

institutes to present their latest research projects and cutting-edge technological developments. For the first time, guest industry speakers will be invited to share their knowledge and experience with ITMA participants. Some members of the judging panel will also be invited to lead discussions on various topics, thus adding to the vibrancy of the Platform.

R&I Pavilion

A total of 27 organisations are participating in the R&I Pavilion which will showcase cutting-edge textile and related research and development projects. Since ITMA 2007, the R&I Pavilion also serves to encourage collaboration among companies, research centres and universities in order to develop novel materials and technologies which will transform the textile, garment and fashion industry.

ITMA Sustainable Innovation Award

The Award was created by Cematex in 2015 to recognise the collaborative efforts by the global textile industry to advance business sustainability through innovative solutions and promote outstanding industry related research.

UCMTF to organise European Textile Machinery Roadshow

Four textile machinery manufacturers associations UCMTF of France, AMEC of Spain, Symatex of Belgium, and BTMA of Great Britain are set to organise the European Textile Machinery Roadshow. The show for apparel, carpeting, and technical (automotive) textile machinery firms will be held in Mexico on November 20, 2018 and in Puebla on November 21, 2018. More than 18 manufacturers have joined the show. On the Mexican side, the initiative has also received a strong support from Canaintex and Citex. Then, a two day programme has been set up. The European textile machinery manufacturers will welcome the Mexican textile and carpet manufacturers and present them their latest technical innovations and services in Mexico and Puebla, according to a UCMFT press release.

The machines cover nearly all the textile industry, from fibre processing to dyeing and finishing and even recycling through weaving, circular knitting; all end uses markets, textile for apparel, home textiles, carpet manufacturing and technical textiles for the automotive manufacturers for example. This is a very convenient opportunity to meet these state-of-the-art machinery manufacturers, meet them at the highest levels, know them better, discuss about your projects. They are already or can become your technology partners to design new products, improve your production processes, increase

your raw materials, energy and water savings and introduce new features of industry 4.0. Alliance Machines Textiles with dyeing and finishing machines, BMS Vision with hardware and software for Manufacturing Execution Systems (MES), Canmartex with large-diameter circular knitting machines for knitted fabrics, Garnett Controls with online weight controls, blending and dosing, Cygnet Texkimp with fibre handling and converting machines for technical markets, Gomplast with coating rollers with rubber, polyurethane, and fluoropolymer, and Icomatex with machinery for washing and textile finishing, will participate in the show.

Other companies include James H. Heal, Jeanologia, Laroche, N. Schlumberger, Pirobloc, Picanol, Rousselet & Callebaut De Blicquy, Superba, Tacome, Trelleborg, and Van De Wiele.

H&M dethrones C&A as the biggest user of sustainable cotton

The H&M Group has taken first place as the world's largest user of sustainable cotton and man-made cellulosic materials, according to the 2018 Textile Exchange's Preferred Fiber Materials Market Report. Dutch fast fashion chain C&A topped the ranking last year.

According to a statement published on H&M's website, 59 percent of all cotton used by the Swedish fast fashion giant last year was organic, recycled or "better cotton" – a term to describe more sustainable cotton, which includes cotton sourced under the Better Cotton Initiative (BCI). In addition, of all the materials H&M used in 2017, 35 percent were sustainably sourced or recycled, also according to the company itself. H&M aims to only use recycled or other sustainably sourced materials by 2030. "With our yearly and steady increased use of recycled or other sustainably sourced materials, we not only push the demand of widely used materials such as organic cotton, but also influence the scalability of new sustainable materials. We hope to inspire other players in the industry", said Cecilia Brännsten, Environmental Sustainability Manager at H&M Group, in a statement.

"The data shows that the longer you have been benchmarking, the more you improve, confirming the impact of the program", said Liesel Truscott, Director of Europe & Materials Strategy at Textile Exchange, in the same statement. Textile Exchange is a global nonprofit that collects and publishes data and insights to promote the use of preferred fiber and materials by the fashion industry. Its annual global conference is being held this week in Milan, Italy.

by human labour is usually inconsistent and unreliable. Textile manufacturers also attempted to use some other fabric inspection systems, but those systems were not able to meet the industry needs. Ensuring quality in the fabric production becomes a great challenge to the industry.

Turkey's Eurotay to open a textile factory in Kraljevo employing 2,500 people

Serbian President Aleksandar Vucic visited Kraljevo on Sunday where Turkish textile company, Eurotay is building a production plant that will employ 2,500 people.

Also in attendance were Chairman of the Turkish Tai Group, Mesut Toprak (Eurotay is a member of the Tai Group), Serbian Minister of Trade Rasim Ljajic, the Ambassador of Turkey to Serbia, Tanju Bilgic, and the Mayor of Kraljevo, Predrag Terzic. Toprak thanked Vucic for visiting the factory and said that the factory in Kraljevo would span 30,000 square meters and employ 2,500 workers.

"Serbia will occupy an important position in the and clothing segment, and our aim is for the value of our exports from Serbia to reach 90 million euro," Toprak said.

He added that the plan was for the factory to be built by March and put into operation by April 2019.

He says that the construction of the factory will be completed in March, which will start production in April. The plant will, as he said, produce seven million pairs of jeans annually.

Toprak pointed out that around 10,000 people would benefit from the Kraljevo factory – both employees and their families. Tai Group was founded in 1977 in Istanbul, and today it is one of the biggest textile companies in that segment.

Tai Group's CEO went on to say that the Group has forged strategic partnerships with many world brands, and that outside of Turkey, they also made investments in Egypt, Algeria and now Serbia.

Tajikistan to develop textile and clothing production

Textile and clothing production in Tajikistan for the eight months of this year increased by almost 30 percent.

Ministry of Energy and Industry of the country states that the amount of production of textile and clothing products during this period made more than 844.5 million somoni (more than \$ 89.6 million).

In the textile and clothing industry, the industrial production

index increased by 29.1 percent due to an increase in the output of cotton fiber, fabric, carpets and carpet products, and hosiery. As statistics agency of the country reports, for the specified period, the textile exports amounted to more than \$ 149.6 million, which is \$ 71.6 million, or 92 percent more than the same period last year. Of the total exports, over \$ 106.9 million is accounted for exports of cotton fiber.

Tajikistan is also successfully implementing the International Trade Center (ITC) program, aimed at supporting the development of the textile and clothing industry and improving the quality management infrastructure.

ITMA 2019 launches Innovation Lab

ITMA has been a catalyst and showcase of ground-breaking innovation since 1951. The participants will be able to share new developments, discuss industry trends and spur creative efforts, thus ensuring a vibrant innovation culture in a global context.

well-received

The ITMA Innovation Lab includes well-received features from previous editions, in addition to new initiatives and enhancements. The four main components of the Innovation Lab are: Research & Innovation Pavilion (R&I Pavilion); ITMA Speakers Platform; Innovation Video Showcase; and ITMA Sustainable Innovation Award.

"By launching the ITMA Innovation Lab feature, we hope to better drive industry focus on the important message of technological innovation and cultivate an inventive spirit. We hope to encourage greater participation by introducing new components, such as the video showcase to highlight our exhibitors' innovation," said Charles Beauduin, Chairman of ITMA Services.

TMA Innovation Video Showcase

The video showcase will provide a new channel for visitors to learn more about innovative exhibits at ITMA 2019. Exhibitors can submit videos based on the following topics:

- Raw materials and manufacturing technology
- Automation and digitalisation: Creating new opportunities in the textile and fashion industry
- Technical textile innovations and manufacturing technology
- Sustainable textile and garment manufacturing in the circular economy

A panel of judges from the global industry will select the videos to be shown at the Speakers Platform.

Speakers Platform

The Platform is an avenue for participating R&I Pavilion



World Textile News

Revealed: hidden source of hazardous textile pollutants

Large amounts of commodity chemicals used in the textile industry are contaminated with potentially hazardous substances such as APEO's, phthalates, chlorobenzene, toluene and other restricted chemicals – that routinely end up in wastewater.

These are the findings of a new study, commissioned by a leading global apparel brand, which showed how commonly used chemicals such as salts, soda ash, organic and inorganic acids, peroxide and caustic soda – which are often by-products of other industries – can be laced with potentially hazardous substances.

Although the safety of specialty textile dyes, pigments and auxiliaries has been under the microscope since Greenpeace launched its 'Detox' campaign, it now appears that a major cause of textile pollution has been overlooked.

Traded on the open market by dealers, and often repackaged under different trade names, these bulk commodity chemicals are often bought based on price only. With price being directly related to the purity of the product.

Reports of a new potential huge source of hazardous contaminants in textile wastewater will come as a shock to many apparel brands and retailers.

Although on the other hand, the identification of the problem could also help the textile sector to identify the unknown source of wastewater contaminants that has puzzled the industry for many years.

Already, the development of a new screening tool for commodity chemicals is one welcome outcome of this research, which aims to help textile mills to make better

informed decisions on the type of commodities they source. However, what this means for supply chain costs is another matter altogether.

Researchers develop AI-powered system to automate quality control process in textile industry

The Hong Kong Polytechnic University (PolyU) recently developed an intelligent fabric defect detection system, called "WiseEye", which leverages advanced technologies including Artificial Intelligence (AI) and Deep Learning in the process of quality control (QC) in textile industry. The system effectively minimizes the chance of producing substandard fabric by 90%, thus substantially reducing loss and wastage in the production. It helps to save manpower as well as enhance the automation management in the textile manufacturing.

Supported by AI-based machine-vision technology, the novel "Wise Eye" can be installed in a weaving machine to help fabric manufacturers to detect defects instantly in the production process. Through the automatic inspection system, the production line manager can easily detect the defects, thus helping them to identify the cause of the problems and fix them immediately.

"WiseEye" is developed by the Textile and Apparel Artificial Intelligence (TAAI) Research Team, which is spearheaded by Prof Calvin Wong, Cheng Yik Hung Professor in Fashion of Institute of Textiles and Clothing, PolyU.

Textile manufacturers currently rely on human efforts to randomly inspect the fabric by naked eyes. Due to human factors such as negligence or physical fatigue, defect detection

resistance on different parts, the company has also produced a layer marking apparatus. It has several features, namely a higher operational capacity and lower price compared to similar apparatuses made by foreign countries. So, the device can increase the quality of the product while being economical, which contributes to economic growth.

The company was one of the major firms attending the 2018 International Nano Exhibition in Tehran from October 13-16. The event brings together many companies from Iran and other countries, which are displaying their latest achievements in the domain of nanotechnology.

With Oil Prices Dipping, Can Tourism Be Iran's Saviour Ahead of US Sanctions?

Speaking of Iranian history, the first thing that comes to the mind is Cultural Heritage. This social phenomenon is a heritage from far back in the past and can determine a nation's history and civilization.

Iran, with such a rich history, is home to more than 1 million historical monuments, 34,000 nationally registered sites and 23 world heritage sites, which is an indicative of the greatness of this civilization and also ample investment opportunities in Iranian tourism industry. By expanding its activities – including the development of tourism infrastructures – the Revival Fund for Cultural and Historic Sites can play a key role in promoting tourism. This has been implemented in other countries throughout the world; for example, Paradores de Turismo Company in Spain has managed to revive about 90 historic sites and reap profit of 40 million Euros. These experiences show that it is important to step in this path and utilize the endless capacities of the Revival Fund.

Nowadays, tourism has been able to claim the third place among the most profitable industries and the industry is still making progress. International tourist arrivals grew by a remarkable 7% in 2017 to reach a total of 1.3 billion which can also be an expression of international solidarity.

Four nanotechnology products unveiled at Intl. Nanotech Festival

Four nanotechnology products were unveiled at the 11th edition of International Nanotechnology Festival, in the presence of Iranian Vice-President for Science and Technology Sorena Sattari.

The 11th edition of International Nanotechnology Festival

kicked off Tehran International Permanent Fairground, and continued until October 16th, 2018.

Four nanotechnology achievements were unveiled at the exhibition which are electronic printer, lyophobic coating for metal surfaces such as stove and range hood, packing nanocomposites to increase the shelf life of protein products and nanostructured ceramic membrane for water and wastewater treatment. Universities, research centers, technology parks, industrial companies, and other related public organizations and private sectors have joined this event. International Nanotechnology Festival is held annually by Iran Nanotechnology Initiative Council, and it is the largest and most credible exhibition in the field of nanotechnology in Iran. It is also considered as one of the largest nanotechnology festivals in Asia. Other than textile, Industrial companies in 11 sectors such as water and environment, healthcare, construction, agriculture and packaging, oil industries and consulting participate in 11th Nanotechnology Festival.

Iran shipment issues trouble Indian handicraft exporters

Representatives from India's Export Promotion Council for Handicrafts (EPCH) met the country's commerce secretary Anup Wadhawan recently to discuss issues faced by exporters to Iran, especially due to sanctions imposed by the United States. The problems include difficulties in claiming duty drawback and goods and services tax (GST) refund.

According to EPCH executive director Rakesh Kumar, banks are refusing to accept shipping documents presented by exporters shipping to Iran for clearance of GR form to the Reserve Bank of India (RBI) and as a result, no bank realisation certificates (BRC) are being issued to exporters.

Without BRC, exporters are unable to claim benefits like Merchandise Exports from India Scheme (MEIS), duty drawback and GST refund, a news agency report quoted Kumar as saying. For exports to Iran earlier, all payments were received in Euro from third party and credited in the exporters' accounts by their bank branches but the bank branches in Moradabad are refusing to issue electronic BRCs despite RBI having no objection, said Kumar.

Exports to Iran are also allowed in Indian rupee (INR) but only UCO bank in Delhi has been authorized to open INR account for which exporters from Moradabad have come to Delhi to open the account, he said, adding that the commerce secretary has assured to take up the matter with RBI and the finance ministry. Handicrafts exports to Iran stood at \$48.10 million during 2017-18.

Iran Textile News

Iran carpet industry attracts about 40,000 visitors annually

The Iranian capital city, Tehran, is hosting the 27th Persian Handmade Carpet Exhibition, showcasing a wide range of products from Iran's carpet industry.

The exhibition has been held in a 45,000 square meter land at Tehran's Preeminent Fairground. Hundreds of Iranian carpet weaving units have taken part in the exhibition, putting on display their latest products.

According to official figures, carpet industry in Iran makes up for a significant share in the country's non-oil exports with exporting 45 percent of its handmade carpets to Asia, 43 percent to Europe and the rest to other continents.

The annual event usually attracts about 40,000 visitors including traders and researchers from Iran and the world. Iran's carpet weaving industry received a heavy blow after the Office of Foreign Assets Control (OFAC) of the US Treasury Department revoked the license for the imports of Iranian-origin carpets. The move came in line with Trump's increasingly hostile approach toward Iran a few months after he withdrew Washington from the 2015 multilateral nuclear deal, officially known as the Joint Comprehensive Plan of Action (JCPOA). In reaction, the Head of Iran National Carpet Center (INCC) Freshteh Dastpak said Iran would file a lawsuit with international tribunals against fresh sanctions imposed by the US on the imports of hand-woven Iranian rugs into the country.

The US was the biggest buyer of Iranian carpets and imported hand-woven rugs worth \$80 million annually before the imposition of sanctions.

Latest statistics released by the Islamic Republic of Iran

Customs Administration show that some 5,400 tons of hand-woven carpets worth \$424 million were exported in the last fiscal year, which ended on March 20, 2018, registering an increase of over 18 percent in value compared to the previous year.

Iranian Firm Offering Nano-Products on Chinese Market

An Iranian knowledge-based company has found its way to the Chinese market by producing nanocomposites. Nanocomposite layers have specific features; among others, they are resistant to friction and corrosion, and their mechanical properties have been improved. These coating layers are mainly used in producing metal parts required for automobile, oil and gas, petrochemical, aerospace, nuclear, textile, marine and steel industries.

Having worked as a knowledge-based firm for seven years, the Sevin Plasma surface engineering company was introduced to the world as an international company manufacturing state-of-the-art equipment to produce thin layers used as super-hard coating.

Offering surface coating services, the company has developed the physical vapor deposition (PVD) technology and secured a good share of the market in automobile, oil and gas, and nuclear industries. The company's activities have improved the properties and performance of layers in different conditions. The improvement of the properties of layers will increase their lifetime and resistance to corrosion, and decrease the friction coefficient and the cost of parts.

In addition to producing heavy-duty layers with high

commissioning: it is delivered as modular, preinstalled components and a spinning beam with integrated, low-maintenance HTM (Heat Transfer Medium) system. This means that an external boiler with all the corresponding pipes is no longer necessary, dispensing with expensive, time-consuming welding. The installed Staple FORCE S 1100 is 30 meters long, 12 meters wide and manufactures up to 15 tons of staple fibers of extremely even quality a day.

Caption:

The installed Staple FORCE S 1100 is 30 meters long, 12 meters wide and manufactures up to 15 tons of staple fibers of extremely even quality a day.

The positive aspects of orange peel skin

The quality of the manufactured yarns is also determined by the surfaces of all components coming into contact with the yarn – such as godet jackets, for example. It is here that Oerlikon Barmag provides support with special repair coatings and – of-ten even more important – know-how of how these are deployed.

Depending on the process, yarns also acquire their properties through accurately-defined godet and separator roll temperatures and running speeds. Furthermore, this requires a defined, yarn-friendly surface in order to ensure there is no damage to the filaments. For this, the components in all newly-sold machines come with a chrome-oxide coating as standard. But plasma-coated godets are also used. “In the case of plasma spraying, the aim is to create a so-called orange peel skin with a defined layout of indentations and supporting surfaces. What may sound negative in other contexts can have a positive impact on the yarn quality here”, explains Marcus Köhler, Customer Support Service Manager at Oerlikon Barmag.

Although the surfaces of such coatings may be precisely tailored to the respective processes and products, they do however deteriorate sooner or later – depending on the polymers, spinning processes and process speeds in question. And aggressive alkali cleaning agents can soften the coating over time. To this end, the result can

be under-surface corrosion with blistering, which may cause flaking in the worst case.

In such situations, Oerlikon Barmag offers repair coatings, for which it has been collaborating with surface specialist Oerlikon Metco for more than 30 years now. The affiliate has a presence in the primary Oerlikon Barmag markets across the globe. “Together, we restore the original surfaces with all the required tolerances. Depending on the customer request and market requirements, we can also add different qualities or surfaces – for example, hard plasma coatings”, states Marcus Köhler.

Whichever coating solution is chosen – it is important that this is implemented in good time, because it is not just the yarn quality that suffers if not. Faulty surfaces are also associated with higher yarn break rates and more waste per ton of finished yarn. And because wear is usually a slow, gradual process, the reasons for fluctuating or slowly-deteriorating production quality initially often remain unidentified. This is when Oerlikon Barmag Service can provide decisive and invaluable know-how. “Our experts have the necessary experience and specialized measurement devices to identify and assess wear. They know which surface profile with which roughness depth each godet requires”, explains Marcus Köhler. Here, it becomes clear that there can be many error sources. To this end, the yarn requires different surfaces depending on its position within the production process. If this is not right in the respective position, this will also adversely affect the yarn quality with, for instance, differing diameters or insufficiently balanced jackets and units.

Oerlikon Barmag is able to provide service life guarantees for its repair-coated surfaces – although only if the company’s own chemical godet cleaner is used. The service also includes the alignment and calibration of the components. And it is particularly popular among customers: to date, Oerlikon Barmag has repair-coated around 4,000 godets – without any subsequent client complaints.

Caption:

Godet or groove roller shells can benefit from a repair coating.

Glossary

A **manufacturing execution system (MES)** is a production control system directly linked to process automation systems. It enables the controlling, steering and monitoring of the production process in real time. It includes classical data acquisition and processing – such as operating, machine and personnel data acquisition along with all further processes – that have an immediate impact on production processes. At the Oerlikon Manmade Fiber segment, we call it the Plant Operation Center (POC).

Edge computing is the relocation of computing power, applications, data and services to the logical margins of a network. Data processing can take place in various places – in real time, or using central servers in networked factory halls.

OpenStack is an open cloud operating system (open source) with which companies can create flexible and scalable private clouds based on standard hardware.

OpenStack allows large pools of computing, storage and network resources to be controlled in a computing center using a dashboard or programming interface.

The **General Data Protection Regulation**, abbreviated to GDPR, unifies how personal data is processed by private companies and public offices EU-wide for the protection of personal data within the EU as well as ensuring free data communication within the European domestic market.

Caption:

The digital system AIM4DTY is being ‘trained’ using trend charts and their respective errors. The result is a digital customer service that determines the probable causes of quality impairments.

Flexible staple fiber production – made simple

Economical, flexible and compact – this is the motto with which Oerlikon Neumag will showcase the Staple FORCE S 1100 at the ITMA Asia + CITME 2018. The staple fiber system excels at two things in particular: it produces small batches (up to 15 tons per day) and can be swiftly reconfigured for various requirements, including polymer, dye and titer changes. Its process control system for easy operation is absolutely unique.

And all this for a modest initial investment.

Large-scale staple fiber systems are only conditionally suitable for manufacturing smaller volumes of fibers. This is because frequent stopping and restarting of the system in order to switch raw materials and operating parameters results in expensive downtimes and high wastage. Nevertheless, small batch manufacturing is in demand – for instance, in the case of staple fiber products with changing fashion colors or various titers. And new fiber materials are initially tested and launched in small volumes. “For this reason, manufacturers already producing staple fibers in large volumes are also interested in additional systems for smaller flexible production”, reports Stefan Schäfer, Sales Director Staple Fiber at Oerlikon Neumag.

The Staple FORCE S 1100 fulfills these requirements and also offers a special highlight: its innovative process control system. Operators are able to steer the system using just five buttons – ‘stop’, ‘back’, ‘next’, ‘pause’ and ‘acknowledge’, ensuring that operating errors are virtually ruled out. Parameters for the various operating modes are preset to ensure easy start-up. To this end, the operator now only needs to jump from one operating mode to the next using the control unit. And the process parameters for the various fibers manufactured are also stored as a recipe, allowing operators to access them at any time without reentry. This results in a fiber quality that can be reproduced more accurately.

The Staple FORCE S 1100 is a one-step plant, which spins, draws, crimps, cuts and bales in a single process step. Here, the fiber tow is drawn using godets in a high-speed process. Sets of godets positioned above each other form a stretch duo with its own hood. This simultaneously provides several benefits: each duo has its own temperature zone under the hood. To this end, the temperatures remain more constant, with no drop-in temperature between the two godets of each duo. Furthermore, the hoods act as steam chests, hence dispensing with the water and steam baths used for steaming the fiber tow in the conventional process. This ultimately also reduces energy costs.

Those investing in the system with its relatively low procurement costs benefit from the simple system

German industrial automation solutions specialist AC-Automation, Oerlikon now offers Industrie 4.0 systems solutions from a single source: the entire manmade fiber manufacturing plant is – step by step – being automated, digitalized and expanded to include new functions.

This starts with human machine interfaces (HMIs), which have enabled hugely interesting services – whether process monitoring via a service online app on smart phones and tablets or customer care and maintenance using the Microsoft HoloLens solution. The possibilities range from expanding the ‘From Melt to Yarn, Fibers and Nonwovens’ process chain to include upstream and downstream steps. Because it makes sense in the future to include those processes – such as automatic labeling or yarn package, fiber and nonwoven bale logistics – to date covered by means of third-party solutions.

Edge computing and cloud solutions

All these functions and services are – together with the Plant Operation Center (POC), which at Oerlikon assumes the function of a manufacturing execution system (MES), including the link to superordinate ERP systems – provided by the Oerlikon Digital Services platform. The machines, systems and third-party systems are networked and integrated by means of power edge computing and cloud solutions based on the OpenStack industry standard. This means that the data are utilized at the customer site as far as possible and only transferred to the central Oerlikon customer data center if required – and only following customer approval. Here, data security, data minimization and transparency are extremely important: “Needless to say, we process all data in accordance with the new European General Data Protection Regulation (GDPR), taking all further international data protection standards into account. Our customers always know which data we use and why”, explains Mario Arcidiacono, Business Intelligence & Data Warehouse specialist for the Oerlikon Manmade Fibers segment.

Scalable IT architecture

This IT architecture guarantees infrastructure management without operational downtimes – while the system and virus protection are always automatically updated. A further significant benefit is the scalability of

the hardware and software, which can be adapted as needed in the event of changing requirements.

Sensors in the polycondensation system, the spinning plant and the texturing unit generate huge volumes of data, further increased by additional information such as drive data and target values, for instance. Collating such a mass of data however only makes sense if they are also automatically, swiftly, intelligently and reliably processed. An example: In the texturing machine, the Unitens® monitoring sensor continually measures the yarn tension at all positions. An error is generated if a measurement value does not lie within the prescribed tolerances—easily creating 125,000 graphs or more a day! In ever more cases, the form of the graphs can provide information on the error causes and ultimately provide targeted and efficient response to these. However: “Analyzing the graphs is currently carried out manually, which is very time-consuming. Hence, comprehensive data analysis and optimization of the production is in principle not possible using manual means”, states Jörg Huthmacher, Senior Manager Digital Transformation for the Oerlikon Manmade Fibers segment.

‘Our aim is your success’

How can these data now be sensibly processed? Here, new technologies such as machine learning reveal opportunities that have to date been locked. “In future, our latest digital solution – we are calling it ‘artificial intelligence manufacturing’, or ‘AIM4DTY’ for short – will provide help for texturing machine and systems solutions”, says Jörg Huthmacher. AIM4DTY is a digital system that is being ‘trained’ using trend charts and their respective errors. The result is a digital customer service that determines the probable causes of quality impairments. The information is instantly available to customers, therefore allowing them to immediately optimize the quality during running production. New information is acquired by linking the most diverse production data. This allows not only the continual optimization of the production process, it also ensures that predictive maintenance is now a reality – for superior yarn quality, greater process reliability and improved system efficiency. Unitens® is a trademark of Saurer Fibrevision Ltd.

Caption:

The automation solutions will be an integral part of an Oerlikon Manmade Fibers segment Industrie 4.0 solution. This will create a coherent production chain – from the raw material through to final delivery.

More intelligence, less work

A prime example of an automated solution: cleaning spinnerets. Thanks to its intelligent control system, the Oerlikon Manmade Fibers wiping robot not only saves production time, work and operating costs, it also generates benefits for HR and health management.

Sure, manual work also has its benefits. However, nobody – and particularly not operators – look forward to manually wiping the spinnerets in the spinning head. In a fiercely hot environment, it involves using a brass tool to remove residual melt from the extruded filaments from the spinneret. Here, lots of silicone oil is atomized from aerosol cans. In view of this overall extremely elaborate measure and the costs involved, production managers are hardly thrilled by the prospect of carrying out this task.

Because a maintenance job of this nature practically cries out for automation, Oerlikon Manmade Fibers has now developed a wiping robot. And a smart one at that, as its control unit is able to communicate with the production system. “This intelligent control system contains the solution’s actual expertise, which networks machines and processes – very much in line with the Industrie 4.0 concept”, explains Stephan Faulstich, POY Technology Manager at Oerlikon Barmag. Initially, this means: the information relating to all wiping positions, cycles and times can be saved in the management system. The robot accesses the saved wiping intervals in an automated and safety-relevant manner – without manual intervention, but accompanied by a whole range of advantages.

To this end, the robot can cope with up to 48 positions, corresponding to one entire production line. Both the wiping quality and the oil application remain constant around the clock. Furthermore, the silicone oil from canisters deployed here costs just a fraction of the manually-utilized 500-milliliter (ml) spray cans, which contain merely 12 ml of oil, as the lion’s share is made up of propellant gases that are harmful to health and environment. So, applying oil from canisters saves costs

for the procurement, storage and disposal of spray cans.

However, more decisive here is the impact of the intelligent control system, with whose help the spinning pump can be moved up and down in an automated and ‘in-time’ manner. To this end, pump stops can be kept to the absolute minimum using a robot, considerably reducing the impact of the wiping on both the polycondensation system process stability and on the yarn data of the spun yarn. And production times can be increased between two cleaning cycles as well: whereas repeated wiping is required after 48 hours in the case of the manual process, utilizing the robot extends the interval between two wiping processes to up to 60 hours. Customers have already been benefiting from such optimized times: Oerlikon Manmade Fibers wiping robots have been operating at two major yarn manufacturers in China for well over a year now.

Caption:

The wiping robot is suspended on a track system under the ceiling.

The wiping robot can cope with up to 48 positions corresponding to one entire production line.

Creating the digital yarn factory

Manmade fiber manufacturing is not being spared by the 4th industrial revolution. The Oerlikon Manmade Fibers segment is already successfully digitalizing its ‘From Melt to Yarn, Fibers and Nonwovens’ process chain. Once again, Oerlikon is expanding customer benefits with new technologies such as artificial intelligence.

Reliably and efficiently manufacturing superlative quality – that is the wish of every yarn, fiber and nonwovens manufacturer. However, optimally adjusting manufacturing with constantly-changing products is a huge challenge: because even small deviations can have a massive impact on the quality of the end product.

To better monitor and control production across all systems against this background, globally technologically-leading machine and systems constructor Oerlikon has expanded its Manmade Fibers segment portfolio to include new digital products and services. By integrating the know-how of the recently-acquired

Caption:

Nylon is the trade name, polyamide the material for such stockings. With its special properties, polyamide has become indispensable in the textile world.

‘Where the future is coming together’

Oerlikon integrates the AC-Automation GmbH & Co. KG – which is headquartered in Bernkastel-Kues – automation solutions for large-scale systems into its technology portfolio. The company is thus taking an important step on its journey towards now being able to offer fully-automated factories digitally networked using Industrie 4.0 solutions from a single source.

For many, mechanical looms are the embodiment of the first industrial revolution. Today – following the introduction of production line manufacturing and the advent of electronics within the production chain – the textile and fiber industry is on the verge of entering the so-called fourth industrial revolution – or Industrie 4.0 for short. With the acquisition of AC-Automation in Bernkastel-Kues and Augsburg, Oerlikon Manmade Fibers – the leading solutions provider within the manmade fiber manufacturing sector – has now set a further milestone on its journey towards fully-automatic, digitally-networked fiber production. In the future, Oerlikon textile industry customers will receive production systems together with the automation logistics – including packaging and high-bay warehouse solutions – from a single source.

In the Oerlikon Manmade Fibers segment’s new automation division, in excess of 80 specialists draw on more than 30 years of experience in manmade fiber production automation. Here, they have been closely collaborating with the Oerlikon Group as far back as the early-1980s. With the help of its highly-developed and tried-and-tested robot handling, packaging, transport and warehouse systems, Oerlikon is now creating turnkey, integrated production and logistics solutions for all customers across the globe.

“With the takeover and integration of the automation solutions from AC-Automation, we are creating new impetus for the manmade fiber business. In conjunction with our new digitalization solutions, it will also

enable us to clearly position ourselves as a supplier of Industrie-4.0 solutions”, states Georg Stausberg, CEO of the Manmade Fibers segment, talking about the reasons for the acquisition. The target is the so-called ‘digital factory’, where production systems monitor, control and optimize themselves with the help of collated data and information. Here, the manufacturing process is becoming increasingly flexible.

“Industrie 4.0 is not just a marketing buzzword”, explains Rolf Gänz, Managing Director of the Oerlikon Manmade Fibers segment’s automation division. “Imagine a company requires fibers for airbags. Even the fiber producer has to be familiar with the precise safety-relevant composition specifications. The same applies to the downstream quality control, with the finished yarn packages ideally tagged in such a way that the machines used for manufacturing the airbag fabric notices whenever the incorrect yarn package has been selected for producing the warp beam.”

All this is now possible as a result of the expanded product portfolio because Oerlikon is offering seamlessly-coordinated production, quality assurance and packaging systems without malfunction-prone and maintenance-intensive interfaces. All customers receive optimally planned, flexible systems from a single source from the very outset.

Rolf Gänz, Managing Director of the Oerlikon Manmade Fibers segment’s automation division

“Here, what will become the new standard in future-oriented manmade fiber manufacturing is coming together. The automation solutions will be an integral part of an Oerlikon Manmade Fibers segment Industrie 4.0 solution. It will assume the yarn product precisely at the point at which spinning plant solutions have extensively completed their work. This will create a coherent product chain – from the raw material through to final delivery. We are now offering all stages – from production planning, production tracking, quality control, packaging and palletizing – on a single, new Oerlikon platform. So, there are now no longer any annoying data interfaces. Yes, we can now also take all automation considerations into account when designing the systems, which means that our customers can now acquire the entire process chain from a single source.”

automatically reordered, wear and maintenance are planned as integral parts of the production process and error processes are identified, alleviated or displayed. This should cut costs, convert production lines more flexibly and help reduce downtimes and waste. For this, the machine construction sector has to provide correspondingly intelligent and Web-enabled production systems, capable of communicating using wired or wireless connections. No easy feat, as this requires interfaces between all systems involved and the collation, channeling and evaluation of tremendous volumes of data in real time.

The first steps on this journey have already been taken – with Oerlikon in the very vanguard. With its Plant Operation Center (POC) for process monitoring, Oerlikon Barmag, for instance, enables the collation of existing production data in a central location and to make these data available. On the occasion of the ITMA ASIA + CITME 2018 in Shanghai, China, the company also showcased the prospect of a development designed – on the basis of machine data – to identify error patterns or deviations as well as provide diagnosis support and help using artificial intelligence. An assistance system based on mixed-reality glasses (Microsoft HoloLens) has already been launched by Oerlikon – supporting predictive maintenance concepts and enabling virtual 360-degree tours through spinning systems. "The market is increasingly looking for more intelligent machine technology in order to more speedily and profitably collate and evaluate production data. And we are addressing this trend and are presenting solutions in a new, digital dimension", comments Markus Reichwein, Head of Product Management for the Oerlikon Manmade Fibers segment.

Digital visions require the qualifying of employees

Digital visions indicate a future in which consumers are able to codetermine their textile products to a considerably greater extent. New business and production models are emerging that will also make smaller batch sizes profitable. This will once again make high-wage countries attractive manufacturing sites. But experts do not anticipate that intelligent, extensively-automated factories will not be able to dispense entirely with people. People will, however, assume other tasks –

in part within the context of newly-created professions. Against this backdrop, qualifying employees and their positive (or negative) view of the opportunities offered by digitalization will be decisive in how swiftly the textile industry embarks on its digital future. And data protection and data security open up many questions that could slow down the speed of the revolution that is Industrie 4.0. Ultimately, many things depend on the textile companies themselves and their ability to embrace – and prepare themselves and their employees for – the opportunities offered by digitalization.

Caption:

Oerlikon Barmag's texturing machines are digitally networked to ensure smooth production of quality yarns.

Polyamide process chains complemented

Polyamide is used in countless everyday items – from apparel, toothbrushes, carpets and automobile fittings all the way through to PC housings, dowels and pipes. For manufacturing extremely flexible, high-performance products from polyamide 6 (PA6), Oerlikon Manmade Fibers offers a broad range of machines and systems that the company has now further expanded.

At the end of March 2018, the group segment acquired the decades-long tried-and-tested technology of PE Polymer Engineering Plant Construction GmbH, based in Thuringia, Germany. This includes the entire polyamide 6 polycondensation systems division and its PA6/6.6 copolymer and the patented dimer-hydrolysis procedures for feeding recycled-lactam with the very highest end-product quality. With this expansion of the product range to include the melt preparation process step, Oerlikon Manmade Fibers now covers the entire polyamide process chain for fibers and filaments – from the melt to the granulate through to the finished yarn. This guarantees the necessary knowledge base for entering the high-end PA6 granulate market for the engineering plastics and film packaging industries. Customers also benefit from an internationally tried-and-tested implementation concept that covers everything from sourcing investment through to securing operational availability throughout the entire lifespan of a system.

4.0: Building the digital enterprise' revealed that many companies across the globe are already taking digitalization seriously. The more than 2,000 participating companies from nine sectors of industry in 26 countries were planning to increase their degree of digitalization in 2015, the year of the survey, from an average of 33 percent to 72 percent within the five following years leading up to 2020. To achieve this, these enterprises are planning to invest around five percent of turnover – equivalent to US\$ 907 billion a year. In return, they expect cost savings of 3.6 percent and average annual sales growth of 2.9 percent.

Huge investment in digitalization

This tendency is not only evident within companies industrialized countries, but also in emerging economies and developing countries – however, the PwC study is able to filter out differing targets. In Germany, Scandinavia and Japan, it is primarily about expanding operational efficiency and product quality. In the US, businesses plan to develop predominantly new digital business models and to expand digital product and service ranges. China is hoping to benefit as a result of automating and digitalizing labor-intensive manufacturing processes.

The study anticipates that the challenges for companies will above all lie in digitally qualifying staff or recruiting expert employees and in establishing an appropriate internal organization and 'digital culture'. This is necessary in order to use data analysis to improve and optimize planning and hence exploit the full potential of Industrie 4.0.

Textile Industrie 4.0: the status quo

Digitalization is also creating a revolution within the textile industry: clients can today already configure and order customized apparel online and have it delivered with very short lead times. This form of manufacturing is also becoming increasingly profitable for manufacturers, as production and logistics processes will in future be extensively automated and self-controlled. However, some textiles experts are viewing the revolution more as an evolution: there is frequently currently still a lack of qualified manpower, reciprocal networking and interdisciplinary cooperation to realize these visions. When looking at digitally covering the entire value chain,

not all links are in place yet for Industrie 4.0: they might be in sewing factories in China, but not at those in Ethiopia or Hungary. And the textile industry therefore requires sector-specific solutions above all.

The fact that these are possible is meanwhile being showcased by ever more Industrie 4.0 pioneers. At its virtually fully-automated Speedfactory, Adidas is able – after a treadmill analysis of the customer at the point-of-sale – to design, and in part manufacture by means of 3D printing, trainers in a matter of a few hours rather than over several months. With their Microfactory, companies under the auspices of the Deutsche Institute für Textil- und Faserforschung Denkendorf (DITF/German Institutes for Textile and Fiber Research Denkendorf) are demonstrating how an integrated production chain for apparel works, manufacturing sweaters and T-shirts using 3D simulation patterns in half a day – customized and profitably even for batch sizes of one. The project can be viewed as a fantastic example of the exchange of knowledge and technology transfer that Industrie 4.0 solutions require. And it enables more flexible, more customer-focused business models away from conventional mass production. The well-known elite German university RWTH Aachen is pursuing a similar approach. In a Learning Factory 4.0, the so-called Digital Capability Center (DCC), the Institut für Textiltechnik (ITA/Institute for Textile Technology) housed there is showcasing how digital transformation can be successful on the basis of a networked textile process chain and using assistance systems, among other things.

On the way to the fully networked textile factory

And with that we move from the consumer product to the actual production and ultimately to the textile machine manufacturers. They are also focusing on digitalization and are intensively driving the development of an entire industry forward. But even the manufacturers of textile machines for mass production are looking at digitalization. The scenario of the future: textile production – from the supply chain through to dispatch – is autonomously controlled in the fully-networked Factory 4.0. The product being created controls and monitors the processes itself using embedded sensors. The manufacturing or order status is known at all times, raw materials are

Can you elaborate a little on these new forms of collaboration?

The speed and dynamism of the development of digital products and solutions is breath-taking. Agility is therefore an absolute prerequisite for an organization to be successful here. Our project group has been able to organize itself and – without any clear hierarchies – only had to interact with a functional steering committee. It was important that we also had representatives from China and India, two of our most important markets, on board. To this end, we were able to include local aspects early on. Departmental boundaries also have to disappear when developing digital products. The Development, IT, Customer Services and Operations departments can only develop multifunctionally-interesting digital solutions if they work together.

Mr Adler, you have been our CTO since 2017. What have you done to master digital transformation?

Very much in line with our 'We drive the markets' maxim, we are once again ramping up the speed. This means that we have established and expanded digital pacemakers on the basis of our product and service portfolio and tried-and-tested innovation processes. This has resulted in agile organizational units, innovative work methods such as design thinking and scrum and also in the utilization of virtual reality and augmented reality at the customer.

What can your customers now expect 'digitally' from Oerlikon?

I would say the digital refinement of our machines and production systems for manufacturing yarns, fibers, nonwovens along the textile value chain. Here, our pledge is: value-added beyond our excellent hardware. We want to further optimize the efficiency of the systems and the quality of the end products with digital solutions. True to our e-save philosophy, our mission is to protect the environment and to promote the sustainability of our solutions. For this, we are deploying the know-how of our newly-integrated partner AC-Automation – which specializes in large-scale systems automation, transport, packaging and warehouse logistics and end product automated quality control. We combine this with our

process competencies and digital data handling using our Plant Operation Center, or POC in short. This has created innovative Industrie 4.0-solutions for our customers – with integrated storage and communication capabilities, wireless sensors, embedded actuators and intelligent software systems. In turn, this allows us to build bridges between data and material flows and between the virtual and real worlds.

Mr Stausberg, what aspects of this will your customers already be able to see at the ITMA Asia 2018?

At our trade fair stand in hall H2, B24, we will be offering our visitors a digital experience that allows them to intensely discover and understand our machines, systems, components and services. Here, we will be deploying playful solutions to present the topic of artificial intelligence. We will be taking our 360-degree and augmented-reality applications as well as our virtual showroom with us, to allow visitors to experience complex systems live in 3D. The 'digital factory' is already in part becoming a reality in conjunction with our machine exhibits.

Caption:

Georg Stausberg, CEO of the Oerlikon segment Manmade Fibers, has been driving the digital transformation at his company since 2015.

With his team of more than 200 experienced engineers, Jochen Adler, CTO of the Oerlikon segment Manmade Fibers, is focusing on future-oriented technologies with high customer value.

Revolution or evolution?

Today, Industrie 4.0 is already making its mark at many companies across the globe – and is there to stay. The Age of Digitalization has also arrived in the textile sector – manifesting itself in the production of customized apparel within a mere few hours in microfactories or in the form of cost-optimized, self-controlled production based on networked systems and data analysis. At the same time, there are challenges that slowing down the advent of digitalization – data protection and data security being just two of these.

Analysts at the consultancy PricewaterhouseCoopers (PwC) were astonished: its 2016 study 'Industrie



Oerlikon- Shanghai, China, October 15, 2018

En-route to becoming a digital trendsetter

How does a manmade fiber systems world market leader with currently more than 3,000 employees successfully undergo digital transformation? This first and foremost requires an economically solid foundation and numerous digital change modules such as organizational adaptability, agility and the qualifying of employees. Georg Stausberg, CEO, and Jochen Adler, CTO describe the exciting path the Oerlikon Manmade Fibers segment is embarking on to create new digital products and services with superlative customer benefits.

Mr Stausberg, do you remember taking your first steps into the new Digital Age?

This was more of a creeping process than a conscious step. It started with me using the Internet and e-mail – first on PCs, then on mobile end-devices. Meanwhile, digital technology has invaded every aspect of our lives, be this in our homes or in our modern cars. About four years ago, the latter resulted in our company starting to consider how we could create additional customer benefits using artificial intelligence. And automobiles are today increasingly differentiating themselves from each other more by means of digital assistance systems than

through classical transmission or chassis technology. We want to become the textile machine construction trendsetter for technologies of this kind.

What have you done to successfully achieve this in collaboration with colleagues and customers?

Even in economically difficult times, we had the courage to invest in the future. Following detailed strategy discussions within the management team, we decided to set up an international project group two years ago. In discussions with research institutes, companies from various sectors, in-house experts and numerous customers, the group developed concrete ideas and analyses on which digital products and solutions could be interesting for our customers and what customer benefits could be generated with these. The result is numerous ideas that are meanwhile being marketed or are currently be trialled as prototypes. When putting together and organizing the project team, we also tested new forms of collaboration, which have proven to be effective and are now being rolled out in other divisions of the company.

efficient production in textile mills, Neuenhauser offers customized automation solutions focussing on industry 4.0.”

André Wissenberg, Oerlikon Manmade Fibers: “We want to become the textile machinery construction trendsetter for digital technologies. The first steps on this journey have already been taken. The Plant Operation Center (POC) for process monitoring enables the collation of existing production data in a central location and to make these data available. HMI based services such as process monitoring via a service online app on smart phones and tablets were introduced as well as an assistance system based on mixed-reality glasses (Microsoft HoloLens). The system supports predictive maintenance concepts and enables virtual 360-degree tours through spinning systems.”

Andritz: “With the ANDRITZ air-through-bonding technology customers pave the way for top-class hygiene nonwovens”

Dr. Stefan Fliescher, Textechno: “Quality control systems monitoring the complete production chain are one of the major factors of efficient plant management in the textile process. Textechno’s automatic testing systems for natural and synthetic fibres as well as spun- and filament yarns are essential basics for an optimised production process. This flexibility and the combination of several test methods in one tester minimises raw material waste, ensures highest productivity, proves the quality of your products and hence grants economic benefits.”

Benjamin Ziel, Weko: “Since 65 years WEKO provides solutions to apply liquids and powders contactless without waste. Weko offers to his customers the results of constant development, bringing modern solutions for actual requirements. Fabrics with low added value and also high technical webs benefits from our technologies, reducing customers process costs and increasing competitiveness by the Triple C Effect: Contact free application (as less as possible), Chemical savings (exactly where they are needed) bringing Cost reduction (as well a production

increase).

In synergy to the solutions by applying fluids, Weko provides also a waste reduction by reducing the waste at the selvedge cutting process. in this way WEKO consolidates itself as a company where sustainability is written in capital letters, giving its customers the certainty that they are doing the best for their company and for the world.”

Dr. Janpeter Horn, Herzog, “Quality, innovation and reliability as reasons to choose the original – Original German Braiding to rely on”.

William Ou, Kaeser Kompressoren: “Air compressors are widely used in industries as general machinery. Air compressors are also high-energy-consuming equipment, its energy consumption accounts for more than 25% of the total power consumption of the enterprise. Most air compressor systems in China are high energy consumption, low efficient and low reliability, which also means huge potential for energy saving. As the largest and most successful air compressor manufacturer in Germany, with the innovative and efficient air compressor energy saving solutions, KAESER will help Chinese industry reduce energy consumption and achieve low-carbon and environmental protection.”

Anda Sun, Lenze: “The textile producers are increasingly requesting digitalised machines and services from the OEMs. We expect that in 5 years, more than 80% of all machines will be communicating with the cloud. Lenze already supports the OEMs with industry-proven IIoT solutions today – but goes even further towards a holistic digital value stream.”

Original technology at ITMA ASIA + CITME – VDMA booth in hall 1

The VDMA booth (H1F57) is the first contact point for visitors interested in original technology. E.g. visitors get a compact overview of manufacturers and their products in the useful pocket guide, listing all exhibiting VDMA members by halls and showing their stand location in hall plans.

performance improvement, quality, sustainable solutions (raw material, energy, water saving), Industry 4.0 (in China called intelligent manufacturing), digital AR/VR services, platforms and software.

Here are the statements of the speakers:

Antonia Gottschalk, Karl Mayer: "Digital solutions considerably extend the possibilities to enhance the efficiency of our customers' production processes. This is the reason why KARL MAYER set up its own software start-up company, as most important strategic step in this respect, namely the KARL MAYER Digital Factory. The newcomer's main objective is a rapid and flexible development of efficient digital solutions for the clients' benefit, solutions which will be offered under the company's own, new umbrella brand. The launch of the digital brand, the presentation of the entire solution portfolio and the demonstration of its first products will be highlights on KARL MAYER's stand at ITMA ASIA + CITME 2018."

Stephan Kehry, Mahlo: "Mahlo: Efficiency and sustainability boost with Industry 4.0."

Jürgen Hanel, Monforts: "Monforts is ahead of progress in the Internet of Things / Industry 4.0 Technology by using latest interface and visualization technology with slider function for machine operation. This system can also be connected to a so called WebUI where current production parameters are monitored on mobile devices via remote service. The proven teleservice is also based on remote service, updated and extended to predictive maintenance possibilities helping to reduce machine standstill. Furthermore, the energy consumption can be improved by automatic optimization of machine parameters."

Dr. Dirk Burger, Trützschler: "An efficient raw material utilisation is no luxury. On the contrary; it is a prerequisite for economic operation. The optical WASTECONTROL sensors developed by Trützschler control the quality of the waste. Therefore, 0,5 – 1 % of good fibres can be saved – without neglecting the cleaning effect. This results in significant annual

savings: With only 0.5 % waste savings, more than 100,000 US\$ have already been saved on raw materials."

André Imhof, Autefa Solutions: "Our customers expect true energy saving technology! Economic sustainability is an integral part of all our development efforts. Autefa Solutions V-Jet and Square Drum Dryer SQ-V supports customers to keep or extend their leadership in the highly competitive Spunlace market."

Marcel Moser, Küsters Textile: "Efficiency in production is like the interest rate on your bank account. The higher the more."

Michael Tuschak, Mayer & Cie.: "We are the first manufacturer to have dared to merge spinning, cleaning and knitting in one machine. That brings about several advantages, both from the environmental and process technology perspective."

Marcus Reichardt, Groz-Beckert: "In terms of profitability/productivity and environment the litespeed® plus needle stands for cost reduction, significantly increased efficiency and a reduced CO2 footprint. In detail this can result in reduced power consumption, machine temperature and oil consumption, and can enable maximum possible machine speeds. Moreover the litespeed® plus needle can lead to an optimized lubrication behavior. All these benefits are independent of the machine direction."

Gunnar Meyer, Brückner: "Zero emissions in our new production plant - zero emissions in your machine."

Martin Küppers, Saurer: "Chinese Market is the largest spinning market in the world.

Therefore Saurer has brought an abundance of innovations along the textile value chain to ITMA Asia. Innovations in automation, in intelligent solutions and for improved yarn and sliver quality.

Kindly visit us in Hall 1 booth F01 and let our specialists show you these in detail."

Wilhelm Langius, Neuenhauser: "Automation + Industry 4.0: For increasing demands for flexible and

press
release



Original technology makes the difference

Shanghai, Frankfurt, 15th October 2018 – ITMA ASIA + CITME 2018, Asia's foremost trade fair dedicated to textile machinery, is once again marked by a significant presence of German companies both in their number and in the quality of their technology. Visitors to the fair will have an opportunity to appreciate the high level of technology being proposed by more than 100 exhibitors from Germany, including more than 80 VDMA member companies. They cover nearly all different machinery chapters with a focus on spinning, nonwoven, weaving, knitting, warp knitting and finishing. The overall exhibition space occupied by German machinery manufacturers is more than 7,000 square meters, confirming Germany's leading position among exhibiting foreign countries. The German exhibitors increased their booth space by approximately 15 % compared to 2016.

"Choose the original - Choose success" is the message of the VDMA Textile Machinery at this trade fair. On the occasion of the VDMA press conference on the opening day of ITMA ASIA, Ms Karin Christine Schmidt, Technical Director VDMA Textile Machinery,

emphasised: "Copycat machines may look similar to the systems they are designed to emulate. But only originals do not simply follow but are pacesetters of technological progress." Original technology is a keystone of innovation. It has the potential to successfully turn visions of entirely new possibilities in the textile production into reality.

This approach is visualised at the VDMA booth. The stand achieves attention and emotion through the picture motif: Neuschwanstein Castle. This world-famous tourist magnet is more than that: it is also a successful original. A vision, which could be successfully implemented in the long term through innovation and technology!

During the press conference, 18 spokespersons of renowned VDMA member companies showed how original technology can indeed play a major role in China's and other Asian nation's efforts to increase the resource efficiency of the textile industry and to interconnect information technology and manufacturing processes.

Topics of the companies included automation,

and has superior equipment. The Plamac's flatbed model Morpho 2513 offers a high sensitivity. Morpho has a CMYK + Lc + Lm + White / Varnish ink structure and has 4 separate suction areas for different media sizes prints.

Customer needs are our main priority

Noting that they have met with manufacturers from several markets at the exhibition, Çağlıyan announced that the companies engaged in glass, wood and special design works predominated the exhibition. "Carpet, textiles and of course the advertising industry, which is our main customer group, has closely examined our new solutions and expressed their interest," said Çağlıyan, and recorded that the market would revitalize with Plamac. Underlining that Pigment Reklam is a company focused on industrial solutions, Çağlıyan continued as follows; "When our customers come to us, we first determine their needs. We learn what they want to produce and how much they want to produce. In order to provide a solution according to their needs, we discuss solutions in mutual consultation. We provide them solutions according to tomorrow's needs, not according to their past needs. For a start-up company, we propose a start-up and middle-class machine and ask for their growth targets. If required, we recommend industrial grade machines. What drives our work is the need of our customers."

Despite the uncertainty in the markets due to the volatility in the exchange rate, industry professionals are eager to invest in the market, said Çağlıyan, he believes that the recession in the industry will soon be overcome. Çağlıyan; "Stability in the market was of course reflected in the exhibition, but our meetings were very promising for the future. A rapid recovery can be achieved as the sudden fluctuation in the currency stops and investors can see the future more clearly. We are doing our preparations accordingly."

Serkan Çağlıyan reminded that they have been in talks with existing and potential customers for new business contacts at Sign Istanbul, and said that the visitors especially wanted sample works related to their own work. Çağlıyan stated that they started the necessary works focused on personalized solutions; "Customers expect high speed, low cost and high quality no matter what they do. So they want to maximize profitability. We also offer them machines and solutions that meet these goals. Sign Istanbul 2018 was a platform where we can offer solutions directly to investors."

Technical support is a must for us and the printing industry

Serkan Çağlıyan stated that the printing industry is predominantly based on imported technology, and therefore, the Turkish customers especially attach great importance to local technical support. Expressing that after-sales services are provided with the principle of 7/24, Çağlıyan concluded his words as follows: "The maintenance and updating of existing machines and the initial installation and operation of new machines should be carried out by a qualified technical team. As Pigment Reklam, we provide our customers with first-time remote support and on-site technical support when that is not enough. As long as the machines we supply are working, we provide support. This approach is appreciated by our customers, therefore they prefer us for other machinery needs. This makes us proud. Thanks again to our customers who prefer us."

Learn more about Pigment Reklam's rich range of products and services on their official website; <http://pigmentreklam.com.tr/>

Pigment Reklam

Pigment Reklam was established in 2010 relying on 10 year experience in advertising industry. The company carries on sales and marketing of high tech products and advertising materials requested by the industry. In addition to swissQprint, Plamac and WIT-COLOR UV digital and solvent printers, Pigment Reklam also provides services of printing heads, dyes, spare parts, consumable materials and second hand machine sales, while it has a strong technical service. Pigment Reklam also carries on graphic segment distributorship of leading cutting technologies brand, bullmer.

Offering technical services for global brands including Vutek, HP Scitex, Gandi Jet! AGFA, DGI, Seiko, OCE, Durst, Virtu and Infinity with an expert team educated abroad, Pigment Reklam provides certified ink sales and all kinds of spare parts for Spectra, Xaar, Konica, Epson and Seiko heads. At the same time, the company enables to have PANTONE code with ICC Profile manufacturing in obtaining correct colors in printing which is mostly an ignored topic in Turkey. Having a young and innovative vision, Pigment Reklam presents very crucial products for operator and human health to the market.

press
release

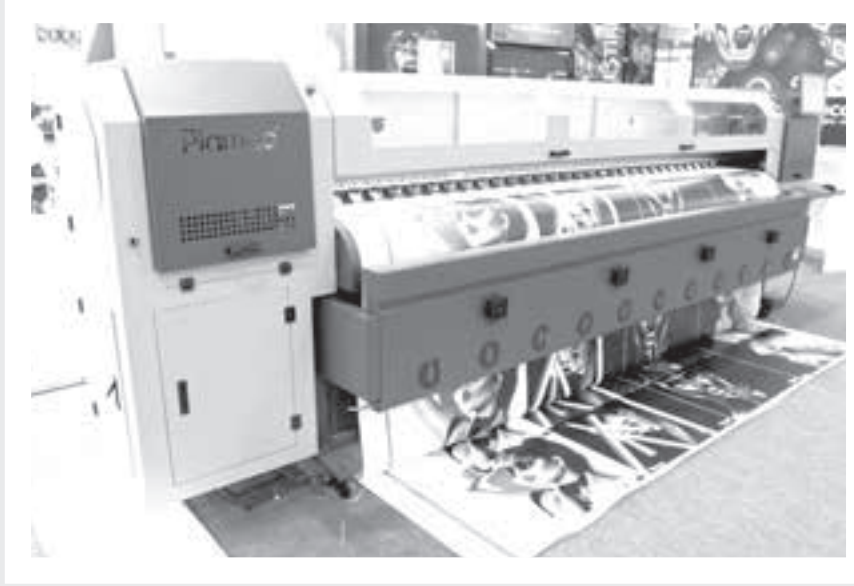
Plamac Met with Digital Printing Industry at Sign Istanbul

Pigment Reklam impressed visitors by attending Sign Istanbul 2018 with their new brand Plamac's 3 different UV digital printers. Plamac models have a high print speed and quality with an affordable investment budget.

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Pigment Reklam, the most important technology supplier of the UV printing market, brought the industry together with the new brand Plamac at the Sign Istanbul 2018 exhibition. Taking place in TUYAP Fair and Congress Center between September the 20th and 23rd, the fair hosted professionals from outdoor advertising, digital printing, signage and textile printing. 3 different Plamac UV digital printing models presented to the visitors attracted great attention during the fair. Enthusiastic about meeting with a new brand, the print manufacturers both received information about the technical details and talked to the company officials about what they could do with these machines.

At the Pigment Reklam booth at Hall 12 D20, Plamac's roll to roll printers Pegasus 3200 and LJ 320SG flatbed model Morpho 2513 were exhibited. The models have attracted visitor's attention with their working performance, and are presented to Turkish market with Pigment Reklam's superior technical service. Pigment Reklam company owner Serkan Çağlıyan; "The newest brand of Turkish printing market Plamac has attracted great attention with 3 models. Visitors have seen the advantage of achieving high quality and efficiency with a lower investment budget compared to their substitutes."

Noting the technical superiority of Plamac, Çağlıyan stated that the innovations that eliminate the problems experienced in other machines are included in these models. Çağlıyan said; "Thanks to these innovations, machines have a longer life and operate at lower costs. In addition, Plamac digital printers are appealing to a very large segment of the market with high quality and price balance. We saw the intensity of this at Sign Istanbul. Both start-up companies and SMEs, cost-sensitive investors have found the answer they were looking for at Plamac."

Combining its powerful features with a compact design, the Pegasus 3200 LED roll to roll printer can process vinyl, PET film, blockout, backlit materials, synthetic media with a production speed of 80m2/hour. Equipped with RicohGEN5 printhead, the machine provides resolution of up to 1200dpi. LJ 320SG ECO roll to roll printing machine can print 248m2 per hour with 3.2m printing width. Thanks to the recirculating ink system, the machine minimizes ink consumption

promotional work responds to the specific demands of users. The UJF-7151plus LED UV flatbed printer, together with the samples, attracted the attention of the souvenirs and promotion industry.

The 3.2m wide format SIJ-320UV LED UV printer in the special outdoor area of the Mimaki booth and the UCJV300-160 UV printer with cut-and-print features were the first solutions to be seen by Sign Istanbul visitors during the exhibition. Ideal for both indoor and outdoor prints, these solutions are unrivalled with their performance and print quality in industrial advertising and design work.

Visitors to the Mimaki booth were able to see the 3D models created with the Mimaki 3DUJ-553, a full-color 3D printer with a capacity of 10 million colours. Responding to the need to create models for many different purposes, the 3D printer transfers designs from digital media to print quickly, ending the issue of creating molds in construction, engineering, medicine and many more areas. Visitors received information from the experts about the rapidly developing 3D printing, and made important discussions about how they could transfer this development to their work. SWJ-320EA, the super-wide solvent printer developed by Mimaki Eurasia in line with the current market demands, was presented to the visitors at Mimaki dealer Procolor's booth. The machine has a printing width of 3,200mm and can print 137m² per hour.

Mimaki inspired users with rich applications

Arjen Evertse said that they talked about what the users can do with Mimaki solutions based on high technology throughout the fair. "We encountered a demanding visitor profile in signage and textile printing," said Evertse, and continued; "Users are wondering what they can do with the machines they invest in, how they can grow their business. These interviews were really motivating for us. With our expertise in inkjet digital printing, we've shown them what we can offer the market, and they tell us what they want to do. I can tell you that there is almost no work that can't be printed with Mimaki. What is important is how much revenue our users get from the printing business. Mimaki solutions are a direct contribution to its users, both when buying and using. They can enter new markets. High print quality and print speeds radically solve the problem of delivering in time. Talking about what can be done more than the technology with the visitors at Sign Istanbul 2018

has inspired us as well."

Evertse said that the exhibition reached its goal in the context of meeting with current and potential users, exchanging views with them and exhibiting practices, and he summarized their strategy as strengthening their market ties. Arjen Evertse; "Our efforts to strengthen Mimaki Eurasia's proximity to the market have increased. After our Ankara Experience Center, we opened our Izmir Experience Center in September. Then we attended Sign Istanbul 2018. Our efforts to evaluate the market opportunities with our users will continue at the same speed."

About Mimaki

Mimaki is a leading manufacturer of wide-format inkjet printers and cutting machines for the sign/graphics, textile/apparel and industrial markets, and also provides a comprehensive range of supporting products; hardware, software and the associated consumable items, such as inks and cutting blades.

Mimaki excels in offering innovative, high quality and high reliability products, based upon its Aqueous inks sublimation, Latex, Eco-solvent, Solvent-UV, Solvent and UV-curable inkjet technology. In order to meet a wide range of applications in the market, we pursue on-demand digital printing solutions. Mimaki Engineering Co. Ltd. is publicly listed on the JASDAQ Securities Exchange, Inc.

Mimaki opened Mimaki Istanbul Technical Center in 2013 to provide a superior technical support to the Turkish printing industry and the Eurasia region. In order to provide a more thorough service to the region, commercial activities were added by founding Mimaki Eurasia in 2016. Mimaki Eurasia has established a stronger structure with their dealers and end-users by reorganizing the sales process in 2017.

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Mimaki Eurasia Called 'Join the Experience' at Sign Istanbul 2018

Mimaki Eurasia attended Sign Istanbul 2018 with the latest technologies and applications demanded by the digital printing and signage industry, and left the exhibition satisfied with interest they received. During the fair, new business opportunities were discussed, and growth was emphasized together with the printing industry.

Mimaki, a leading manufacturer of inkjet printing technologies and cutting plotters, became a point of interest for visitors at Sign Istanbul 2018 with their booth concept and rich solutions. Mimaki Eurasia booth at Hall 12 No E-20 at TUYAP Fair and Convention Center between 20-23 September gave visitors the opportunity to visit an Idea Shopping Center. Solutions and samples for signage/graphics, textiles/clothing, promotion and 3D were exhibited with the shopping center concept focusing on experiencing the power of Mimaki Eurasia in printing. Arjen Evertse, General Manager of Mimaki Eurasia, said that they created such a concept in order to better present the results of research and development to their visitors. Evertse; "We wanted to create an environment where people can exchange ideas. If you can meet all your needs by visiting a shopping mall, you can meet all your digital printing demands

with Mimaki. Mimaki booth was closed with a large amount of exterior applications, and visitors were able to observe that we have focused on a separate segment and solution in each section. For example Mimaki had a boutique area. Here we had our TS30-1300 transfer inkjet textile printer and samples produced with it. We inspired our visitors by showing what can be done for garments, bags, shoes and accessories."

Each section created a different experience

Mimaki Eurasia focused on "What to do with a Mimaki machine" at Sign Istanbul 2018. For this reason, the visitors have seen the machines and the sample prints prepared in the areas established with the shopping center concept. The printers exhibited during the exhibition received full marks from the visitors with their speed and efficiency. The Mimaki technical team present at the booth helped the visitors to make the right decision for the investment by giving clear and comprehensive answers to all questions of the visitors.

UJF-3042 MkII EX high performance LED UV flatbed printer was developed for printing on different kinds of objects. The ideal model for stationery and