, Nylock has changed the game for the outdoor industry by providing designers with an unprecedented bonding solution for tightly woven, lightweight fabrics and smooth finishes. For both construction and aesthetics, it's the most robust offering for nylon bonding in the world, eliminating the trade-off of performance versus aesthetic.

Bureau Veritas to launch Smart Wear testing solution

Bureau Veritas, together with 7layers, leaders in testing, inspection, advisory and certification services for the Smartworld, have announced they will be launching their new suite of Smart Wear testing solutions for smart clothing at the Mobile World Congress in Spain on March 1. TexRay's AiQ Smart Clothing will co-present with Bureau Veritas at the event. Bureau Veritas' strategic partner AiQ Smart Clothing will be showcasing its BioMan range of sports products that successfully completed the Smart Wear program from Bureau Veritas. AiQ will also provide insights into the value of testing for the BioMan collection. "As two mature industries converge, there are many challenges facing manufacturers of smart wear products. There is a need for industry standards, the need to address consumer concerns and the real issue of understanding the regulatory framework for this new category of product. Our unique position in having global capabilities covering traditional physical and chemical testing as well as connectivity testing meant we were able to address these challenges," said Elizabeth Hausler, VP of global technical services at Bureau Veritas Consumer Products Services and technical lead for the Smart Wear Solutions Programme.

Toshiba shows apparel retail solutions at Decoded Japan

Toshiba Tec Corporation displayed its latest solutions for the retail industry like Recommend system, Digital Receipt system and RFID at Decoded Fashion held in Japan on July 9, 2015.

Decoded Fashion is a top global event connecting decision-makers in the fashion, beauty and retail industries with emerging and established technology companies.

In a press release, Toshiba Tec said it has always been providing devices and solutions for Point of Sales (POS) systems, Multi Function Peripherals (MFP), and Barcode Printers (BCP).

However, to move on to the next stage, Toshiba Tec has started to offer innovative solutions, created by the synergy between each field of business and its own information devices.

Toshiba Tec believes its technologies and know-how accumulated in multiple areas will be useful for the apparel retail business and help make the user's working environment more convenient. "In recent times, popularity of ecommerce



World Textile News

Karl Mayer records successful participation at Techtexsil

Germany's leading technical textile machinery company, Karl Mayer, successfully participated at the Techtexsil 2017 expo, a leading technical textiles and nonwovens exhibition, from May 9 to 12, 2017, in Frankfurt, Germany. About 200 high-level conversations took place on the stand. Many visitors came from Germany, Turkey, Poland, and India. Many existing clients came to discuss projects, customer trials, and machine purchases, and some sales contracts were even signed. The company also made some important new contacts.

Bastian Fritsch, Karl Mayer's senior sales manager said, "Techtextil is a fantastic fair in terms of sales. Many new clients came to visit our stand, including manufacturers from other technology sectors and the clothing industry, who are looking for new end-uses in the field of semi-technical textiles, for example. Many of them already have some new ideas in mind, and are looking for partners to implement them. With our machines and know-how, we were able to help all of them."

Any company focusing on future issues definitely found what they were looking for on Karl Mayer's stand at Techtexsil which, for example, was featuring an impressive presentation of a future building material, textile-reinforced concrete. This composite enables lightweight, narrow concrete components to be produced using tough, carbon-fibre grids. The weft- inserted, warp-knitted textiles for the reinforcement are produced on Karl

Mayer's machines. As an alternative to conventional steel reinforcements, which are liable to corrode, the warp-knitted structures are increasingly attracting the attention of the construction industry - and consequently the textile industry. Many manufacturers expressed a specific interest to operate in this sector. In addition to the products catering for the construction industry of the future, there were many discussions on conventional, warp-knitted technical textiles, especially geotextiles, coating/backing substrates, interlinings, and reinforcing textiles for plastic composites. Other important topics were warp-knitted spacer textiles, nets, automotive textiles, and functional textiles for the sports, and athleisure sectors.

Xerium debuts new generation of forming fabrics

Xerium Technologies has launched Transform, a new generation of forming fabrics designed especially for paperboard and packaging machines. Transform forming fabrics have been tailor made for every type of board and packaging former: fourdriniers, twin wire formers, top formers, gap formers, and multiply formers, while also offering several benefits.

According to Xerium, Transform forming fabrics offer various benefits, including lower energy consumption and extended fabric life.

The company conducted trials of these new fabrics in select board and packaging mills, which threw up excellent

coordination and form joint working groups.

Iran agrees to make existing trade deal with Pakistan functional

Iran has agreed to deepen existing trade pact with Pakistan — Preferential Trade Agreement (PTA) — which is dysfunctional for many years, and make it functional with an aim to boost the bilateral trade up to \$5 billion by 2020, a senior official at Economic Affairs Division (EAD) said.

“However, both sides have decided that there will be no fresh Free Trade Agreement (FTA), rather both sides will later on turn the current PTA into FTA,” said the official. At present, the existing PTA is dysfunctional for many years between the two countries owing to which Pakistan exports have alarmingly dwindled to lowest ebb to \$35 million in 2015-16 from \$800 million in 2008-09.

Both the countries held talks in Tehran on April 17-18 under the canopy of Joint Economic Commission (JEC) where in Pakistan’s 14-member delegation from six ministries participated.

The official said Iran also refused to accept the force majeure contention of Pakistan which has caused delay in the project. Iran argues that unless and until Pakistan import is gas and crude oil, the dream of jacking up the trade between the states up to \$5 billion by 2020 to get metalised is mission impossible.

Iran Apparel Imports Hinge on Domestic Production, Exports

Foreign representatives, branches and distributors of apparel in Iran seeking business licenses are required to produce goods worth 20% of their import value (in rial terms) inside Iran and at least 50% of this domestic production be exported, a new directive issued by the Ministry of Industries, Mining and Trade announced.

The licenses issued as per the above condition will be valid for two years, with the possibility of extension if there are no violations.

The new regulations are aimed at increasing domestic production, creating jobs and reviving Iran's aging apparel industry by importing up-to-date technology.

According to the Headquarters to Combat Smuggling of Goods and Foreign Exchange, apparel tops the list of goods smuggled into Iran.

Some \$2.6 billion worth of clothes are imported into Iran every year and according to members of apparel unions, twice this amount is smuggled into the country.

According to Director General of the Association of Iran Textile Industries Mohammad Mehdi Raeis-Zadeh, more than 90% of foreign brands sold in Iran are fake and only 25 to 30 brands have sales permits from the main companies and/or their representatives.

The Iranian apparel market is worth an estimated \$12 billion per year.

Iran’s Shoe Industry Needs support

The footwear industry in Iran, as an old player in the country’s economy, has faced many hurdles in recent years.

Iran is one of the oldest producers of footwear, yet it is one of the most neglected domestic industries.

The industry is currently in a slump, with footwear producers facing numerous problems.

However, according to a study by the association, Iran is the largest consumer of shoes in the Middle East and the 18th largest consumer in the world. The country’s annual per capita footwear consumption is 2-2.5 pairs.

The low per capita consumption, Lashgari says, stems from either people’s low purchasing power or their general reluctance to regularly change their shoes.

The absence of well-known domestic brands is a major reason for the industry’s slump.

Iran’s shoe industry has been greatly disadvantaged by rampant illegal imports.

Citing global statistic, in 2013, 2014 and 2015 about \$229 million, \$574 million and \$252 million worth of footwear products were imported respectively, which amounts to an annual average of \$350 million over the three year.

However, according to the Islamic Republic of Iran Customs Administration, during the three years to March 20, 2016, the average value of footwear imports stood at only \$5 million. The figures clearly indicate that the value of smuggled products is 70 times more than the value of legal imports.

Iran Textile News

Iran Cotton Industry Risks Losing Viability

Iran imported over 56,517 tons of cotton worth \$103 million during the 11 months to Feb. 19. Uzbekistan was the biggest exporter.

Considering the small size of farms for cotton cultivation in the country, the high costs of machinery and equipment are just not affordable, which means farmers have to produce cotton traditionally, much as it is inefficient.

This has led farmers to turn to other agricultural sectors, the CEO of Iran's Cotton Fund Company said.

"Not long ago, about 100 tons of cotton used to be exported from Golestan Province but now we import a considerable volume of cotton," he said.

According to the CEO, in the fiscal 2003-4, Iran exported 12,000 tons of surplus cotton. Imports in that same year stood at 25,000 tons.

According to Kaviani, the area under cotton cultivation was 80,000 hectares in the last Iranian year (ended March 20, 2017).

It is predicted to reach 90,000 hectares this year, thanks to the timely delivery of seeds, fertilizer and pesticides to farmers along with government subsidies.

Iran imports cotton seeds from Turkey and Greece, which in Kaviani's words, are among the best in the world.

The textile industry is a labor-intensive sector accounting for 13% of total employment in the industrial sector, directly employing 280,000 people. Its manufacturing facilities often have more personnel on average compared

to other industrial sectors.

Cotton farming creates two and a half times more jobs than growing soybeans, four times more than corn, six times more than wheat and four times more than colza production.

Amirkabir University of Technology (AUT) and Hong Kong Polytechnic University (PolyU) investigated venues for expansion of scientific and research cooperation

A delegation of Hong Kong PolyU, comprising head of the International Affairs Office, dean of the Faculty of Engineering and dean of School of Accounting and Finance made the visit to Tehran Amirkabir University on Saturday aiming to bolster international scientific collaborations.

The Hong Kong delegation joined a session with deans of the Aerospace Engineering, and Biomedical Engineering faculties, and the research deputy of the Computer Engineering faculty.

Both sides presented a report on latest achievements and capabilities of their universities and stressed the need to expand collaboration, exchange lecturers and students in addition to conducting joint research.

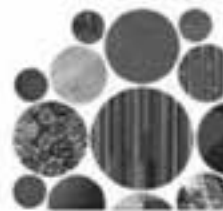
The head of Hong Kong Polytechnic also voiced willingness to receive PhD students and Iranian professor on sabbatical in order to carry out joint research projects.

He also expressed readiness to make necessary



DOMOTEX asia / CHINA FLOOR 2017

21-23 March 2017 Shanghai New International Expo Center, China



HOMEDEC WEIYA CARPET, INNOMASTER HOME, JIALI CARPET, KINGDOM PLASTICS, TAISHAN ARTIFICIAL TURF INDUSTRY, and YINGTAIHONGYE HOME DECORATION. Onsite, visitors had a chance to preview and experience a selection of 50 new products displayed in 2 dedicated InnovAction Centers.

cadex, the international hub for connecting, learning and doing business in the design and architecture industry was held for the second year concurrently to DOMOTEX asia/ CHINA FLOOR. cadex hosted three days of conferences, networking, interactive events, creative displays, and much more.

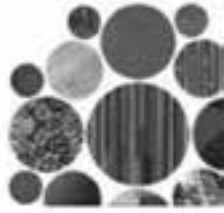
For the first time, DOMOTEX asia/CHINA FLOOR in collaboration with COVER magazine successfully hosted **“Luxury Brands”**, a contemporary high-end handmade design carpet showcase in the heart of hall W5. Luxury Brands consisted of an exclusive display area which featured a curated selection of high-end hand-made carpets from some of the top international rug brands, namely: **Amadi Carpets, Ariana Rugs, Art Resources, Ayka Design, Creative Matters, Hossein Rezvani, Knots Rugs, New Moon, Rug Star, Samad, Tissage, Wool & Silk Rugs and Zollanvari**. The Luxury Brands showcase was met with great enthusiasm and interest by the visiting audience, showing a clear trend setting in the Asian market for the handmade carpet sector.

The exhibition’s halls were flooded by visitors from China, Asia-Pacific and other regions of the world, who came to discover new trends, technologies and innovations and took part in 33 conferences, events and seminars around flooring practices, applications and modern day challenges, presented by world-renowned flooring experts, professionals and designers. Events like the **“ALL IN ONE Home Decoration Industry and Wooden Products Development Summit”** and the **“Bamboo Flooring and Outdoor Decking Matchmaking”** attracted a plethora of both domestic and international flooring visitors, while cadex conferences such as the **“Luxury Boutique Hotel Design”** and **“Smart Home”** were fully packed with architecture and interior design professionals.

Another feature that continued its successful route following its 2016 launch was the **US Distributor Delegation** that brought together 10 flooring professionals from some of the biggest flooring distributing companies in the US for a China Factory Tour before the exhibition and onsite B2B match making with selected exhibitors during DOMOTEX asia/ CHINA FLOOR. **“The breadth of products at the exhibition was simply incredible. It is something that any executive who deals with Asian manufacturing should experience. I would definitely say the trip provided me with extra knowledge that will prove crucial for future dealings.”** – said Chuck Greene, hardwood product manager at Apollo Distributing.

Future is looking particularly bright for DOMOTEX asia/CHINA FLOOR 2018, which will mark its 20th year on the forefront of the flooring industry in Asia as the leading flooring tradeshow. With a phenomenal onsite rebooking rate of 64 % and an excellent feedback from the exhibition’s visitors, the 2018 edition is sure to come back even more enriched and maintain its position as the No. 1 flooring exhibition both for exhibitors and for visitors in Asia-Pacific.

For more information about the show visit www.domotexasiachinafloor.com



The 19th edition of DOMOTEX asia/ CHINA FLOOR concluded stronger than ever



DOMOTEX asia/CHINA FLOOR, the leading flooring tradeshow in Asia-Pacific, opened its doors to visitors and exhibitors from all around the world during March 21-23, 2017 at the Shanghai New Exhibition Centre. 1,364 exhibitors from 40 different countries, among which 313 were international, exhibited both traditional and innovative flooring products in an extended gross area of 145,000sqm spread throughout 13 halls. Ten countries, namely Afghanistan, Belgium, Croatia, France, Germany, India, Iran, Turkey, The Netherlands and USA were also represented through country pavilions. The total number of visitors increased by 8.2 % from the previous edition and reached 54,529 visitors, among which 12,812 were international flooring professionals.

“Again DOMOTEX asia/CHINA FLOOR confirmed its leading position in Asia-Pacific. In particular, the huge variety of domestic and international brands proved the profound commitment of the flooring industry”, said Ms. Susanne Klapproth, Global Director DOMOTEX at Deutsche Messe, one of the organizers of the show. “We received a very positive feedback from our exhibitors who appreciate the high quality of the visitors. This motivates us to keep on targeting the best buyers of carpets and floor coverings from China and Asia-Pacific.”

The InnovAction Flooring program once again gave DOMOTEX asia/CHINA FLOOR 2017 exhibitors the opportunity to showcase their newest products to the audience before and during the exhibition. More than 500 new products were launched on the show’s dedicated online platform by over 400 exhibitors. Visitors voted online and onsite for their favorite innovative products choosing the Top 10 from wood, carpet and resilient sectors. The companies that received an award under the category 2017 Top 10 New Products were: ERE FLOORING, FUYU WOVEN, FUXING CARPET, PROPARG,

press
release

ITMA 2019 ENHANCES INDEX OF PRODUCTS TO FACILITATE COLLABORATION AND SOURCING

Exhibition space application opens today

4 May 2017 – Exhibition space application for ITMA 2019, the world's largest textile and garment technology exhibition, opens today. The exhibition, which has been held every four years since 1951, showcases the entire textile and garment making manufacturing chain, as well as raw materials.

As the most established industry exhibition, ITMA's owner, CEMATEX - the European Committee of Textile Machinery Manufacturers - constantly reviews its index of products to ensure its relevance and continuously improve visitor experience.

Mr Fritz P. Mayer, president of CEMATEX, explained: "A core value of ITMA is to be relevant to the textile and garment making industry and end-users. As such, we are always exploring new ways to reinvent and to make our platform vital to all stakeholders by offering an integrated sourcing experience. More importantly, during every ITMA, manufacturers are able to have meaningful discussions with their partners and customers on innovative ideas that offer users a competitive advantage."

At ITMA 2011 a new fibre and yarn sector was introduced, and this was favourably received by visitors who could source their raw materials at the show. Due to the favourable response received from fibre and yarn exhibitors and visitors at the last two ITMA shows, ITMA 2019 will include woven, nonwoven and knitted fabrics in the fibre and yarn exhibit sector. In addition, digital and screen printing inks have been classified in the printing chapter. This will allow ink producers to be in the same hall as printing machinery manufacturers so that visitors can easily source technology and consumables. A new service introduced for the benefit of machinery buyers is leasing and financing services, according to ITMA Services, the organiser of ITMA 2019.

Mr A. E. Roberts, managing director of ITMA Services, commented, "We have taken a comprehensive approach in ensuring the index of products will be extremely useful to

manufacturers as the global business environment remains challenging. The launch of ITMA 2019 space application has been eagerly awaited by textile machinery manufacturers and raw material producers. We have received a lot of enquiries from past exhibitors and interested manufacturers who have not taken part in ITMA before. This augurs well for ITMA 2019 and the industry can look forward to another strong industry platform."

Mr Han Bekke, president of International Apparel Federation, said: "ITMA is a very established textile machinery exhibition but over the years, the exhibition show profile has evolved in keeping with industry trends and challenges. It now features the entire textile and garment making production chain, including raw materials.

"Hence, our IAF members which represent the world's leading brands and apparel makers find it an excellent sourcing platform. As we look for innovative solutions to offer consumers exciting products made in a sustainable way, we are glad to be able to explore new materials and technologies in one location at ITMA 2019."

ITMA 2019 will be held from 20 to 26 June at Fira de Barcelona, Gran Via venue. Interested participants can visit www.itma.com to apply for space or get more information on the sector allocation plan, exhibition schedule and travel arrangements. Mr Jordi Galtés, president of AMEC AMTEX, the Spanish Association of Textile Machinery Manufacturers, enthused: "We are excited to be hosting ITMA again. Participants had a good experience in 2011 and we hope to replicate it again in 2019. Spain is home to some of the most famous luxury and fast fashion brands and an interesting destination for all in the textile, garment and fashion industry." The last ITMA exhibition, held in Milan in 2015, featured exhibits from the entire textile and garment making value chain spread over 108,268 square metres of net exhibition space. It drew the participation of 1,691 exhibitors from 46 countries and visitorship of almost 123,000 from 147 countries.



be realized after yarns are receiving the loop form, not during the knitting process. This type of error is not possible as result of thermal treatment (such as drying). Because view of the thermal damage of the elastomer material will occur in the form of shrinkage of the fiber end and absence of the view in this way, the error is not reason by heat.

Another reason for the elastomer rupture error; The worn planes of knitting elements of the knitting machine (needle, platinum), being as like a cutting tool, by giving damage to elastomer material completely and/or partially ruptures on large portions and on later stages by the tensions applied to the knitted fabric (open and wrap the fabric, drying the paint shop ... etc.) rupture on rest of fabric is likely to emerge.

Dyeing and Finishing of Circular Knitting Fabrics with Elastane Yarn

On finishing and dyeing of knitted fabrics with elastane yarn, final dimensional stability and curling feature of the fabric is important to obtain. Sequence and number of finishing depends on various factors and the most important of these factors are; The type of fiber used, the machine selection and the cost of dyeing.

- **Flotte ratio:** compared to 100% cotton working, 20% -30% should be increased.
- Because of fabric comprising elastane is 25% heavier than equivalent amount of 100% cotton fabric, on loading machine rope length of the fabric must be reduced.
- Bath should not be cooled on shock.

Considerations During the Dyeing of Fabric Containing Elastane Yarn

Do not use Azoik Dyes (have the effect of lowering the quality of the elastane threads). Do not use water that contains chlorine. Use dyes and auxiliaries that are less polluting elastane yarn. Use dyes and auxiliaries that have good wash fastness. Determine the properties of elastane yarn and use dyes and auxiliaries according to that., For the type of elastane yarn to determine the conditions that have the best results on dyeing, make Experiments in the laboratory.

Considerations During Working on Fabrics with Lycra

If Knitted fabrics will be hold, should be washed and dried if possible, should be wrapped around the reel without creating internal fractures.

Fabrics hold on depot, if possible not stacked overlap, must be put on fabric cases. On cases date of set of fabrics must be noted, and fabrics should be used by this date notes.

Held fabrics must be covered by black colored fabric. Depot time should not exceed two months time.

Considerations on Pre-Fixing of Fabrics with Lycra

- The desired width, weight and structure of the fabric
- The type of clothes to be made
- Which color will be dyed
- Type of Lycra
- Ratio of Lycra
- Heat sensitivity of the fibers
- Impact against time and temperature of heat setting on the fabric

FEATURE	HEAT RAISE	TIME RAISE
Stability	Increases	Increases
Shrinkage	Decreases	Decreases
Whiteness	Decreases	Decreases
Tidiness	Increases	Increases
Power	Decreases	Decreases
Width	Increases	Increases
Oil Stains	Increases	Ineffective
Egalizes	Decreases	Ineffective

Pre-Fixing of Fabrics with Lycra

There are benefits of using of wetting and degreaser in terms of quality on pre-fixing.

The Fabric should stay 1 minute on Stenter. (on 8 cabins ram 18 m/min)

First, on 1 roll fabric, fixing should be done 10 g/m² more than desired finished weight, that will give tensile test. In the tensile test weight ,after washing, must be 15-20 g/m² more than desired weight. Once these conditions are met fixing process should be continued. If the weight is less or more we will decrease or increase fixing speed.

Studying the Viscose Lycra Fabric

On these fabrics, unlike the fixing fabrics with lycra, I advise drying with water on ram before. After that fixing procedure must begin. On fixing procedure adding wetting agent and degreaser will be useful. On pre-fix we have to work fabric on maximum feeding. Before cutting finished fixed fabrics with lycra, by passing fabric from the steaming machine called S-TEKS, we can give stability on every part of fabric. I advise this to all Confection Firms.

*Ekrem Hayri Peker
Chemical Engineer*



Necessary Production Operations For A Good Elastane Mixed Fabric

- Keep low tension in knitting machines
- Fabric should be wrapped with undervoltage
- The fabric should be wrapped in rolls without wrinkles,
- Fabric rolls should not be stored onto one another as dense
- should not be stored in storage to occur fracture trail
- should not be stored for more than two months on same form.
- Attention should be paid to the choice of oil to be used knitting machines
- For threat against yellowing, thermofix on high temperature should be avoided.

Considerations on the Use of Elastane

Ask elastane from vendor according to the yarn type you want to use. Before using the elastane yarn please superficial control every party you received (coils, incomplete kg, right denier of all incoming parcels?) Otherwise return the yarn before using elastane where you bought.

Check the lot number of each party of the elastane yarn you bought. Because differences on lots of elastane yarn can cause problems in painting (abraj, flexibility difference. etc. may cause such error) Because of Elastane production technology is very sensitive, so the elastane threads is itself sensitive. When using knitting machines, operation of each apparatus of the elastane yarn passes must be complete. Especially, there should be no obstacle that could cause tension. Pulleys in contact with elastane, must be on revolving condition. On the mouth of shuttle there must be no flying debris.

Settings Required To Obtain Quality on Fabric

Settings between shooting on circular knitting machines and yarn feed system is the major factor to obtain the quality of the fabric texture (weight, thickness, etc.) and determining the touch. In the absence of this mechanism in the machine there would not have been proper knitting. Knitting, can be collected on pins, after a period stitch will not occur and needles can be broken. Because, to have comfortable work of the needle, the fabric must be taken down in a certain tension.

Also this tension must be equal on all surface of the fabric. When we first start building fabric; Other settings of the machine, may set, the band adjustment, after adjustment for tension, shooting setting must be done to attain the desired weight of the fabric.

Importance of Cleaning the knitting machine

During knitting operations, particularly natural fiber yarns, fiber fly, dust and dirt, that mixed with oil and abraded metal particles are make dirt in various parts of the needle and in roller bearing. Over time, this mixture is become compact and tightly bound to place where they are. Increasing an impurity in this manner causes a narrowing of the width of the needle bed of the channel and increases the friction. Needles are slowing, the rise outward from the needle bearings and contact to the various regions of steels. Due to pollution: Becomes excessive friction, needle and machine gets wear, needles will be damaged, high machine temperatures will occur, would be excessive energy consumption.

Reason of break of elastomer material on Knit Fabric

There are 3 reasons:

Elastomer material, the finishing process (especially heat treatment) and the knitting elements of the knitting machine are making the damages.

Sourced elastomer material breaks, the first of the above reasons, are due to as the industry's term "stale lycra" that had been subjected to improper storage conditions, or that are the second, third quality elastomer materials. During the knitting process when manufacturing with elastomer material of this type, by the given pre-tensions on material there will be break as a result property lost of the material. But the appearance of the rupture zone will not have sharp surface. Additionally, this rupture will be noticed by the thread control device in the knitting machine and the machine will be stop and the knitting of broken material will be prevented. Thus, complete rupture of the elastomer material in the fabric structure must



11- Continuous Oil Stains: On roll vertical or horizontal one or more oil stains.

12- Fabric Cracks: On fabrics because of Rolling, storage or transportation errors that makes physical cracks.

13- Report Error: Errors that fabric report is not execute rightly.

14- Fold Signs: Fabrics that rolled may have signs and stains on edges of folds. When fabric opens, these errors can be seen on fold places.

Thread Deflects

1- Bonito: approximately 10 mm length, on fish shape thread gathering. On cotton color, stained, oiled can be.

2- Thin Thread: Places that thread nominal count is %50 more thin. On fabrics seen as knit thinning or thread break shape. On quality control worker must detect and must make count.

3- Thick Thread: Places that thread nominal count is %50 more thick. On roll it is as horizontal thick stitch. It cannot be seen while machine is working. On quality control it must be detected and counted.

4- Transverse Band: It can be because of no of Thread, difference of uster, paraffin or centering problems on knitting machine. On fabrics horizontally 1 cm or more thick lighter or darker areas will be seen. It can be detect while machine is working.

5- Foreign Fibers: While yarn production or on knitting area by floss it can be mixed to fiber. These flosses can be in different colors. It cannot be seen while machine is working. On quality control it must be detected and counted.

6-Core (Black Points): Cause of Thread. Not possible to count. On quality control it must be detected and counted.

7- Abraj of Thread: Circular tracks on horizontal way cause of thread. Physical difference on one or more thread can cause this defect.

8- Thread Pass: On many thread used fabrics, it is defect of any thread has changed surface.

Defects Cause of Knitting Machine

1- Oil Stain: On fabric can be like drop shape as horizontal or vertical line. These are water soluble needle oil that used on machine. It can be detected while machines are working. On quality control it must be detected and counted.

2- Bird Eye: From not good working needle undesired bending is appeared. Generally two small defected loops are next to each other.

3- Loop Lapse: Result of not good working needle or of winding machine. Holes or loop lapses are appeared.

4- Stop Track: Vertical track seen on fabric that is result of stops of knitting machine.

5- Machine based Band Track: periodic continued circular tracks result of setting error on circular knitting machine or machine based problems.

To prevent these defects my advice is to have precautions. First of all yarn quality must be good.

Other than that from fabric defects sample sheets will be done, workers must be trained for defects. Rolls are never be cut from defects areas, new roll beginnings are started inside roll. More roll beginnings means more sewing waste and means more cut waste cause of not right measurement. Increase of waste leads to short of ordered sizes, additional dyeing for missing sizes, evenly to cancel of total orders.

For this raw pre-dyed material control must be made good, for short of pieces planned dyed fabric must be increased.

Ekrem Hayri Peker/Chemical Engineer

Standard Defects and Ratios on Knitting Fabrics



Knitting fabric production has shown huge development on last twenty years. Knitting machines usage process begins previously only on underwear production, then on T-shirt and cotton fabric production, from there to home textile sector with more bigger machines that can knit haze fabrics. Any defect on dyed and printed fabrics that are for sewing cause us to throw the fabric to waste. Naturally cost of dyed or printed fabric is more than raw fabric.

The most seen errors on knitted fabrics are hole, rupture and needle signs. On a 20 kg roll maximum defect must be; with cotton fiber knitting 3-4, with carded fiber knitting 5-6 numbers on fabric.

We can load errors of fabric to computer with codes. If we give examples to meanings and shown to errors codes;

Roll no	No of roll that is weighted.
Date	Date of Weighing
HPF	number of small holes on fabric.
RPT	rupture (holes bigger than)
OTR	Other (3 or 4 piece oil stains on drop shape)
NDL 1	Needle 1 (Defects cause of fault needle)
THK 1	Thick 1 (1 meter or more length defects)
THK 2	Thick 2 (Defects that continued by Thick fiber)
THN 1	Thin 1 (break of lycra)

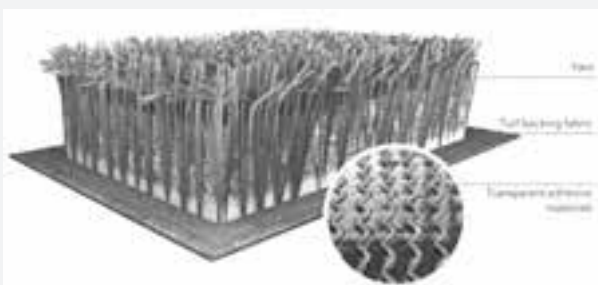
Quality Control Standards used on Circular Knitting Cotton Fabrics

Fabric Defects

- 1-Vertical May Leak:** The lack of Vertical Wale.
- 2-Horizontal May Leak:** The lack of horizontal wale.
- 3-Hole:** defect that seen by the lack of loop
- 4- Needle Space:** Loops that are deformed.
- 5- Fabric Fall:** Deformation that seen when a group of needles are not working on circular knitting.
- 6- Floss:** Error that comes by friction between fiber and hard-thick pieces.
- 7- Rupture:** More than 10 cm Diameter big knitting blank space.
- 8- Cut:** Beginnings of rolls on one roll.
- 9- Lycra Break:** Error because of Lycra on knitting.
- 10- Vertical Needle and Platinum Track:** Knitting error that deform fabric.

international standards for performance and safety. The product development has many aspects:

- Yarn polymer chemistry and profile design
- Turf backing materials and strength improvement
- Player friendly, low skin abrasion turf surface
- Eco-friendly material and 100% recyclable system
- Non-infill artificial turf system with shock absorbency layer



Materials Used in Artificial Turf

Artificial turf is manufactured from yarn made up of two types of polymers:

- Polyolefin, comprising polyethylene and polypropylene
- Polyamide, also known as nylons

In some cases, a combination of polymers is also used. Artificial turf is chemically modified to provide a surface with good fibre resilience, frictional resistance, weathering resistance, and durability.

Manufacturing Processes

There are two main manufacturing methods used to produce artificial turf. Tufting is the most common process, where the fibre is tufted into a primary backing cloth. The cloth is made from woven polypropylene or urethane. Each tuft is fixed onto a latex-based secondary backing material. The backing material enhances the dimensional and structural stability of the entire turf. The other method is needle-punching. Here the fibre forms both the pile structure and most part of the backing cloth. First, the fibres are poked or needled into a flat primary cloth, and then the same process is repeated to pull through and angle the fibres to a felt-like structure. Knitting and weaving methods are also used to make artificial turf. However, these are not widely used as the costs are greater than the first two methods.

Advantages and Disadvantages of Artificial Turf

The following are the key advantages of using the artificial turf:

- High-quality with uniform surface
- Comparatively low maintenance requirements
- Weather resistant, thus no adverse effect to the surface

- Multi-purpose use
- Various colors are available
- No heavy machinery is required for maintenance
- Can be programmed intensively to suit day and night, and also to sub-divide field space
- Easier on the player's joints as it is padded with rubber granular infill and shock pads

The following are the some common disadvantages of using the artificial turf:

- Initial cost is high
- Expensive to repair if damaged
- Cleaning process require the use of petroleum
- Some concerns about the toxic chemicals used in the infill
- In some cases, heat retention and reflection can become a big issue
- Has to be redone or upgraded every 8-15 years
- Sand-filled artificial turf increases in weight when damp, thereby rendering it difficult to transport, relocate or dispose without the use of heavy lifting and transporting machinery

A research study published in the British Journal of Medicine in 2006 concluded that there was no evidence of greater injury hazard while playing soccer on either artificial grass or natural turf during the Swedish Premier League.

New Innovations in Artificial Turf

Owing to the increase in customized artificial turf, several new innovations have recently come into the market.

- Advanced shockpads - Player performance on artificial turf is further enhanced by embedding shock pads and using high quality infill. It ensures maximum safety for player and long-term usage of the turf system. Airlastic is a company involved in producing shock pad and environment-friendly infill solutions for the sports industry. Their products can also be recycled.
- AstroTurf 3rd, 4th, 5th, 6th Generation All Weather Pitches are available in the UK. However, only 3G pitches meet professional pitch standards at the moment.

References

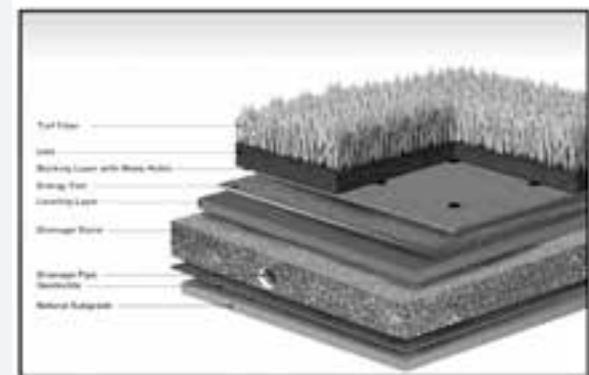
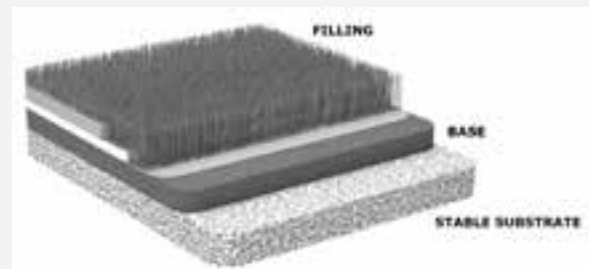
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the turf dimensional stability. When installed, the turf's face (i.e., the grass "blades") is generally given a layer of sand to augment water drainage, and a layer of cryogenic rubber granules to help keep the tufts more vertically oriented; and to provide shock-absorbency. Other synthetic turfs are often made from shorter, denser polyethylene fibers that have even shorter crimped fibers to keep the tufts (grass blades) upright. Variations of artificial turf are now used on field hockey playing surfaces and on tennis "grass courts". For physical testing purposes, artificial turf must pass ASTM F1551-09 Standard Test Method for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials. Other required test for artificial turf include ASTM D624 Test Method for tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers, ASTM F 1015-Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces, ASTM F 355-Test Method for Shock-Absorbing Properties of Playing Surface Systems and Materials, and about 26 other ASTM test methods and requirements for synthetic turf products.

The actual construction and physical performance properties between artificial turf carpets and synthetic grass differ significantly. Here are just a few examples: Artificial turf is often made from polyethylene fiber that must be colored by adding pigments and dyes prior to spinning, and will require a tuft bind minimum average of 21 lbs/square inch. Synthetic grass carpets are made from solution dyed polypropylene (olefin), and are required to have a minimum tuft bind strength average of 3 lbs/square inch. Typical synthetic grass carpets have a pile height ranging from 3/8"-1/2", and a pile yarn weight of 10-34 oz./square yard. Artificial turf will often have a pile yarn weight as much as 55 oz./square yard, and have a pile height ranging from 0.5- 4". Synthetic grass carpets are typically coated/laminated using styrene butadiene rubber. Artificial turfs are coated using a polyurethane rubber. Most artificial turfs consist of two face yarns, one that is textured, and one that is not. Synthetic grass carpets can be made using tufts consisting of one or more face yarns. This information demonstrates the vast differences between the required performance criteria between synthetic grass carpets used on patios, around swimming pools, etc., to artificial turf used for various sundry athletic playing surfaces. In no case should residential synthetic grass carpet be used as an athletic playing surface, or be confused with synthetic grass products

specifically designed for landscaping, parks, and playgrounds. Like synthetic turfs, these carpets are typically made with thicker "blades", will have a urethane secondary backing, and require drainage capabilities and the use of in fill during installation.

ARTIFICIAL TURF FILLING



So called "infill", which is artificial grass infill in the form of rubber granules, is introduced between synthetic grass fibers for the purpose of their stabilization and provision of suitable playing comfort. Basic structural elements, on which artificial grass carpet is installed, include:

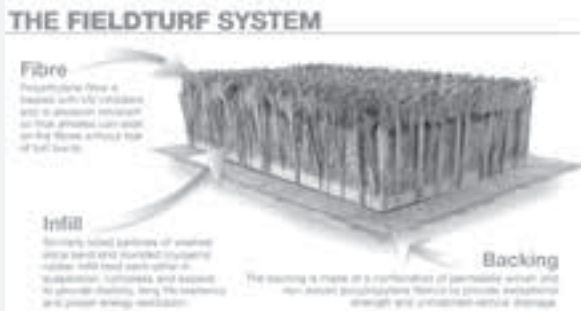
- **Infill** – the filling has two layers: sand and rubber granules. Quartz sand ensures drainage and stabilization of synthetic grass, while rubber granules ensure good surface flexibility and safe playing. Additionally, both layers "care" for horizontal position of artificial grass fibers and prevent their relocation, kneading and deformation.
 - **Base** – it is usually built with coarse aggregate such as break stone, for example. Also, the base may be asphalt or concrete.
 - **Substrate** – the most common materials used to built the substrate is stone, gravel or debris. Main purpose of this layer is to stabilize the whole structure and to ensure its permeability, i.e. suitable water removal.
- Our technical team brings the latest technology to build the artificial turf systems in order to meet

Artificial turf



Dr Farnaz Nayeb Morad

Artificial turf is a surface of synthetic fibers made to look like natural grass. It is most often used in arenas for sports that were originally or are normally played on grass. However, it is now being used on residential lawns and commercial applications as well. The main reason is maintenance artificial turf stands up to heavy use, such as in sports, and requires no irrigation or trimming. Domed, covered, and partially covered stadiums may require artificial turf because of the difficulty of getting grass enough sunlight to stay healthy. But artificial turf does have its downside: limited life, periodic cleaning requirements, petroleum use, toxic chemicals from infill, and heightened health and safety concerns.



Artificial turf first gained substantial attention in the 1960s, when it was used in the newly constructed Astrodome. The specific product used was developed by Monsanto and called AstroTurf; this term since then became a generic trademark for any artificial turf throughout the late 20th century. AstroTurf remains a registered trademark, but is no longer owned by Monsanto. The first generation turf systems (i.e., short-pile fibers without infill) of the 1960s have been largely replaced by the second generation and third generation turf systems. Second generation synthetic turf systems feature longer fibers and sand infills, and third generation systems, which are most widely used today, offer infills that are mixtures of sand and granules of recycled rubber.

Synthetic Grass and Artificial Turf

In this Tek Newsletter, synthetic grass carpets refers to tufted carpets made specifically for residential end-uses that include patios, walkways, decks, porches, and areas around swimming pools. Artificial turf refers to tufted carpets made specifically for end-use that include athletic playing surfaces, driving ranges, putting greens, “goofygolf”, putt putt golf, etc. A second reference to synthetic grass carpets used for landscaping, playgrounds, and other commercial end-use’s will also be mentioned briefly.

The first successful effort to produce what was referred to as artificial turf occurred in 1960 at the North Carolina State University College of Textiles. By 1965, the first artificial turf was installed in the newly-built Astrodome in Houston, Texas.

By 1970, similar artificial turfs were being installed in both the United States and Canada in indoor and outdoor stadiums for venues such as soccer, baseball, and football. By this time, the most advantageous use of artificial turf was seen in its use in football stadiums with colder climates. By the 1980s, artificial turf was being installed in European soccer stadiums, and later as a playing surface for cricket and rugby. At this time, artificial turfs had begun to gain a bad reputation for being very hard and unforgiving surfaces, as more and more serious joint injuries were being associated with their use. By the 1990s, many stadiums that had used artificial turfs began to replace them with softer, more forgiving natural grass that had been engineered to withstand colder climates where necessary. Today’s generation of artificial turfs are considered to be much safer, and are now compared to playing on natural grass. These products are made from UV-enhanced olefin (polypropylene) fiber that is tufted into a woven synthetic primary backing that receives a coating of synthetic latex on the opposite side of the face fibers to give