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From the editor

Dear Reader,

Are you as excited as we are about the forthcoming Techtextil and Texprocess trade fairs? We can hardly wait to see all the innovations and to experience the tremendous spirit of optimism pervading the industry at first hand.

The information already gleaned from the trade fair exhibitors has whet our appetite for more, and the Frankfurt Exhibition Centre, with all its organisational expertise and ingenuity, will no doubt ensure that everything runs as smoothly as ever. As far as the subject matter is concerned, there are some real treats in store for us. Automation, digitalisation and industry 4.0 are set to give Texprocess an enormous boost, and Techtextil will no doubt excel itself yet again in terms of innovations. Given these circumstances, it would be bordering on unprofessional to focus on any particular topic, as every innovation plays its own decisive role in driving forward the corresponding application or product group.

Virtually all technical textile segments or applications are considered growth markets, and in some cases the expected growth rates are sensational if we are to believe the forecasts of market research institutes such as "Markets & Markets", which predicts an annual growth rate of 33.5% for "smart textiles" between now and 2020. However, this will require ready-to-market products and a wide range of applications; the Techtextil will tell whether "smart textiles" are heading for a glorious future. One thing's for sure: there won't be a dull moment for suppliers of "smart textiles" at the trade fairs, as growth rates of this magnitude are reason enough for any entrepreneur to take a very careful look at this up-and-coming segment. After all, the competition may well be taking an interest in it too.

We still view the ongoing growth of the technical textile industry as the first part of a parabola. And even though exponential growth of the industry as a whole may still be a distant prospect, the trade fairs in Frankfurt, at the heart of Europe, are already attracting tremendous interest from all around the globe.



They are a source of inspiration and an engine of progress for the textile industry as a whole as well as for other industries which use textiles in the manufacture of their products. We therefore consider it appropriate to give wide coverage to both trade fairs in this issue of our magazine and to provide our readers with plenty of up-front information by way of guidance. To complete the picture, we will also be taking a closer look at the latest machines for the production of technical textiles.

We would particularly recommend reading our exclusive interviews. One of the people we have had the pleasure of speaking to is the Brand Director of Techtextil, Michael Jänecke, from whom we have been able to elicit some inside information in the run-up to the trade fairs. And in another interview Erwin Postma, Managing Director of the Dutch company Probo, a highly successful service provider in the field of digital textile printing, explains why the "Digital Textile Micro Factory" has already become a reality for his firm.

We wish all of you attending the trade fairs in the capacity of exhibitors or visitors a safe journey, a pleasant stay in Frankfurt and every success in achieving your goals.

We are as always looking forward to your comments and suggestions to redaktion@texdata.com.

Best regards Oliver Schmidt

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Techtextil set to showcase a wide spectrum of innovations

There is hardly any other sector that can boast of having a development dynamic and innovative power as impressive as the technical textile industry including the non-woven sector. This is not only because of existing products that have been improved, but above all, because of the huge range of new products it continues to create. You'll find out all about what you can make from textile fibres this May at Techtextil 2017 in Frankfurt, the world's leading trade fair for these type of products. Let's take a quick look at the reasons why hardly any sector can get by without integrating technical textiles into their products.

As usual, let us start with some facts. Already in January Messe Frankfurt announced that Techtextil is on a growth curve. They wrote: "Visitors and exhibitors can look forward to an even bigger event and a completely new trade-fair experience at the coming Techtextil". The booked space already exceeds the total area of the last edition in 2015. Moreover, the extensive complementary programme of events is set to be distinguished by a variety of innovations in 2017.

Already the 2015 edition of the worldwide flagship fair for technical textiles and nonwovens has set unequivocal new records on both the exhibitor and visitor sides. 1,389 exhibitors from 52 countries (2013: 1,322 / 48), an increase of four percent over the last event, presented new products for all product groups and areas of application for technical textiles and nonwovens. Around 28,500 visitors from 102 nations (2011: 27,500 / 98), also an increase of about 4 percent, ensured busy exhibition stands and numerous contacts throughout the fair. With the addition of Hall 6.1, the area occupied by the fair rose to 57,000 square metres (2013: 53,100 square metres).

Mission to Mars: Special 'Living in Space' exhibition and special area in Hall 6.1

The highlight of this year's Techtextil will be the special 'Living in Space' event in cooperation with the European Space Agency (ESA) and the German Aerospace Centre (Deutsches Zentrum für Luft- und Raumfahrt – DLR).

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"We are branching out in completely new directions with this year's Techtextil and are, therefore, all the more delighted about the outstanding resonance of our exhibitors", says Olaf Schmidt, Vice President Textiles & Textile Technologies, Messe Frankfurt. "Furthermore, the fact that we have gained strong new partners, ESA and DLR, from one of the main areas of application for technical textiles represents solid evidence of the application relevance of the products and technologies shown at Techtextil."

"Space fascinates people all over the world. All our space missions are backed by many years of research and innovation in which new materials and processing technologies played a decisive role", says Frank Salzgeber, Head of ESA Technology Transfer Programme Office (TTPO) on the collaboration with Techtextil and Texprocess.



ESA astronaut Thomas Pesquet on the International Space Station with the spacesuits he and commander Shane Kimbrough will wear during their January spacewalk.(c) 2017 ESA/NASA

Dr Rolf-Dieter Fischer, Director, DLR Technology Marketing, adds, "Thanks to their extreme durability and temperature resistance, many of the materials developed for space travel are finding their way into everyday products, and vice versa. This is particularly true of fibre-based materials with materials developed for space suits that regulate heat and moisture now being used in sports shoes, garments and home textiles."

In addition to a space-oriented area in the vicinity of exhibitors for functional apparel textiles in Hall 6.1, insights into the start-up scene and expert lectures are planned. Based on the areas of application for technical textiles, Techtextil will present high-tech textiles and textile processing technologies from and for the space sector revolving around four main themes. 'Mobility' brings together examples of applications relating to locomotion in space, e.g., lightweight structures for space capsules and parachute fabrics. 'Clothing' covers the subject of functional garment textiles such as space-inspired high-tech fashion. 'Civilization' stands for textile products for survival, e.g., geotextiles for growing foodstuffs and textiles for medical applications, as well as for energy production or filtration. 'Architecture' presents applications for dwellings and the infrastructure.

According to the German Aerospace Industries Association (Bundesverband der Deutschen Luft- und Raumfahrtindustrie – BDLI), the German aerospace industry generates annual revenues of 34.7 billion euros and is set to expand further.



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With a growth rate of 12 percent a year, aerospace is one of the world's driving forces for growth in the field of carbon-fibre reinforced plastics. Used in components of space capsules and fuel tanks, this heat and deformation resistant material cuts weight and, therefore, transport costs.

Fibre-reinforced composites are also used in the folding antennae of communication, which can be as much as 30 metres in diameter when opened, and earth observation satellites. Last but not least, a space suit consists of numerous layers of high-tech textiles that protect the astronaut from heat and radiation at the same time as regulating the body temperature.

Technical Textiles market continues growth

According to the Confederation of the German Textile and Fashion Industry (textile+mode) the textile and apparel industry with more than 130,000 employees, 1,400 companies and an annual turnover of around 32 billion euros is the second largest consumer goods industry in Germany. The growth is primarily driven by technical textiles. "German companies are the global market leaders in terms of technical textiles. For years, the turnover has been growing steadily – a proof for the innovativeness of the industry and excellent products. The digitalization of textile products and processes will furthermore trigger an innovation boost in other industries", says Manfred Junkert, Deputy General Manager of textile+mode. The technical textiles market, in terms of volume, is projected to reach 42.20 Million Metric Tons by 2020, at a CAGR of around 4.68% from 2015 to 2020 according to a market study published by the market researchers "Markets and Markets." It says: "The market for the global technical textiles industry has seen an upward surge since 2000. The Asia-Pacific region accounted for around 33.13% of the total market share in terms of value in 2014, followed by the North American and European regions at 29.13% and 24.02 %, respectively. However, as the technical textiles market in developed countries is getting matured, the market in developing countries such as China, Japan, and India is projected to grow at a higher rate from 2015 to 2020. China, with a CAGR of 5.93%, is projected to grow faster than any other country. This is because of its vast population and high industrial and technological developments in the country."

Officially, technical textiles are not counted in the list of cutting-edge technologies according to Eurostat statistics, but they are most definitely essential in terms of many innovations in leading technologies such as car manufacturing, medical technology, aerospace technology and environmental technology. Here, they are important for solutions which would not work as well without them, as well as those which otherwise would not even exist. A straightforward example of technical textiles being used in the specialist area of space travel are spacesuits for astronauts.

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Examples of innovative applications at the forefront of technology

However, let's take a closer look at some more complex examples, or in other words, innovations which are at the forefront of this technology.

Smart textiles

An area of application which falls into this category and demonstrates its great potential is "smart textiles." This term refers to high-tech textiles whose fabrics and meshes contain conductive textile materials, components and sensors, or have these type of elements attached to them. Smart textiles were a hot topic at the last Techtextil, but developments in this sector have really been pushed to the forefront this year. What's important here is that applications for these type of materials are becoming increasingly clear, and that we are recognising that these products could definitely reach large markets. The further development of technology into marketable products in particular is where the visitors to this year's Techtextil will most likely get the chance to see numerous innovations from research and industry, especially, but not limited to, functional clothing and medical technology.

Let's review a few of the latest innovations in this sector. The Swiss company Schoeller Textil is working on a flexible, easy to cut-to-size, heatable, e-soft-shell material. This new laminate's structure resembles that of a conventional soft-shell fabric with corkshell[™] technology and can be manufactured as piece goods. The heatable backing fabric is produced by the Eschler company, which is part of the Schöller group. Specially incorporated conductive yarns enable an even distribution of heat and specific heating surfaces are functional under normal stress conditions. As well as this, the material can be dyed and is washable. In collaboration with the company Osmotex, Schoeller has also researched an electroosmotic membrane called HYDRO_BOT which can be used in outerwear.



Heatable e-soft-shell material by Schoeller Textil (c) 2017 Schoeller Textil

Eschler were also able to develop a textile surface made from highly conductive yarns which as a sensor for electrical impedance tomography makes lung monitoring in real time possible. This has allowed medical professionals and carers to see exactly what is happening within the chest of an artificially ventilated patient for the first time ever. This way, doctors can adapt therapeutic measures as required.

Fraunhofer IFF will also present its textile sensors for surface pressure detection and corresponding pressure mats at Techtextil. This technology, developed at Fraunhofer IFF, enables surface distributions of pressure and force to be determined based on textile materials and manufacturing techniques. Recording physical measurements in this way is useful for a number of different applications. For example, comfort and ergonomics, pressure distribution during sitting and lying, and the adjustment and arrangement of support contours are all areas which show great potential. When it comes to medical applications, bedding systems are being improved to prevent bedsores and offer the right treatments for this ailment, as well as for use in the production of individually adapted aids such as wheelchair seats, prostheses and shoes. In the area of safety applications, touches can be recorded, which can play an important role for simple technologies such as seat occupancy sensors, as well as for very important ones concerned with collisions. And last, but not least, tactile input devices for humanmachine interactions could also benefit from pressure measurement. In total, 107 exhibitors are set to present their "smart textile" innovations at Techtextil.



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What's more, the relatively young market of "smart textiles" is projected to be worth \$4.7 billion by 2020 according to a market study published by the market researchers "Markets and Markets."

Filters

Compared to the new field of applications for "smart textiles," filters have been an established application for decades. However, anyone who expects fewer innovations for that very reason is sorely mistaken, because innovative products in this sector are being created all the time using new fibres, nonwoven materials, fabrics or new production processes. They are also being produced through innovative sourcing ideas. The manufacturers of viscose special fibres at Kelheim Fibres, for example, procured a new application idea for filters after holding an ideas competition for this purpose, and are sure to impress at Techtextil by telling us all about the project.

Dr. Jürgen Pettrak, who is involved in drainage and water purification in Straubing, Bavaria, won with the idea to use filters made from functionalised viscose fibres as part of a fourth clarification stage, which is designed to filter out the increasing amount of endocrine substances now found in water. These endocrine substances end up in our water as they are being used more and more in medication and livestock farming, which in turn could have dire consequences for our DNA. Advancements can also be expected in the area of non-woven filters. For example, Freudenberg Filtration Technologies has just received the FILTREX Innovation Award 2017 for the micronAir blue motor vehicle cabin air filter.

While conventional motor vehicle particles and combination filters merely prevent soot, dust and unpleasant odours from entering through the air conditioning, micronAir reliably keeps out fine dust almost 100%, blocks virtually 100% of all allergens $\geq 2 \ \mu m$ in the airflow, and hinders mould microspores on a long term basis.



micronAir blue - The new Freudenberg cabin air filter (c) 2017 Freudenberg Filtration Technologies



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When it comes to filter fabrics, you can look forward to the improvements and new solutions that can now be achieved by weaving on the new Type P2 rapier weaving machines by Lindauer DORNIER. The P2 was presented for the first time at ITMA 2015 and manufactured in a width of 320 cm with two heavy duty warp beams and a high-density filter fabric, which, up until now, could only be manufactured in this width using very expensive specialized machines. This extremely high density is facilitated by a reed beat-up force of 5 tonnes, a slip-free take-up motion and total weft uniformity. Fabrics produced in this way always have the same mesh number per cm2 and are therefore uniform throughout. Density and uniformity are fundamental requirements for this type of filter fabric.

"Markets and Markets" also believes that the market for this industry is on a compelling growth trajectory with an annual growth rate of 6.1% from 2016 to 2021. Therefore, the total market which was worth \$22.91 billion in 2016 could increase to \$30.78 billion by 2021.

Medical products

Expectations are also high for new fibre-based products that can be used in medical treatments and therapeutic care, on the one hand, and for revenue potential, on the other. Trade and professional visitors involved in the medical and health-care business can look forward to a range of new fibre-based research findings, together with the solutions that derive from them, in the Medtech section at Techtextil.

Areas of application include hospitals, rehabilitation and care institutions and / or the care of the elderly in their homes.

Fibres form the basic building blocks of life. In terms of the medical and healthcare business, they are becoming an increasingly important focus for German textile research in a number of collaborations with small to medium-sized manufacturers of medical technology. Current development projects are showing that models to be found in the world of plants and animals are not only being replicated in the laboratory, but, in joint work with other research disciplines, clinics and industry, they are laying the groundwork for new operative possibilities. What, then, can we expect of high-tech fibres in 2020?

"First and foremost, that the human body will tolerate them and that they will have adaptable properties in terms of rigidity and resorbability. Some of them will be new types of product, covering implants and therapeutic aids that can be individually adjusted to suit the individual patient," says Dr. Klaus Jansen from 'Forschungskuratorium Textil', the umbrella brand for German textile research. Products now on the horizon are, for instance, hollow fibres as components of wound dressings that can administer doses of active medicines directly into the wound. But there are also stents, for use in the heart and lungs that can be populated with the body's own cells, so as to resist rejection for longer.

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Hernia meshes are some of the first medical products in the field (Source: FEG Textiltechnik)

Highly specialized medical textiles not only open up new possibilities, with regard to transplantation medicine. Things that have, for the most part, not yet progressed beyond the laboratory stage at textile research establishments in Dresden, Aachen and around Stuttgart, will, in just a few years, undoubtedly find their way into clinical practice. Examples here might be textile dressings with built-in sensors, new kinds of bronchial stent and portable artificial lungs with core elements made from textiles. Fiber-based innovations are of huge importance for an ageing generation – above all, in situations where clothing with smart-textile components can measure vital parameters and environmental influences and channel the data in the right direction. The 'smart jacket' from Zella is part of this trend as, indeed, are the gym mats with built-in sensors or the moisture-sensitive incontinence inserts for the bedlinen, from an Austrian start-up company, which aims to help improve the processes of care.

Construction applications

From textile-based fascia panels over the Bosporus to the German Future Prize 2016 for carbon concrete and the highest glass-fibre membrane project in the world. Also Buildtech applications have much to offer and will featuring the latest innovations in construction using fibres. Werner Sobek is in no doubt, "it is almost impossible to imagine any new engineering approach to lightweight construction and design that would not require textile-based materials." Sobek is a star architect, currently contracted by the industrial group ThyssenKrupp to apply a glass-fibre wrap to an almost 250 metres high elevator testing tower in Rottweil, Baden Württemberg, which also happens to be the world's highest membrane project. Designed to reduce the tower's warming, the spiral-shaped fibre wrap has an irregular surface that dampens wind flow and so reduces vibration. It is also designed to catch the eye, of course.

Verseidag supplies the necessary special fabric. The textile manufacturer from Krefeld and Techtextil exhibitor is just like any supplier of building materials for Sobek. "Cooperation with textile companies like Verseidag is part of my everyday working life, just as cooperation with steel or concrete suppliers", declares the building engineer, who embedded textile construction at Techtextil back in the early nineties. And another textile construction topic also started at that time and will be one of the trade fair's focal points – textile reinforced concrete.

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One of the first research projects for textile-reinforced concrete began at the Technical University of Dresden in 1992. The idea was to use fibre fabric instead of steel to reinforce the concrete. Almost a quarter of a century later this construction material, now known as carbon concrete, has been awarded the German Future Prize 2016, the country's most prestigious prize for innovation.

The team of award winners also included Prof. Chokri Cherif, Institute of the Director for Textile Machines and **High-Performance** Textile Materials Technology (ITM) at the TU Dresden. At the forthcoming Techtextil the institute (Hall 3.0 / Booth G43) will be presenting a further development of this awardwinning material to incorporate an additional sensory function.



Textile reinforcement for the new Bosphorus bridge by solidian (c) 2017 solidian

The Yavuz-Sultan-Selim Bridge over the Bosporus near Istanbul completed in the summer of 2016, will play an indirect role in supporting Techtextil: 'solidian', an exhibitor from Albstadt in Baden-Württemberg supplied glass and carbon reinforcements for the fascia panels of the 320 metres high bridge pillars. Curiously: without these Swabian fascia panels, it would not have been possible technically to complete the project.

KARL MAYER Technische Textilien GmbH (Technical Textiles) can offer the RS MSUS-G weft-insertion warp knitting machine for producing the textiles that are used as an innovative way of reinforcing

concrete. This high-speed raschel machine with weft insertion in line with the stitch courses can produce heavy carbon-fibre grids, which are used by members of TUDALIT e.V. This association is responsible for the TUDALIT® trademark-protected brand for maintaining quality standards in the production and use of textile-reinforced concrete. Allgemeine bauaufsichtliche Zulassung (General Building Regulations Approval) has already been applied for to cover certain concrete components containing weft-inserted, warp-knitted textiles.

These are just a few examples from the "smart textile", medical products, construction and filter sector and do not represent the huge number of innovations from the various fields of application for technical textiles and non-woven materials which will be presented.



Complementary programme

And with the "Techtextil Symposium," an interactive special area for "Textile Processing Technologies in Space Travel," the second ever "Innovative Apparel Show" after its great success two years ago, the "Techtextil Innovation Award" and the student competition "Textile Structures for New Construction 2017," visitors are expecting a wide variety of other highlights. Techtextil is sure to continue on its path as an innovative trade fair well into the future.

Innovative Apparel Show

Successfully started at Techtextil and Texprocess in 2015, the Innovative Apparel Show will get in 2017 even more international with universities for fashion and design from four European countries. These universities will present their visionary product ideas using technical textiles and modern processing technologies on all four days. They are: Accademia Italiana, Florence / Italy; ESAD College of Art and Design, Matosinhos / Portugal; Esmod Paris/France, and the University of Trier / Germany. The young designers will show designs revolving around the themes of textile effects, creative engineering and smart fashion while a fashion show in the foyer of Halls 5.1 and 6.1 presents their ideas in a professional way.

Reinforcing grid made from carbon for use in textile-reinforced concrete (c) 2017 KARL MAYER

A public prize will once again be awarded in 2017 for the outfits that are presented on the catwalk.

During the trade fair, the audience will be asked to vote on which of the presented models should win the three "Innovative Apparel Public Awards 2017".

The prizes will be presented following the 11 a.m. event on the last day of the trade fair.



Innovative Apparel Show 2015 winner Designer Maria Valdez from Hochschule Niederrhein and Olaf Schmidt Vice President Textiles & Textile Technologies (c) 2017 Messe Frankfurt



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Techtextil Symposium in cooperation with Dornbirn MFC

The concept of Techtextil Symposium, one of the world's leading events for textile research, is being expanded. At the 19th edition of the symposium, international experts will present the latest research results, products and technologies for technical textiles, nonwovens and functional garment fabrics, in a total of seven half-day lecture blocks: New Fibres & Textiles, Industry 4.0, Circular Economy & Sustainability, Health & Protection, Smart Textiles and Composites.

The themed lecture blocks will be chaired by Dr. René Rossi (Swiss Federal Laboratories for Materials Testing and Research - EMPA, Switzerland), Prof. Meike Tilebein (German Institutes of Textile and Fiber Research Denkendorf, Germany), Braz Costa (Technology Center for the Textile and Clothing Industry of Portugal - CITEVE), Dr. Klaus Jansen (Forschungskuratorium Textil e.V., Germany), Dr. Hartmut Strese (VDI/ VDE Innovation + Technik GmbH, Germany) and Dr. Thomas Stegmaier (Institute of Textile Technology and Process Engineering Denkendorf ITV, Germany).



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Dornbirn-MFC is the Europe-centred innovation platform for the fiber industry and the downstream manufacturing stages (c) 2017 Texdata

Additionally, Techtextil is working together with the Dornbirn MFC Manmade Fibres Congress for the first time. Thus, Dornbirn-MFC will organise one of the seven lecture blocks within the framework of the symposium (to be held in 'Saal Europa' of Hall 4.0).

Techtextil Innovation Award

Moreover, outstanding new developments and advances in the fields of technical textiles, nonwovens and functional apparel textiles will be honoured for the 14th time with the Techtextil Innovation Award, the competition for which is also open to non-exhibitors. Conditions: the developments submitted should not have been available on the market for more than two years or be on the threshold of being launched. Additionally, they may not have been selected for any other award. The award categories have been adapted and the Innovation Award is now given in five categories: New concept; new technology; new material; new application and new product.

The winners will be presented with the Techtextil Innovation Award during the Techtextil opening ceremony in 'Saal Europa' (Hall 4.0) on 9 May 2017. All award-winning products will be on show at a special area during the fair.



The Techtextil Innovation Award winners are presented in a special area (c) 2017 Messe Frankfurt

Student competition "Textile Structures for New Construction 2017"

Together with the international Tensinet network, Techtextil is holding the 14th 'Textile Structures for New Building' competition for students and young professionals, which honours innovative and practical concepts for building with textiles or textile-reinforced materials. The closing date for receipt of entries to the competition, which is worth a total of & 8,000, was 26 February 2017. In addition to the awards ceremony, all award-winning works from the student competition and the Innovation Award will be on show in special exhibitions in hall 4.1 and hall 6.1.



Electronics in nonwovens was one of the student competition winners in 2015 (c) 2017 Messe Frankfurt

Change in placement for CAD/CAM and Cutting, Making, Trimming

To make the profiles of Techtextil and Texprocess even sharper, the bonding and separating technology, CMT (Cutting, Making, Trimming), CAD/CAM and printing product segments will be concentrated together at Texprocess in hall 4.0. Thus, visitors will find Techtextil exhibitors from these segments at Texprocess. These product groups will be deleted from the Techtextil nomenclature.

Exhibitors and their innovations

This brings us to the most important aspect of the fair: the exhibitors and their products.

As usual, we have structured our preview in accordance with the textile value chain from fibers to fabrics and will be focusing on the manufacturers of machinery for the production of technical textiles and nonwovens. We would like to start with the big associations and some special exhibition zones.

In hall 6.1, exhibitors and visitors will also find the **'Innovation made in Germany'** area of the **Federal Ministry of Economics and Energy** (Bundesministerium für Wirtschaft und Energie – BMWi), which is aimed at young, innovative companies based in Germany. ACIMIT, the Association of Italian Textile Machinery Manufacturers, has organized an Italian exhibition area (Hall 3.0, Booth Bo8-B10) together with Italian Trade Agency. In fact there are about 70 Italian textile machinery companies in Germany. This number that has grown over the years, and a testament to the interest Italy's textile machinery sector places in the technical and innovative textiles market. 25 of these companies will exhibit at the Italian Pavillion. These companies are all ACIMIT associated members: 4M Plants, Beschi, Bianco, Bombi, Bonino, Canalair, Carù, Cogne, Cubotex, Dell'orco & Villani, Etv, Fadis, Mesdan, Monti-Mac, Noseda, Pmt Ribbons, Ratti, Rollmac, Sariel, Saspe, Sicam, Textape, Toscana Spazzole, Unitech, Zappa.

UCMTF, the **French Association** which groups about 30 companies will have its own booth Hall 3.1 Stand A73. The French machinery will emphasize on their strategic partnerships with technical textiles manufacturers. French machinery manufacturers are SME's, often world leaders on their specific markets, organized not to sell off the shelves machines but to design machines specifically for their own customers' needs.

VDMA Textile Machinery Association (Hall 3.0 / Booth D25) will offer comprehensive branch information and useful publications. A visit at the VDMA booth will be a good starting point for visiting afterwards the VDMA member companies exhibiting at this fair. With 62 exhibiting VDMA member companies, German Technology will be strongly represented at Techtextil.

The VDMA uses the trade fair for technical textiles once again as an opportunity to honour successful young engineers. At the trade fair, five students will be awarded prizes of the Walter Reiners-Stiftung (Foundation) in the categories dissertation, master and seminar paper for their outstanding and creative achievements.

With their works, which deal with lightweight construction applications among other things, the young ladies and gentlemen demonstrate that textile machinery is a real high-tech industry with a future.

The award ceremony of the Walter Reiners-Stiftung (Foundation) will take place on 11 May, from 5 to 6 pm at the VDMA booth (3.0/D25). Trade fair visitors and exhibitors are very welcome to participate.

The VDMA booth is also the first contact point for visitors who would like to get an overview of the exhibiting VDMA member companies. For example, the list of exhibitors VDMA members @ Techtextil 2017 as well as Buyer's Guide Textile Machinery are available at the information booth.

Yarns & Fibers

Fiberpartner – a global supplier of polyester, polypropylene and bicomponent fibres, along with high-tenacity polyester technical yarns – (Hall 4.1 / Booth E48) will show off some exciting new products.



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Visitors to the company's stand will get a first-hand look at new 100% recycled polyester fibres for technical uses and a partly recycled bico low melt, with a 110C meltingpoint. Other exhibits are thermo-bonding fibres with low melting points (PE/PET, PE/PP, CoPET/PET) and flame-retardant fibres in polyester as well as short cut fibers in polyester for wetlaid and airlaid. Furthermore Fiberpartner will introduce a new solid fiber for wadding, which is recycled and OB free.

FIBER-LINE (Hall 4 / Booth A36) will be promoting its newest product line of synthetic wire and high-performance ropes. FIBER-LINE is now able to transform traditional wire rope constructions by utilizing high performance fibers such as: Kevlar®, Vectran®, Zylon®, Technora®, UHMWPE and carbon fiber. Synthetic wire rope products provide a host of improvements over its metal predecessor including reduced weight, higher strength, prolonged life, improved flex, and corrosion resistance amongst many others.

The Bavarian viscose speciality fibres manufacturer **Kelheim Fibres** (Hall 3 / Booth F23) will present their exceptionally wide spectrum of the most varied functional fibre products which are the perfect raw materials for a whole range of technical applications, from nonwovens applications to functional apparel, and from sportswear to filtration.

The Bavarians will present Olea, the world's first viscose fibre with inherent hydrophobic properties, as well as the fibre speciality Bramante, which – in contrast to Olea – delivers significantly increased levels of absorbency relative to standard viscose fibres: Bramante can store liquids in the segmented hollow structure inside the fibre and keep it there even under pressure. Thus, Bramante is the ideal raw material for re-usable incontinence products and other hygienic applications.Danufil® BF, a flame retardant viscose speciality, serves a completely different purpose: used as a protective barrier nonwoven in mattresses or furniture Danufil® BF can help to prevent a fire from spreading.

PHP Fibers, one of the globally leading producers in the area of hightenacity filament yarns, (Hall 4.1 / Booth D21) will present its broad portfolio of technical Polyamide and Polyester filament yarns. The focus this year will be on Enka® TecTape Hybrid Roving and technical filament yarns based on bio-polymers. Enka® TecTape Hybrid Roving is the starting material for the fully automated manufacture of continuous fiberreinforced composites with a thermoplastic matrix. Thanks to its twistfree and tape-like structure, Enka® TecTape Hybrid Roving efficiently combines continuous reinforcingfibers with thermoplastic matrix fibers. The resulting small distance between matrix fibers and reinforcing fibers enables short flow paths and consequently short cycle times in the manufacture of fiber composite parts. Enka® TecTape Hybrid Roving is flexible and its lowfriction and fluff-free roving surface allows exceptional load-specific and convenient processing into complex fiber composite parts on a textile basis.

Nonwovens

Freudenberg Performance Materials (Hall 3.1 / Booth F37) will present a huge variety of innovative solutions and is responding to mega trends of new technological solutions for generating and storing electricity with various innovations. One example is the battery separators, which significantly contribute to providing the safety, reliability and long working life needed in batteries. A second example is the redox flow battery (RFB) used in long-term storage technology. Third, the gas diffusion layers that are one of the critical performance components in fuel cells.



Pillow filled with down and feathers contained by Freudenberg' s Evolon® super-microfilament fabric (c) 2017 Freudenberg Performance Materials

However, energy is just one area of Freudenberg's expertise. There will be more topics. Evolon® is a unique innovative technology that combines the spinning of endless bico-filaments with splitting by hydroentanglement to generate extremely fine microfilaments. Thanks to this revolutionary technology, Evolon® can be used for a multitude of applications. Comfortemp® fiberball padding is a new dimension in thermal insulation as a replacement for down: warm, light and breathable with no processing limitations. New to the product portfolio for advanced wound care are hydrophilic polyurethane foams, which offer superior absorbency and comfort.

Sandler (Hall 3.1 / Booth D54) invites visitors to a garden of nonwoven novelties and will show a veritable bouquet of high-tech materials for acoustic insulation in the home and the office, for transportation, and for filtration.

fibercomfort® insulation materials are applied in the roof and in walls, providing for rooms at a pleasant temperature and at the same time helping to conserve energy. The product range offers the right acoustic nonwoven for every application: soft and voluminous or self-supporting and compact; with an open-pore surface of especially smoothed; white, black or a marble-like shade in colour—these textiles can be adapted to customer requirements. They can also be finished with print or embossed motifs or laminated with different fabrics.

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Sandler's latest development for filter media are enAIRsave® pocket filter media. Apart from excellent filtration performance, they put a premium on energy conservation.

Efficient acoustical absorbers dampen engine and driving noise, providing for a pleasant noise level. New sawasorb® advanced nonwovens achieve this level of

sound insulation at low product thickness. They are therefore ideal for narrow installation spaces and—using fewer raw material—offer a more sustainable product solution.

Lightweight sawasorb® premium exterior shadow absorber nonwovens are not only acoustically efficient at low product thickness, they also feature hydro- and oleophobic properties particularly for exterior applications in wheel house liners or underride guards. sawaloom® nonwovens for seat upholstery in vehicles provide the cosy-factor.

Being air-permeable and moisture resistant, these materials contribute to an optimum micro-climate of the seat. The latest development in this product line features a particularly soft, bulky and foam-like quality. Quilted with leather, this nonwoven produces an especially pronounced 3D-quilt-look.



Technical textiles

Schoeller Textil (Hall 6.1 / Booth Bo8), a global leader in highperformance textile manufacturing specializing in the sustainable developement and production of innovative textiles and textile technologies, will present awide range of latest innovations. The company offers wearable Smart Textiles (with electronics and/or sensors), textiles for future apparel, textiles for professional and protective clothing as well as for sport and active wear, clothing including protective clothing, personprotection equipment and outdoor products.

With the pyroshell[™]technology which was honored with the ITMA Future Material Award 2014, Schoeller Textil AG has succeeded in uniting permanent flame protection with polyamide or polyester fabrics. As a new feature, pyroshell[™]now offers flame protection in combination with the highly abrasion-resistant ceraspace technology



Schoeller Textil's pyroshell [™] flame protection can be combined with the highly abrasion-resistant ceraspace[™] technology (c) 2017 Schoeller Textil

With the 3XDRY® Bio technology, Schoeller now also offers the proven and familiar 3XDRY® feelgood comfort as a PFC-free and bio-based option. 3XDRY® Bio ensures reliable repellence of water droplets and aqueous dirt on the outer side, and optimum moisture management on the inside. 3XDRY® Bio also supports the body's own natural cooling function thanks to evaporation close to the skin.

The ceraspace[™]technology from Schoeller owes its outstanding protective properties to a unique composition of special ceramic particles anchored in a polymer matrix. The special ceramic particles are nearly as hard as diamonds and are firmly attached as a 3-dimensional coating to the textile. A textile with ceraspace[™] proves to perform significantly higher than highquality leather in terms of abrasion. The new high-vis-yellow version offers now highest visibility compared with security.



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The ceraspace[™]coating brightens as color-matching is possible with the base fabrics in the signal color. Versions that are more insensitive to dirt are brownish and olive green shades.

ecorepel[®] Bio imitates plants' natural protection with the aid of a highperformance, permanentlyodorless high-tech finish. It is PFC-free and is obtained entirely from renewable primary products. The finish envelopes the fibres of the fabric in a thin film, providing the repellent effect which allows water droplets and aqueous dirt to run off the surface.

Furthermore Schoeller is in the process of developing a heatable E-softshell material that can be cut to size as required. This innovative laminate is structured like a conventional soft-shell with corkshell[™] technology, and can be produced for sale by the meter. The heatable backing is manufactured by Eschler. Specially incorporated conductive yarns enable uniform heat distribution and specific heating surfaces are functional at the usual voltages.

And last but not least Schoeller recently announced an exciting new development, resulting from a Swiss collaboration between textile manufacturer Schoeller and auxiliaries and dyes specialists at Textilcolor. ecodye is a new auxiliary concept used, in particular, in polyester dyeing processes. The technology accelerates the dyeing process and contributes to cutting costs, while at the same time helping to preserve the environment with a low level of demand on resources.

Spinning

Graf + Cie (Hall 3.0 / Booth Jo6) will inform about their huge portfolio of products and services as a global leading supplier of metallic card clothings, flat clothings, combs and related products. Qualified specialists provide customers with competent consultation and support in the selection of card clothings to meet their particular needs more individually.

A special emphasis will be given to Hipro metallic card clothings. They can be used on high-performance roller card systems as well as on conventional machines and are suitable for all standard man-made fibers in the nonwoven sector and also for wool. They can be used on the following rollers: doffer, worker, stripper and condenser rollers. These excellent, robust clothings are available with normal profile and as interlinked clothings.



Graf Hipro metallic card clothing (c) 2017 Graf

Saurer Allma (Hall 3.0 / Booth Do2) will inform about the latest developments in twisting technology for industrial yarns. On the two-forone twisting machine TechnoCorder TC2 for industrial yarns for example up to 9-ply yarn constructions can now be processed.

in production, material and varn counts of industrial varns. Self-sufficient spindle drives allow for such production flexibility that individual items can be processed on each separate spindle. With the innovative FlexiPly software you can economically produce the hybrid yarn constructions expected by the market on the TechnoCorder TC2. Through the use of different materials such as polyamide and aramid and different twists, varns with new characteristics are created for technical textiles, tires and mechanical rubber goods (MRG).



Allma TechnoCorder TC2 - With even more flexibility in production, material and yarn count (c) 2017 Saurer

A novelty is the extension of the FlexiPly device. The new software allows for multiple constructions of up to 9-ply. The possibility of equipping the machine for processing PE-/PP tapes and monofilaments provides the customers with additional material flexibility.

The two spindle gauges 670 and 830 mm enormously widen the yarn count range from 235 to 33,000 dtex, enabling both very fine and very coarse yarns to be processed in high quality on the TechnoCorder TC2. The delivery speed of 400 m/min is world class in twisting industrial yarns. SSM (Hall 3 / Booth Do5 [ELMATEX]) will exhibit their winding machine for technical yarns, the SSM DURO precision package winder.



The SSM DURO-TW precision winder for all technical yarns up to 50'000 dtex offers a new level of flexibility and winding quality in one machine; thereby ensuring the fulfilment of all customer requirements. The SSM DURO-TD assembly winder allows the plying of multiple ends/yarns. Optional intermingling guarantees loop-free twists as well as optimal unwinding during twisting. The ability to run closed precision winding enables higher package densities, thereby increasing the knot-free length.

The unique characteristics of tailor-made high performance yarns is helping such yarns to substitute other classical materials in large range of applications; thereby continually increasing the usage of technical textiles and consequently their consumption. Despite this overall positive scenario production lot sizes can vary greatly; from large ones for standard yarns to small ones for specialties, managing such variances poses a challenge for any producer.

USTER (Hall 6.1, booth B65) will present the latest USTER® TESTER for filament yarn as well as the production optimization and quality assurance benefits to show visitors.

The amazing diversity of technical textiles applications is matched by the wide variety of quality characteristics needed in the raw material used – so filament yarn producers know they must work to the most stringent specifications and standards.

Quality failings, especially in the critical parameter of yarn evenness, can be expensive, but the USTER® TESTER 6-C800 provides fast, accurate testing to the tightest tolerances, protecting filament producers against customer complaints and claims.



USTER® TESTER 6-C800 - The Yarn Inspection System (c) 2017 Uster

Evenness testing has to combine reliability, accuracy and speed. The USTER® TESTER 6-C800 is specially designed for filament yarn testing, to meet these criteria perfectly. At its heart is the new Capacitive Sensor, providing more accurate and reliable test results than ever before. Typically, filament yarns show a CVm value around 1, so that even small deviations in evenness are likely to cause noticeable defects in the fabric.

The increasing complexity of applications and performance standards – with fabrics needing to protect against water, wind, cold, heat, and even bullets – means that evenness is an absolute requirement.

For this vital parameter, spinners have for decades been depending on the USTER CVm value, now recognized as the defining global standard for evenness. The USTER® TESTER 6-C800 combines reliability with top speed operation. All models operate at the test speed of 800 m/min. Running on the automatic setting, the high sample throughput rate gives even better detection of quality exceptions. The result is lower labor costs and improved control of quality for the business.

As well as the advantages already described, the USTER® TESTER 6-C800 offers three new unique features to help yarn producers increase efficiency and improve quality. The measurement of interminglings is an innovation saving time and preventing variations in subsequent fabric appearance. An automatic twist scan facility has been developed, assist filament quality monitoring by making twister settings easier.

And the Knowledge Based System (KBS) quickly traces the cause of a quality problem on the spinning machine, with no need for extra settings or input from the machine supplier, via a single click on the spectrogram display.

Weaving

IQ-SPS from Germany and **CREALET** from Switzerland (Hall 3.0 / Booth D72) will take the chance to point out their efforts to take advantage of synergies that exist in terms of products, services and market position during the Techtextil. The two companies have the necessary know-how to modernize or overhaul weaving machines. The engineering department is constantly creating innovative products in the field of electronically warp feeding from beams or weaving creels for existing or new wide and narrow weaving machines as well as warp knitting machines. Special developments were realized in the feeding of carbon fibers.



Webbing-feeding-unit by Crealet (c) 2017 Crealet

The Weaving department of **Groz-Beckert** (Hall 3.0 / Booth Fo3) is presenting its comprehensive range of products for weaving preparation and weaving accessories at the Techtextil.

A highlight of the portfolio is the PosiLeno® leno system, which boosts efficiency by up to 100 percent. Moreover, an acrylic weaving machine mock-up, the WeavingLoom, will provide insight into the operation of heald frames, healds, warp stop motions and drop wires. The jacquard heald is also demonstrated using the WeavingLoom. Made of mono wire, this product facilitates not only high densities but also a particularly gentle workmanship. In combination with the innovative thread eye, which is glued into the mono wire instead of welded, Groz-Beckert provides for uniform fabric quality and high machine efficiency.



Groz-Beckert PosiLeno® leno system (c) 2017 Groz-Beckert

Jakob Müller (Hall 3 / Booth B19) will exhibit three innovative machines from different sectors of their portfolio. In the sector of narrow fabric weaving systems Jakob Müller will exhibit the new electronically controlled narrow fabrics loom NH2 53 2/130.

The successfully launched NH2 53 narrow fabric loom is now available on the market in the widened and strengthened NH2 53 2/130 version, which has a reed width of 130 mm, enlarged shed and increased heald shaft lifting power.

In the sector of warp crochet knitting systems Jakob Müller will exhibit the COMEZ ACOTRONIC 8B/600. This is a high-efficiency, electronic crochet knitting machine that employs compound needles for the production of a wide range of ribbons, technical and medical textiles, both elastic and non-elastic.

In the sector of technical textile make-up Jakob Müller will exhibit the UV60-W automatic cutting and winding device. The UV60 automatic cutting and winding machine is designed for the make-up of medium-weight and heavy, non-elastic belts.


NH2 53 2/130 spaces with bag tape and woven-in drawstring (c) 2017 Jakob Müller

Picanol (Belgian Lounge /Hall 3.0 / Booth B28) will be present with the Picanol "Team Technical". On the eve of TechTextil 2017, they will launch a new campaign for the Technical Markets, entitled "Impossible? Not anymore!" showing the power of its approach for existing and prospective customers alike. Picanol's strategy is to use its leading position in weavingmachines for mainstream textiles as a basis to grow in the sector of machines for woven technical textiles.



Picanol Optimax 4 - 540 rapier weaving machine (c) 2017 Picanol

Stäubli (Hall / Booth) will showcase two machines that fit especially well in the production process of technical textiles and inform about . Furthermore a selection of technical fabrics including spacers and multilayers with variable thickness that have been produced in conjunction with Stäubli products such as TF weaving systems, dobbies, Jacquard machines, warp drawing-in, or tying equipment.

The Magma T12 warp tying machine is suitable for technical yarn ties monofilaments, coarse multi-filaments, PP ribbons, bast fibres, coarse staple fibres, and many other fibre types. It has been developed for universal application ranging from coarse technical yarns to medium yarn-count range. Its rigid design includes an optical double-end detection system.

MAGMA is demonstrated at the booth tying monofilament, diameter 0.40mm, density 7 threads/cm, 4 canister, 140 threads each.

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The single-end control Jacquard machine UNIVAL 100 offers more benefits for sophisticated technical textiles such as automotive and aeronautic textiles, technical textiles in the sports, industrial, medical sectors, and new fabric constructions, even with glass fibre, carbon, and Kevlar.

Furthermore information will be provided about new TF weaving system providing individual system configuration and maximum flexibility. This system offers virtually unlimited weaving possibilities, whether for flat, spacer, or complex multi-layer fabrics and 3D fabrics. Featuring latest shedding machines in combination with the double-rapier weft insertion system and a special slaying motion this system allows high-volume production of up to very thick and/or dense fabrics and efficient processing of a wide variety of technical and highly sensitive yarns. This weaving system is available featuring various machinery combinations and set-ups for weaving any application and desired technical fabric. With its Schönherr carpet systems branch, Stäubli will inform visitors about the ALPHA 500 LEANTEC weaving system allowing the production of superior high-quality synthetic grass and greige material for printing.

VANDEWIELE, the leading supplier of carpet and velvet weaving machines, tufting systems and textile accessories, will show its latest developments of textile products and related machinery. Innovations include further developments woven on the JEC award-winning 3D-Lighttrans weaving machine for multi-layer woven panels with integrated stringers, omega-profiles and hollow reinforcements. Other developments relate to new design possibilities in the field of one piece shoe-weaving, for creating 3D-effects and increased local permeability.



Visitors at the booth will get an impression of the complete range of technical textiles produced with Vandewiele technology, in cleantech, sporttech, mobiltech, indutech, protech and more.

Knitting

In Knitting, **Groz-Beckert** (Hall 3.0 / Booth Fo3) is presenting its product portfolio for the technologies circular knitting, warp knitting and flat knitting, as well as customer-specific solutions. With system solutions from a single source, the company is responding to more stringent requirements for wear, load capacity of key components and the workability of different materials. Increased market penetration in warp knitting and the processing of materials such as metal and glass-fiber in flat-knitting mills call for custom-tailored solutions.



Groz-Beckert LiteSpeed Plus needle (c) 2017 Groz-Beckert

KARL MAYER (Hall 3.0 / Booth E 18) manufactures textile machines for producing the products that are used in many cutting-edge applications and these products can be seen at the Frankfurt site. Visitors can expect an impressive display focusing on textile-reinforced concrete and functional clothing for the sports and athleisure sectors.

KARL MAYER Technische Textilien can offer the RS MSUS-G weftinsertion warp knitting machine for producing the textiles that are used as an innovative way of reinforcing concrete. This high-speed raschel machine with weft insertion in line with the stitch courses can produce heavy carbon-fibre grids, which are used by members of TUDALIT e.V. General Building Regulations Approval has already been applied for to cover certain concrete components containing weft-inserted, warp-knitted textiles.

The textiles produced on the machines manufactured by KARL MAYER Technische Textilien can be used to reinforce the composite materials used in concrete construction, as well as plastic composites. Here, readyconsolidated, fibre-thermoplastic, semi-finished products, so-called organic sheets, have become more important in recent years. According to Jochen Schmidt, the Managing Director of KARL MAYER Technische Textilien GmbH, the concept of fibre spreading is also starting to be a hot topic. Before they are joined to the plastic matrix, the fibre tapes are spread using KARL MAYER'S UD 500 and UD 700 fibre spreading machines. These two machines have already made a name for themselves among composites' manufacturers for use in the preliminary stages in the production of multiaxial textiles.

Innovative sports- and athleisure-wear provides comfort, enhances performance, looks stylish and offers a performance profile that is backed up by intelligently designed textiles. Stylish, functional stretch and nonstretch textiles are a speciality of KARL MAYER's warp knitting machines.

The company's high-speed tricot machines, jacquard raschel machines and double-bar raschel machines can produce a variety of structured and openwork designs from a single source, and also work functional zones that can be integrated into a garment, such as a jersey. Zones are created, which provide a defined compression, breathability, warmth retention and freedom of movement.

This is based on body mapping principles and the zones are located in exactly the right places. KARL MAYER's double-bar raschel machines in particular are also setting functional trends when producing seamless items that are making quite a fashion statement.

With its impressive stand design and carefully selected exhibits, KARL MAYER is looking forward to a successful show.



Functional sample produced on a jacquard raschel machine (c) 2017 KARL MAYER

Mayer & Cie. (Hall 3 / Booth Ao6) will demonstrate that circular knitting machines offer many opportunities in innovative textile applications. A number of others could join them in the future thanks to the new spinning and knitting technology the firm is also showcasing in Frankfurt. With its mattress covers Mayer & Cie. is already a force to be reckoned with in home textiles, or Hometech as the sector is known at Techtextil. The machines that make them are members of the OVJA family such as the OVJA 1.6 EM HS or OVJA 1.6 EE. Another established area is to make covers for upholstered furniture of all kinds. That is a speciality of, inter alia, the MCPE 2.4, a machine for coloured all-over plush jacquard fabrics.

The Relanit 0.8 does not use conventional yarns to manufacture textile fabrics. It knits spun steel fibres or copper, steel and silver wire, glass fibre, carbon fibre or carbon – including in combination with cotton and synthetic yarns. Their uses range from protective clothing to horticulture and electrically conductive textiles.



Mayer & Cie. OVJA 1.6 EM HS (c) 2017 Mayer&Cie

STOLL (Hall / Booth) will be showcasing a large variety of flat knit application examples. The new cluster concept for TT sport, TT med, TT home, and TT mobility will be unveiled, along with the new CMS 330 HP W flat knitting machine for TT sport, which is suitable for the manufacture of shoe uppers, orthopedic supports, and textile accessories with complex shapes.

The compact model also boasts a high production speed, exceptional value for money, and options for inlay techniques, intarsia patterns, and plating effects.



Nonwovens

ANDRITZ Nonwoven (Hall 3 / Booth B15)will highlight top-notch technologies for technical nonwovens and textiles and is targeting processes for technical nonwovens and textile.

Driven by the vibrant market for durable nonwovens, ANDRITZ presents the neXline needlepunch with the innovative, high- speed Dynamic crosslapper, operating at up to 205 m/min at the input. The renowned ProDyn capabilities are able to reduce fiber consumption drastically. Profit from fabric weight evenness and a significant cost reduction. Another major asset is the "Dynamic Harmonic Shifter" (DHS), which steadies higher machine frames that are susceptible to vibration. DHS technology harmonizes the frequency to minimize vibration effects, which could possibly ruin a machine. Another added value is the productivity boost for such applications as rib needling up to 20 m/min.

Yet another innovation is the ANDRITZ Nonwoven neXmatrix simulator system. This system identifies, configures, and optimizes various process solutions in order to streamline functions. It answers specific needs such as production capacity, width, versatility, investment payback, and fabric range by configuring the production line to meet the exact requirements. Visit our booth to find out more.

AUTEFA Solutions (Hall 3.0 / Booth H 33) will inform about turn-key lines as well as individual machines for nonwovens manufacturing which stand for best possible Total Cost of Ownership (TCO). The machines offer high productivity, the flexibility for various nonwovens products and low maintenance costs.

The Autefa Solutions V-Jet is a new hydroentanglement system which saves up to 30% of the hydraulic energy required for the Spunlace process. The patented jet-strip design enables a pressure reduction while keeping the product quality constant in comparison to a standard jet-strip. The Spunlace process is optimized with the Square Drum Dryer SQ-V, which has significantly better energy efficiency and drying performance than a common Drum Dryer – at the same footprint.



Autefa Solutions Needle Loom Fehrer StylusONE (c) 2017 Autefa

The Crosslapper Topliner CL 4004 SL is characterised by a high infeed speed of up to 130 m/min and a precise weight distribution. Further machines are the Automatic Needle Exchanger 2.0, the new Nonwovens Card Web Master FUTURA and the HiPerTherm Thermobonding oven with the proven double nozzle system.

For the production of flushable wipes Autefa Solutions and Campen Machinery plan and realizes complete hydro laced airlaid process lines. The concept hits the specific need for medium and small size Airlaid production solutions.

There is also a growing interest in high speed through air thermobonding lines for hygiene products such as acquisition and distribution layers (ADL). These materials are used in baby diapers, sanitary napkins and adult incontinence products. The key strengths of the Autefa Solutions belt dryers are uniform airflow and the precisely adjustable temperature distribution, the ability to maintain loft or to create high densities. For the needle nonwovens process, Autefa Solutions offers the Needle Loom Fehrer Stylus ONE, a machine for all needling applications. StylusONE covers the needs of the market for a reliable and economic machine. With a performance of max 1200 strokes/min the Needle Loom StylusONE distinguishes itself through productivity, guaranteed longevity and maintenance free gear boxes.

As the leading group in the field of staple fibre nonwoven production lines **DiloGroup** (Hall 3 / Booth H31) will inform about complete lines presenting the latest developments in all components. Furthermore the DiloGroup will explain the characteristics of DILO standard and special nonwoven production lines in discussions with international customers.

The strong demand for DILO production lines is partly due to the high attraction of needled nonwovens themselves with a yearly increase in consumption of about 6 - 7 %. DiloGroup enjoyed above-average order influx in all important markets for its machines and installations and had record turnovers in 2015 and 2016. Due to an increase of about 20 %, the overall turnover in 2016 will reach a total of around 110 million Euros.

A DILO line stands for highest productivity with best web quality. This goes hand in hand with a high efficiency as the mentioned four machine groups are controlled by a single drive and control technique and fulfill all requirements for modern crosslinking and smart production.



Horizontal crosslayer DLSC 200 by DiloMachines (c) 2017 Dilo

A close cooperation with needle manufacturer Groz-Beckert has advanced the development of the needle module technique and the intense needling of light weight nonwovens. Ample information will be available at the booth.

In addition to information about standard universal lines, Dilo will inform about the latest developments in DILO machines which aim to increase efficiency and productivity by the degree of automation and improved end product quality. An example of such an innovation is the "DLSC Vector 200", a new crosslapper by DiloMachines which is unique with an infeed speed of more than 200 m/min. Furthermore, DiloGroup will inform about universal needling technology and carding systems of wide working width and high web speed for water entanglement lines. For this important, special branch of nonwoven production normal lines have a working width of about 3.8 m and medium web speeds of around 200 m/min, DiloGroup's portfolio includes carding systems of wider working width and higher web speeds. DiloTemafa offers in close cooperation with DiloSpinnbau these special carding systems with working widths exceeding 5 m and resultant web speeds of more than 400 m/min after water entanglement and drying.

Considerable progress has been achieved in the processability of special fibres like carbon using recycled fibres to make composite materials. Compact special lines for product research and development with recycled carbon fibres are available and can be discussed with interested visitors.

With its product area Felting **Groz-Beckert** (Hall 3.0 / Booth Fo3) puts its contribution to the nonwovens industry on display. The service life and rust resistance of felting and structuring needles have been, and are, important issues in nonwoven manufacturing. Now, Groz-Beckert is presenting its latest innovation: Groz-Beckert® dur. The patented manufacturing process of the needles in combination with a new base material improves resistance to corrosion with up to 30 percent longer service life. Moreover, the staple fiber needle punch line inaugurated in March in the Technology and Development Center at company headquarters in Albstadt is going to be presented. As a development partner, with this facility Groz-Beckert is expanding its service offering in the field of application advice.

haadaa hahaa ha

Groz-Beckert EvoStep (c) 2017 Groz-beckert

For Spunlance customers, Groz-Beckert is presenting another new product with its HyTec® jet strips. As well as improved handling properties, the innovative jet strips also feature significantly higher hardness, which has a positive effect on all mechanical properties such as scratch resistance, bending strength and service life. The Carding department's focus at the Techtextil 2017 is on improved performance and on raw material savings and is presenting the high-performance worker and doffer wires SiroLock® and EvoStep®. EvoStep® card clothing features a unique slanted step undercut on the tooth front. In this area the working angle is significantly more pronounced than in conventional worker and doffer wires. Compared to EvoStep® card clothing, which aims to reduce raw material consumption, the focus of SiroLock® card clothing is on boosting performance of the roller card via high delivery rates and nonwoven weights.

For **Trützschler** (Hall 3.0 / Booth Bo3) the making of nonwovens and industrial yarns will be at the center of attention. Trützschler Nonwovens' proven and new nonwoven machines help to set up streamlined, energy-efficient production processes. In the sector of fiber preparation partly newly developed and partly proven T-BLEND components answer a broad range of requirements. Latest addition in web forming with T-WEB cards and crosslappers is the new high-speed card. It is a specialist for highly productive spunlacing lines with speeds above 300 m/min.



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Trützschler high-speed card (c) 2017 Trützschler

In the T-BOND section everything is about efficient web bonding – from the AquaJet to needling machines, from thermobonders to components for chemical bonding processes.

The proven and continuously improved Omega, Streamliner and multidrum dryers are labelled under the name T-DRY. Last but not least the T-WIND winder, unwinder and slitter-rewinder program: the brand new master roll winder brings benefits to spunlacing and thermobonding lines destined for the production of master rolls for converting processes.

Trützschler Man-Made Fibers is presenting a new industrial yarn spinning process. The new development is about spinning polypropylene (PP) yarn varieties with exceptionally high tenacities from standard grade polymer.

Drying, Dyeing, Finishing, Coating

A. Monforts Textilmaschinen's, Techtextil Division, (Hall 3.0 / Booth Fo1) will represent the company at Techtextil'17 on a joint 100m² booth together with Fong `s Europe.

Monforts will demonstrate its full range of new coating units for the first time at Techtextil'17 - incorporating Knife over roller/air system; magnetic roller system; and printing head systems.

The Monforts coating range 'texCOAT' is now available worldwide and follows the recent acquisition of renown manufacturer Timatec; who was previously active mainly in the central European markets. New applications and interesting references of the coating units will be presented as well including membrane- and Filter- applications.

Single sourced solutions ranging from single sided applications of finishing agents such as, for example, outdoor clothing and functionalization of textiles in the home textiles sector, through to sophisticated lightweight construction using innovative textile-based coated materials in the automotive and aerospace industries are now available.

The various coating modules can be used with or without a magnet system. For working widths above 240 cm use of a magnetic doctor blade is recommended.

The coating systems are available in four versions – basic, multi-functional, universal and multi-functional. The basic version, for example, offers manual adjustment in two positions for air knife and roller knife coating and printing without magnet for working widths of up to 240 cm.

The Multi-functional version with two position manual adjustment is designed for magnetic knife coating with a working width of up to 240 cm and screen printing. The Universal version features motorised adjustment with three positions for foam coating, roller knife coating and magnetic knife coating; for working widths above 240 cm.

The fourth, Multi-functional version, with three position motorised adjustment has been designed for direct fabric feed coating applications using printing templates and operating modes with roller knife and magnetic knife.



The new Monforts Montex 8500 stenter (c) 2017 Monforts

Monforts can also provide Ex-proof ranges for solvent-based coatings and for high temperature processes up to 320°C such as, for example, PTFE sintering. The Monforts range of coating solutions also includes the recently introduced Montex Allround. Designed for constantly changing technical textile coating process applications, the systems coating modules can be quickly and easily changed by a specially designed undercarriage from the side of the unit; allowing it to be adapted for different applications.

All Monforts coating systems feature simple and user friendly PLC techniques with on-screen visualisation for all operating modes. Recipe management for different coating processes are integrated in to the proven Qualitex control system of the Montex stenter.

Benninger (Hall 3 / Booth D o5) will provide visitors with their comprehensive process know-how in the fields of technical textiles, in particular in the areas of textile finishing, washing, bleaching, dying (Küsters DyePad) and mercerizing. Benninger develops and manufactures textile finishing and cord production ranges as well as providing complete system solutions. The vast knowledge of Benninger in the field of controls and automation is based on many years of experience with machines and ranges, also in other industries. A special emphasis will be given to the newly redesigned TRIKOFLEX drum washing compartment. With the front and back washing effect, based on the patented double drum technology, the newly redesigned TRIKOFLEX drum washing compartment guarantees a high mechanical washing efficiency.

It not only enables low, controlled fabric tension, but also crease-free fabric transport, even with sensitive fabrics. The TRIKOFLEX drum washing compartment also offers another advantage by controlled relaxation of synthetic and elastane fibres.

All these advantages also predestine the TRIKOFLEX drum washing compartment for use with technical textiles. To meet all requirements in this field, the compartment is available with a working width of 5,400 mm. The range for technical textiles is supplemented by the HYDROVAC water removal system and the original Küsters finishing padder. This offers the customers new options in the technical textile field – not only with regard to the technological processes, but also with minimum use of resources.



BRÜCKNER (Hall 3.0 / Booth F29) shows a wide range of application examples for Technical Textiles which can be finished on the tailor-made and resource-saving BRÜCKNER machines. A great number of special machines for very specific purposes show the competence of the creative BRÜCKNER team.

Manifold product examples on the booth invite to discussions with the BRÜCKNER experts.

Models of a SUPRA-FLOW BX double belt oven for nonwovens and of the innovative ETRO bow-shaped dryer which is particularly suitable for the coating with PVC or adhesives show only two of the machines offered by BRÜCKNER for the finishing of nonwovens and foils.

In addition BRÜCKNER offers very different application systems for the coating of technical textiles and one of them is the ECO-COAT minimum application unit. In the Technology Center in Leonberg the customers can develop their own innovations on different machines.

Also padders, drying, heat-setting and curing ovens with maximum production capacity and lowest possible energy consumptions and the highest precision in the temperature distribution and air circulation are part of BRÜCKNER's product range. Various cutting and winding machines to give a shape to Technical Textiles of any kind round the product portfolio.

Benninger TRIKOFLEX (c) 2017 Benninger



BRÜCKNER ECO-COAT minimum application coating unit for technical textiles (c) 2017 Brückner

Examples for the final applications processed the BRÜCKNER finishing lines are woven glass fabric for circuit boards, carbon textile for textilereinforced concrete, linings for walls and roofs in the field of automotive and aerospace, airbags, high-tech filters for the medical industry, hygiene articles, geo nonwovens for bank reinforcement.

Erhardt+Leimer (Hall 3.0 / Booth C15) will present products for web guiding and spreading, web tension measurement and control and edge trimming.

The SWS 9 segmented roller guider guarantees gentle and precise web guiding and spreading. The system includes the multifunctional wide band sensor FE 45 for edge and centre guiding with width monitoring. Also on exhibition is a new pivoting frame for web guiding in narrow-web applications, the DR 23 from the ELGUIDER product family.

For web tension measurement E+L offers a broad range of sensors: flange load cells, block load cells and measuring rollers of the ELTENS product family.

The sensors are available in aluminum, steel and stainless steel (IP 65). With the ELTENS DC 62, E+L also presents a product for web tension control. Another solution will be the PA 62 web tension measuring amplifier. And last not least they will showcase their successful ELCUT BTA 80 edge trimmer.



The DC 62 web tension controller and a PD 21 load cell from the ELTENS product family (c) 2017 Erhardt + Leimer

iNTERSPARE (Hall 3.0 / Booth J08) will present their machine portfolio of the textile finishing line ARTOS / Babcock textile machines. The focus is on the iNTERSPARE ARTOS Unistar stenter, which is particularly suitable for weaving equipment and allows permanent production at high chain tension.

The heart of the ARTOS Unistar is the legendary horizontal chain. It is a lubrication-free sliding pieces chain with enormous capability of resistance. Especially in high transverse tension processes the chain proves its superiority. The chain is suitable for high impacts and extreme cross tensions and exceeds with these characteristics the requirements of coating and carpet. Because of the synthetic sliding pieces and synthetic bushes there is no need of lubricants inside the chain rails and there are no wear parts inside the chain rails. This also means there is no oil and grease which may get into the dryer, because of this special chain.



Another advantage of the ARTOS horizontal chain is the very short down time period. For the exchange of parts of the chain it is not necessary to wait until the dryer has cooled down. The chain can be pulled out of the dryer, the chain parts can be exchanged and an alternative chain can be inserted into the machine.

Long running times and minimal costs are further advantages. Since many years the patented Econ-Air energysystem fulfills also today's requirements for energy efficiency and sustainability. It utilizes the inserted thermal energy in the most efficient way.

Mahlo (Hall 3.0 / Booth B42) will present live the latest technology of nonradiometric coating measurement in operation. In the market for technical textiles and nonwovens Mahlo provides renowned on-line measurement and control solutions for thickness, basis weight, density, coating addon, and moisture. Another focus lies on innovative weft straighteners and detection and correction of web distortions.

The traversing quality control system Qualiscan QMS is the perfect tool for the demanding manufacturer. It offers non-nuclear sensors plus responsive, professional technical support, and the most reliable, wellbuilt scanning platforms in the industry.

iNTERSPARE Artos Unistar (c) 2017 iNTERSPARE



Mahlo Compact O-frame Webpro XS with an X-ray basis weight sensor Gravimat FMX-T (c) 2017 Mahlo

SANTEX RIMAR GROUP (Hall 3.0 / Booth B30) will inform about their huge portfolio of textile machines for weaving, textile finishing, technical textile, nonwovens and green solutions and latest innovations of their brands SMIT, CAVITEC, ISOTEX and SANTEX NONWOVENS. The technology characterizing SMIT production includes weaving machines with rapier weft insertion for home textiles, garments, terry cloths and customized solutions for the production of special technical fabrics such as airbags, fiberglass and conveyor belts.

CAVITEC offers machines for coating, laminating, impregnation and prepreg. Cavitec is the world leader in prepreg system for composite products for the aerospace, automotive, wind-power industries and for the resin impregnation of carbon, kevlar or glass fibre. All leading prepreg manufacturers work with Cavitec lines and each plant is tailor-made to specific customer requirements. ISOTEX offers coating, embossing and printing machines. With more than fifty years of experience Isotex offers its global customers not only a wide range of products but also innovative and customized solutions.

SANTEX NONWOVENS offers thermobonding solutions. Santex oven technology in thermo-bonding process plays an important role for different and flexible applications like home textiles, hygienic and medical, geotextiles, automotive and industrial products.



CAVITEC CAVIMELT P+P compact machine for coating and lamination (c) 2017 CAVITEC

Thies Textilmaschinen (Hall 3/ Booth F23) will highlight latest trends and innovation.

The well-established iCone bleaches and dyes fibres, flakes, yarns, cables and belts. The unique technique enables dyeing in short liquor as well. Obtaining uniform dyeing and the required fastness is self-evident. Using special energy-efficient functions the iCone is able to dye in a more cost effective and eco-friendly way.Cellulose fibres for medical purposes or any other substrate such as polyester, acrylic and polyamide may be used.

The variety of iCone is reflected in the following areas of application:The treatment of sewing threads, the dyeing and bleaching of yarns for the production of solar sails, tents, awnings and the finishing of flame-retardant yarns.

The HT-Jigger is used for dyeing fabrics, nonwovens or space fabrics. The HT-Jigger offers step less tension and speed control combined with an economical dye trough. It has been designed to offer uniform dyeing in very short liquor ratios.Suitable to process textiles at temperatures up to 143°C, the HT-Jigger is recommended for the treatment of crease sensitive, permeable and non-permeable fabrics; to offer optimum flexibility for finishing of all modern fibres.Key applications are the automotive sector with treatments of vehicle interiors or industrial sectors, which use filter materials.



Thies iMaster H2O (c) 2017 Thies

The iMaster H₂O machine concept is ideal for all fabric applications where water consumption is an important consideration, together with other possible energy savings including steam, electricity plus chemicals and dyestuffs. The iMaster H₂O dyeing machine is proving successful with several automotive fabric producers. The notable process times facilitate competitive high production capacities. The system features a transport winch inside the kier, allowing cotton, synthetic fibres and their blends, and including articles with a high elastane content, to be processed with significantly reduced elongation; resulting in fabrics with an improved stability whilst offering flexibility in the processing of a wide range of products.

Designed for the universal dyeing of wovens, knits and nonwovens, the generation of soft-TRD machines sets new standards in the efficient use of materials and resources. The free material flow and low tension in the transport zone, guarantee optimum relaxation and uniform treatment of the entire fabric rope.

Digital Printing

Mimaki (Hall 6.0 / Booth B57 "Digital Textile Micro Factory") will highlight its wide-format digital textile printers and innovate ink and dye sublimation technologies in two separate exhibition halls. Mimaki will show its TS300P-1800 with sublimation inks and the Tx300P-1800 printer with pigment inks during the large-format inkjet printing step of the micro-factory, involving sublimation printing on polyester and pigment printing on cotton and mixed fibres.

Both developed for the textile print industry, the revolutionary TS300P-1800 wide format, high-speed dye sublimation textile printer delivers costeffective printing while maintaining high quality and productivity and is designed to print onto the thinnest of transfer paper. The Tx300P-1800 direct textile inkjet printer delivers high-quality printing on a wide range of textiles and is ideally suited for applications such as fashion, furnishing, soft signage and exhibitions.

During the Digital Textile Conference on May 10, Mimaki will lead a roundtable discussion at 12:05pm. In addition, Uwe Niklas will present "High Speed Dye Sublimation Printing" on May 10 at 11:40am. In this presentation, he will explain the difference between sublimation transfer and direct dye sublimation printing, and how each technology can be beneficial for home textiles and interior design will also be discussed.



Mimaki Tx300P-1800 direct textile inkjet printer (c) 2017 Mimaki

Zimmer Austria (Hall 3.0 / Booth B18) has become a benchmark for dependable high-class machines in the textile printing industry with a product portfolio that includes coating, screen printing, digital printing, digital functionalisation, drying and steaming systems as well as a broad range of sample & lab machines. The Austrian based machine manufacturer will especially focus on highlighting the advantages of its coating machines and lines for all 12 technical textile application areas.

Exhibited at the booth will be the MAGNOROLL Multipurpose Coating Machine - in the following executions: MAGNOROLL Screen Coating, with magnet roll rods and MAGNOROLL Knife Coating, with the MK4 coating knife. In addition Zimmer Austria will show the digital laboratory printing machine CHROMOJET.TABLETOP PRINTER and textile samples of various application technologies on different substrates.



Zimmer Austria CHROMOJET (c) 2017 Zimmer Austria

Textile Chemistry, Coatings and Lamination

Archroma (Hall 3.0 / Booth B33) will be displaying its broad portfolio of solutions for textile mills and nonwoven manufacturers at Techtextil 2017, in Frankfurt, Germany, from May 9-12.

Featured highlights at the show will include fire protection with Archroma's non-halogenated Pekoflam® range, repellency & release from PFOA-free* C6 chemistry Nuva® N to its Smartrepel®Hydro range that is not based on fluorine and coating package solutions, which are combining Appretan®, Lurapret® and Texapret®polymers together with Archroma's color and finishing specialties. Furthermore Archroma will be displaying its Printofix TF high-performance pigment preparations for outdoor applications. These are mainly suited for synthetic fabrics that are specifically developed for sunshades, camping tents, umbrellas and industrial applications where other dyes cannot meet the very high requirements of light and weather fastness.

SIKA (Hall 3.0 / Booth A21) will inform about their market leading solutions for industrial lamination. Esspecially the SikaMelt® hot melt adhesives achieve enhanced textile performance and increased production efficiency. SikaMelt® are reactive (HMPUR) and non-reactive (PSA & PO) hot melt adhesives used to bond various combinations of plastics, metals, textiles, fabrics, foams, non-wovens and composites. Either in rigid assembly processes such as panel lamination or in flexible lamination processes such as textiles and non-wovens, or in adhesive tapes and self adhesion coatings.

Other Suppliers

The Italy based **Mesdan** (Hall 3.0 / Booth Bo8) will present the new LINEAR CUT RESISTANCE tester, for the assessment of the resistance to the linear cut of gloves and protective cloths, as per the EN ISO 13997 and the EN 388, endowed with a system for adjusting the cutting pressure and a multi-position sample holder.

Gerber Digitalisation and Industry 4.0 inspire Texprocess

Vunique Solutions

Photo © 2017 TexData

There is hardly a topic, which has so captured the attention of the textile production industry in the last few years as the increasing use of digitalisation and Industry 4.0, the vision behind it. This makes this year's Texprocess 2017 Trade Fair into a quite special event, because this is where textile companies from all over Europe are able to take a close look for themselves and to find out where the journey is leading. It is worthwhile to cast a glance towards the future of textiles and to equip ourselves for the major changes, which are about to affect textile production. We want to see what it is that makes Texprocess so interesting as regards these issues.

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TEXPROCESS 2017

Join us and book an appointment: Hall 4.0, Booth C21

Digital is now! 360° collection coordination with all of your partners

Speed factory

The introduction of the "speed factory" by adidas was the most recent indication that Industry 4.0 is much faster than was anticipated by accepted operational reality. And if automotive suppliers, such as OECHSLER can found a textile branch and use their many years of experience with industrial robots to take this to the classic CMT sector, this automatically means that all established manufacturers will have to put these technical changes into place sooner or later. Ultimately, it means that we have to review and realign corporate strategy. The decisive issues here are the extent of the present status of the new technology and the impetus it is likely to have in the next 5 - 10 years. These important questions are nowhere better answered or more controversially discussed than at Texprocess.

IUMAN

Even from the exhibitors' side it is no surprise that four months prior to the start of the fair the Frankfurt Trade Fair registered the highest registration figures in the history of Texprocess, for fundamental technological change always offers plenty of room for new players, who are diversifying from other fields and sectors.

This best example of this is software, for it is customary for this production support sector to communicate successful solutions from CAD, ERP, PLM or SCM to as many other industries as possible. However, despite a high degree of expertise in digitalisation, this will certainly not be easy, because on one hand the textile industry is very specialised and on the other in these areas it already has highly specialised firms with outstanding products.



Conversely, it is well-known that success lies in a niche market and there are plenty of those in information technology. Conceivable possibilities include new control systems, intelligent Cloud and big data solutions, new forms of human-to-machine communication, such as data gloves or VR glasses, algorithms, expert systems, to mention just a few.

Logistics products, which also receive huge impetus from digitalisation and robotics, are a further example. All in all, even on the fringes the new technologies are very varied and in some cases, disruptive, so that solutions of this kind may bring completely new impetus into the textile sector. Texprocess once more is demonstrating its strength, in that its range of products embraces all the steps in textile value creation. For visitors this wealth of new technologies means more than ever leaving one's comfort zone, looking around and peering into nooks and crannies, since each individual change in a process can affect the entire textile value chain.

Innovation in the areas of design, IT and digital textile printing is becoming evident and tangible.

Digital textile printing a focal-point theme at Texprocess

Colour and function: digital textile printing is one of the focal-point themes at this year's Texprocess.

adidas speed factory (c) 2017 adidas

For the first time, the World Textile Information Network (WTiN) is holding the European Digital Textile Conference at Texprocess. The focus of the conference will be on digital textile printing for adding functional and decorative features to technical textiles. The WTiN European Digital Textile Conference will take place in 'Saal Europa' of Hall 4.0 from 09.00 to 16.30 hrs on 10 May. The subjects to be covered in the lectures include direct yarn colouring in the embroidery plants (Coloreel, Sweden), plasma pre-treatment for textiles before digital printing (GRINP, Italy) and chemical finishing for textiles using inkjet printing technology (EFI-REGGIANI, USA).

And there will be a separate lecture block on digital printing in the programme of the Texprocess Forum. As well, numerous exhibitors, including Brother, Epson, Ergosoft, Mimaki and Zimmer Austria will be showing digital printing technologies.

Digital Textile Micro Factory

One of the highlights in this area must be the Digital Textile Micro Factory, with which the German Institutes of Textile and Fiber Research Denkendorf (DITF) in collaboration with well-known companies in the textile sector are presenting a small, integral clothing production chain. The production process is demonstrated, from digital design through digital printing to cutting out and then on to assembly and labelling.

The will to make production sustainable and the desire for customisable products up to "batch size 1" make this form of production increasingly more interesting and the selected technologies with their high degrees of freedom and automation are already offering these possibilities.

Stages in the digital textile micro factory

The first stage in the micro factory is the CAD/Design area. With the help of computer-aided design (CAD) and the Vidya 3D-simulation software, creative designs are put into effect in a virtual reality and/or adapted. The data that emerge from this are immediately merged with data for subsequent processes such as the digital printing of the textile, the cutting out and sewing. Our partner for the Design area is Assyst, a company in the Human Solutions Group.

The next stage (Printing) demonstrates large-format inkjet printing, involving sublimation printing on polyester and pigment printing on cotton and mixed fibres. Manufacturing tasks can be flexibly combined here with various printing parameters so as to produce a print with reproducible colours. Our partners in the software and hardware business Caddon Printing and Imaging, Ergosoft and Mimaki as well as Coldenhove and Monti Antonio are the ones ensuring optimum printing results at this station.



Digital Textile Micro Factory at Heimtextil 2017 (c) 2017 Messe Frankfurt Exhibition GmbH

After this comes the Cutting area. At this juncture in the production process, the individual orders need first to be identified without anyone touching them. Identification is made possible by automatically loading the appropriate data files for the cutting-out process. A feeder system at the cutter ensures that the material is transported as smoothly as possible and without distortion. Camera systems recognise the cutting points, as a result of which the path the cutter is to take is optimised and a top-quality cut can be achieved. Our partner in this area is Zünd.

In the next section of the production process (Assembling), the cut-out elements of the various orders are also identified in a context-specific manner and added to the garment. This area shows the process of identifying the individual orders and the sewing process, carried out on the latest sewing machines, which can also be linked to the internet. Furthermore, the area will show ultrasonic welding for apparel fabrics. Our partners in this area are Dürkopp Adler and Pfaff. In the field of hand-ironing technology and steam generation (Finishing), visitors can expect to see new, energy-efficient appliances at the trade fair. Despite increasing automation, these steps continue to be essential for producing and finishing textiles. Partner of this area is Veit.

In the last step (Labeling) the garments will be provided with logos and graphic details that will be washable, can be ironed and are suitable for dryers. Partner of this area is Seripress.

Additional partners of the Digital Textile Microfactory at Texprocess are Eschler Textil and Schoeller Textil.

The Micro Factory has been presented already at this year's Heimtextil and seems rather like a laboratory, but makes it very clear in principle where the journey is leading.

Store factories

The "store factories" come even closer to the customer than the "micro factories". In these the customer can design his garment for himself, there in the shop and have it produced within a few hours. In February 2017 adidas presented a "store factory" of this kind in Berlin as the icing on the cake to a research project. Up until mid-March in the chic Bikini Berlin concept shopping mall customers were able to design their own "Knit for You" pullovers.



adidas store factory in Berlin (c) 2017 adidas

Their measurements were transmitted by 3D scanners to Stoll CMS 830S knitting machines and their merino wool pullovers were produced straight away. Is this sort of thing just an advertising idea or is it a realistic approach for industrial manufacture? At more than 200 Euros for a pullover it is certainly not an application for a mass market, but it is at least a green light for a new textile segment. A segment, which may grow quickly and thus become competition for every other kind of production. Even at this early stage it is worthwhile to discuss its consequences for the future with other experts and one's own network and it is hard to imagine a better place to do this than in May in Frankfurt at Texprocess.

Two companies, both market leaders are presenting the contemporary revolutionary consequences of digitalisation in the clothing industry and for the large mass markets. At Texprocess under the motto, "Digital is now", the Human Solutions Group is showing what is already possible today, even if it seems as if we are dreaming of the future. For instance, put on a pair of glasses and enter a virtual room together with your partners from all over the world to view the current collection and take decisions. Two highlights on the stand, which revolutionise the development of clothing, are the Digital Fashion Board and the digital showroom.

The Digital Fashion Board supersedes the analogue mood board and connects product development and visualisation in 3D with data, which come directly from the PLM system In this way the right prototype is more quickly discovered and important decisions can be taken on the digital model, even before any component has been sewn. And in the digital showroom people from different sites can jointly plan, view and revise the next collection.

Gerber Technology pursues a similar motto with "Embrace Your Digital Reality." Gerber sees the fashion industry on the brink of a huge digital technology revolution and offers state-of-the-art digital design tools, which help clothing manufacturers to reduce costs by millions of Euros, to increase throughput, reduce waste and - most importantly - to remain in the "fast fashion" era. Gerber's defined objective is to support the individual transformation of processes right down to the single user and to give advice on this technology. Texprocess offers Gerber the opportunity to show the industry leaders how easy it can be to connect systems so that data may flow seamlessly from design and development right through to the supply chain and how software and "Internet of things" technology can be used to increase visibility and efficiency. Their presentations at the stand include "Changing the Game" and "Smart Factory". Changing the Game targets the expansion of the boundaries of supply chain visibility and Smart Factory demonstrates stateof-the-art technologies for digitalising the clothing industry. In addition, Gerber provides information on the consequences of these technologies on CSR.



SoftWear Automation wants to revolutionize the textile industry with automatic sewing by their #SEWBOTS (c) 2017 SoftWear Automation

Of course, as well as software there will as usual also be many innovations in the other Texprocess core areas. The established companies, the top dogs of Texprocess will take the opportunity to demonstrate their particular innovative strength. This applies to all the technologies all along the textile value chain, such as cutting out, sewing, joining, embroidery and knitting up to finishing. For instance, the VEIT Group has advertised a new shirt finisher, which has been optimised for an even greater spectrum in the production of shirts and which is intended to achieve an unprecedented quality of finish.

The presentation from the SoftWear Automation Company will also be trend-setting; this firm is advertising on their website nothing less than the re-design of the value chain of the textile and clothing industry. They offer their SEWBOTS automatic sewing robots and are currently accepting advance orders for fully automated production lines for the manufacture of T-shirts.

In any case, sewing robots could potentially become the really major topic for Texprocess, on which many of the established manufacturers will stay their hand prior to the start of the trade fair.

Texprocess Forum: Industry 4.0, sustainability, digital printing, quality management

For the fourth time, the Texprocess Forum will be held during the Texprocess and experts from science and industry will present the latest textile-processing trends and knowledge in around 40 lectures and panel discussions spread over all four days of the fair. The main themes of the 2017 Texprocess Forum 2017 are digitalisation and Industry 4.0 (with SPESA, Lectra, Human Solutions, Hohenstein Institute and Gerber Technology), quality management (TÜV Süd, Takko Holding and Datacolor) and sustainability (with Bayern Innovativ).



Texprocess Forum in 2015 (c) 2017 Messe Frankfurt Exhibition GmbH

Additionally, a separate lecture block will focus on the use of digital textile printing for finishing and functionalising technical textiles (with Mimaki, Zimmer Maschinenbau and Coldenhove).

Texprocess Innovation Award 2017

Messe Frankfurt will award the Texprocess Innovation Award for outstanding new developments and advances for the fourth time on the occasion of Texprocess. The winners will be presented with their award during the Texprocess opening ceremony in 'Saal Europa' (Hall 4.0) on 9 May 2017. At the same time, all award-winning products will be on show at a special exhibition in Hall 4.0.



Winners of the Techtextil Innovation Award and Texprocess Innovation Award in 2015 (c) 2017 Messe Frankfurt Exhibition GmbH

Innovative Apparel Show

It was a highlight of the last Techtextil and Texprocess, and in 2017 it will become much more internationally-oriented: the "Innovative Apparel Show". During Techtextil and Texprocess the "Innovative Apparel Show" will present new clothing ideas and innovative processing technologies live and in an unconventional way. Four international colleges for fashion and design will present their visionary outfits made from technical textiles or functional apparel textiles that use modern processing technologies in the form of a fashion show every day of the trade fair.



Innovative Apparel Show 2015 (c) 2017 Messe Frankfurt Exhibition GmbH

Based on the themes "Textile Effects", "Creative Engineering" and "Smart Fashion", the young designers will showcase their ideas and experiments. The participating schools in 2017 include Accademia Italiana, Florence / Italy; ESAD College of Art and Design, Matosinhos / Portugal; Esmod Paris/France, and the University of Trier / Germany.

The stage shows for the "Innovative Apparel Show 2017" will take place twice daily in the foyer of halls 5.1/6.1. on 9 May at midday and 3 p.m., on 10 /11 May at 11 a.m. and 3 p.m. as well as on 12 May at 11 a.m.

The English-language presentation and choreography for the shows is once again being managed by well-known South African show producer Kevin Oakes. A public prize will once again be awarded in 2017 for the outfits that are presented on the catwalk.

During the trade fair, the audience will be asked to vote on which of the presented models should win the three "Innovative Apparel Public Awards 2017". The prizes will be presented following the 11 a.m. event on the last day of the trade fair.

This very brief extract of Texprocess topics and technologies gives an indication of how significant and interesting this year's event is going to be. And with the Texprocess Forum, the special interactive section for Textile Processing Technologies for Space Travel, the second edition of the Innovative Apparel Show after its huge success two years ago and the Texprocess Innovation Award, many more highlights await the visitors. This Trade Fair is an event to look forward to.

Exhibitors and their innovations

This brings us to the most important aspect of the fair: the exhibitors and their products.

Under the slogan "Together for you" the enterprises **Dürkopp Adler** as well as **PFAFF** with **Beisler** and **KSL** will present state-of-the-art industry 4.0 solutions for "joining" of textile materials and leather on an impressive joint booth of more than 1.000 m².

DÜRKOPP ADLER will demonstrate its strengths with regard to the automation and digitization of industrial sewing technology by the novelties to be shown and underlines its leading position in the world of sewing technology. The latest PREMIUM generation of the flagship M-TYPE makes it possible to network sewing places, e.g. in the automotive or home upholstery production, and machines can be adapted to different requirements via a central server. Thus, the individualised production in the Industry 4.0 era is as easy as never before. These digitally controlled machines are now available in all types of construction as flat bed, cylinder arm and post bed machines.

With the launch of a new generation of automats for piped pockets Dürkopp Adler has realized a milestone in the field of automated clothing production. The new class 755 for right-angular piped welt pocket openings with and without flap makes it possible to reduce the time needed for the conversion to other needle distances by up to 80% and to increase the output PREMIUM generation by up to 28.5%.



Da755 S (c) 2017 PFAFF

Maximum seam quality, networkability for Industry 4.0 solutions and even better operability in comparison to the predecessor improve the process quality and make the machine one of the most important components of the classic production of men's garments.

PFAFF INDUSTRIAL will show flexible and high-performance sewing and welding solutions to process technical and non-technical textiles and leather. The presentation of the latest jeans solutions will be one of the focal points. Without a doubt, the new PFAFF 3589 is the fastest pocket setter on the market. It ensures consistently high quality and performance – even when using two sewing heads with different colored threads. During an 8-hour operation, up to 2,600 medium-sized jeans pockets may be processed. The PFAFF 3589 yields top sewing results on modern stretch jeans

The PFAFF 3538 pocket hemmer automat shown at the fair will feature a new fully automated pocket loader. Once the magazine (with up to 500 pocket cuts) has been stocked, the machine works completely without an operator. Using the PFAFF 3538, an output of approx. 16,500 pockets within 8 hours is possible. The special "curved version" of the PFAFF 3819 waistband machine which was specifically designed to process fashionable ladies' jeans is an absolute world debut. Using the PFAFF 3819, it is for the first time ever possible to program and realize straight and curved seam sections with just one machine. An innovative puller system in combination with intelligent machine software is the core of this innovation.



Pfaff 3538 (c) 2017 PFAFF

For more than 30 years PFAFF INDUSTRIAL has been building class 8362 mobile hot-wedge welding machines.

In Frankfurt the company will present the PFAFF 8362i, a completely new generation featuring electrical wedge movement, automatic detection of the end of the weld seam and an intuitive software for many innovative programming functions. For the first time ever, a long-arm version of the proven PFAFF 8312 ultrasonic welding machine featuring an arm space of 1,000 mm will be shown as well as the PFAFF 8321, a heavy-duty version (big heavy-duty housing/ height of the postbed 750 mm. arm space 750 mm) of a programmable hot-wedge/hot-air machine to process rubber boats, containers and inflatable objects.

Texprocess 2017 is the perfect platform for **KSL (Lorsch)** to demonstrate the range of products of automated sewing systems to an international audience with an increasing demand for automation solutions in a growing number of segments.

As a trade show highlight PFAFF INDUSTRIAL and KSL will show a joint "robotics" innovation. The system accomplishes a fully automated bobbin change on the PFAFF Plusline 2481 using a handling robot. The required bobbin change is done via a changer magazine with 8 bobbins with the robot autonomously exchanging the entire magazine. Additionally, the robot guides the item to be sewn past the sewing head. Thus operator intervention is greatly reduced.



The system combines PFAFF INDUSTRIAL's sewing competence with KSL's handling know-how and sets new standards in automated textile production. It shortens production cycles, prevents standstills and significantly increases productivity. This solution is another step towards operator-less production.

The KL 110 CNC sewing unit head bag equipped with barcode scanner system to acquire data in multiple applications for direct analysis on the HMI-operator panel will be presented in the airbag segment. This freely programmable CNC sewing unit with turning head is offered in either one or two needle design and sewing speed up to 3,000 stitches per minute. It is used for the servo controlled sewing of high quality safety, functional- and decorative seams. Due to the tangential orientation of the sewing head into any direction, sophisticated PFAFF 8321 KL 110 top-quality seams may be sewn using lockstitch or chainstitch. The integrated template changing system saves a lot of space and allows an overlapping workprocess.

In the tire cord segment KSL will exhibit the KL 624 long-arm feed-off arm sewing system with 10 needles for linear sewing of light-weight belts and tire cord material.

In addition, a KL 950 classic multi-needle sewing unit for multi-functional sewing and a material passage width of 1,200 mm will be shown. It is equipped with a height-adjustable top transport system and fournisseurs for consistent thread tension.

The area of sewing **Groz-Beckert** (Hall 3.0 / Booth Fo3) is waving the banner of process optimization presenting the Quality Management INH (Ideal Needle Handling). The patented process provides support in the handling of sewing machine needles during the entire sewing operation and has recently also been offering a digital solution to document needle breakage: the Smart INH. The documentation system consists of two pieces of software, a mobile app and a browser, thereby facilitating the digital saving and storage of data sets as potential evidence.

The Mobile Lab will be another Sewing highlight. It allows material samples to be examined and analyzed directly at the Groz-Beckert booth.

Gerber Technology (Hall 4 / Booth B31) will showcase "Digital Solutions" at 2017 Texprocess tradeshow and comes with the the message that the digital revolution is here, and cutting-edge digital design tools will help garment manufacturers cut costs by millions of dollars, increase throughput, reduce waste, and – most importantly – stay competitive in the age of "fast fashion". Gerber will demonstrate to industry leaders how easy it can be to connect systems, allowing data to flow seamlessly from design and development all the way through their supply chain, leveraging software and IoT technologies to enhance visibility and efficiency.

To accompany and consult individual transformation processes at the single user is Gerber's defined objective here. Therefore, Gerber has developed its Texprocess presentations around the theme of "Embrace Your Digital Reality."



Gerber's 3D CAD system AccuMark 3D to be integrated part of Digital Solutions presentation at Texprocess.

Gerber will showcase its Digital Solutions including the newest releases of YuniquePLM® product lifecycle management software, as well as AccuMark® the industry-leading pattern design, grading, marker making and production planning software, AccuMark 3D and AccuPlan[™].

Since Gerber's Digital Solutions architecture uses common file structures, data can easily be passed to the cut room, where smart machines, like the GERBERspreader[™] XLs series and Gerber Paragon® line of multiply GERBERcutters®, can process the order with a simple barcode scan. A closed-loop, end-to-end Digital Solution like Gerber's, that integrates software and smart machines, allows companies to automate their entire process and streamline data and workflow necessary to provide insight, maximize throughput, minimize errors and reduce labor costs to be competitive in mass production environments. Furthermore Gerber experts will give presentations at on-site supporting events during Texprocess which include "supply-chain-visibility", "smart factory" and digitization of the apparel industry.

The companies of the **Human Solutions Group** (Hall 4 / Booth C21) will present new solutions that help businesses to exploit the potential of digitization to achieve their product devel-opment goals faster and more cost-effectively. Human Solutions wants to demonstrate that "digital is now!" One example. Pull on a pair of goggles and view the current collection in a virtual room together with partners from all around the world, then make your decisions. Does this sound like science fiction? Human Solutions will show that this and much more is possible. Two special highlights that revolutionize the development of apparel will be showcased at the booth: the Digital Fashionboard and the Digital Showroom.

The Digital Fashionboard replaces the analog Moodboard. It networks product development and visualization in 3D with information that comes straight from the PLM system. The correct prototype can be found faster and important decisions can be made on the digital model, even before a piece is sewn.

Also at the booth: The Digital Showroom, in which people in different locations can plan, view and revise the next collection.



The Digital Fashionboard (c) 2017 Human Solutions Group

VEIT Group (Hall 6 / Booth B10) will show the latest technologies in the area of ironing, finishing, pressing and fusing in the garment industry.

Among the large portfolio of high-performance technology, innovative ways of processing shirts are very much at the centre of attention. VEIT Group especially focusses on the Shirt Finisher, which has been optimized for an even wider range of applications in shirt production and achieves an as yet unrivalled finishing quality. In order to increase flexibility in trouser finishing, BRISAY pressing machines offer new possibilities that integrate smoothly into the tried-and-tested system of the BRISAY SC/VC trouser finishing series. Also in the field of hand-ironing technology and steam generation, visitors can expect to see new, energy-efficient appliances at the trade fair. Despite increasing automation, these steps continue to be essential for producing and finishing textiles.

VEIT's fusing division will present the FX Diamond 1600 at the Texprocess, the perfect solution for large-scale productions and centralised fusing.



This machine generation creates outstanding fusing quality and is also available as an FX CFL version for gentle fusing and laminating of flexible materials such as leather and textile cuttings of any composition.

Exhibits on the subject of the biodegradation of textiles will be one of the key focuses of the presentation of the **Hohenstein Group** (Hall 3.1 / Booth B21). Experts from the Development and Services departments will be available for personal discussions with trade show visitors, both at our booth and then at a total of five specialist presentations as part of the Techtextil symposium and Texprocess forum.

The biodegradability of textile products is becoming an increasingly important factor in assessing their sustainability, focussing not just on manufacturing and product safety, but on what happens to a product once it reaches the end of its useful life cycle. At the trade show booth and at the Texprocess forum organised by the Dialog Textil-Bekleidung (DTB), a team of Hohenstein experts will present an internally developed test procedure for assessing the biodegradation of textiles and demonstrating the marketing opportunities provided by certification and product labels.

Hohenstein scientists are currently involved in a collaborative project to develop protein-based water and dirt-repellent finishing agent to provide an alternative to hydrophobic processes using fluorocarbon chemicals (PFC), which are still in common use.

Biodegradation of textiles

As part of a ZIM research project, the researchers at Hohenstein are currently developing a thermoelectric cooling bandage for mobile cold therapy for acute injuries and post-operation treatment.

Following on from the Greenpeace Detox Campaign and the Roadmap for the Zero Discharge of Hazardous Chemicals (ZDHC) Initiative, the subject of responsible chemicals management in companies along the textile chain has recently been growing in importance and priority as a means of excluding identified harmful chemicals from production by 2020.

Using the OEKO-TEX® modular system of certifications and tools for increased sustainability as a basis, Hohenstein provides companies with solutions for incrementally optimising their chemicals management systems to meet these market requirements successfully.



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Interview with: MF-Mfchael Jänecke DirectorBrand Management Technical Textiles / Techtextil LyOfverSchmith

"I am convinced all participants of both trade fairs are to come away with new and positive inspirations."
In January you reported yet again an all time exhibitor record for the Techtextil and Texprocess trade fairs. Growth is now surely your aim but of course not to be taken for granted. How do you manage to do this time after time? Or does it just sell itself?

Mr. Jänecke: We are expecting over 1,750 exhibitors for the Techtextil and Texprocess in total so we are looking at the largest events so far. The list of companies registered for the Techtextil and Texprocess includes all the international market leaders. Especially high exhibitor figures are recorded for Techtextil in the sectors of Indutech, Mobiltech and Buildtech, in other words those manufacturers offering products for industrial use, architecture and construction as well as for the mobility sector. Producers of functional clothing, medicine and personal safety equipment are also strongly represented. The Tecprocess reports especially strong growth in the CAD/CAM sectors.

The healthy condition of the industry in no way allows either trade fairs to rest on their laurels. It is necessary to continually modify the range of products offered by the trade fair for exhibitors and trade visitors alike to enable both the Techtextil and Texprocess to remain the leading trade fairs of the industry. Supporting us in this besides the ongoing constructive dialogue most notably with our exhibitors is also our basis of comprehensive expertise. The Frankfurt Trade Fair is the global leader for the specialist fairs of the textile industry with more than 50 international textile events. Our events cover the entire value supply chain of the textile industry. As a consequence we work closely with the respective industry associations such as the VDMA Textile Care, Fabric and Leather Technologies for the Texprocess.

You always approach the trade fairs in a very creative manner as well as being as innovative as the exhibitors by integrating many new developments. A new and special highlight this time called the 'Mission to Mars' illustrates the central role played by Techtextil and Texprocess in the space age. What is the concept and what may we expect?

Mr. Jänecke: Our presentation 'Living in Space' shows visitors to Techtextil und Texprocess textile materials and processing technologies for a specific field of application. We, the European Space Agency, the German Aerospace Centre and exhibitors have created an informative and at the same time entertaining area that has never yet been seen in this format at any Techtextil or Texprocess fair.

Space fascinates human beings throughout the world. International space missions consist of a great amount of research and innovation work where in turn new materials and processing technology play a decisive role. Technical textiles are an inherent part which - more or less visibly - occur in almost all spheres of life. This specially designated area presents this diversification. Part of the display features products from Techtextil and Texprocess exhibitors in a 'Material Gallery'; architechture for space by the star architect Ben van Berkel, as well as space -inspired fashion and the original Mars Rover. And: Visitors will be able to go on a trip through space to Mars using virtual reality glasses without ever having completed dizzinessdefying astronaut training.

The extremely successful 2015 'Innovative Apparel Show' is meanwhile about to produce a second edition and be even more of an international event with participation by fashion schools from Paris, Florence and Matosinhos in Portugal. Is a small dose of 'fashion' at a trade fair characterized by technology just the icing on the cake or are new ideas for functional clothing fabrics developed there?

Mr. Jänecke: The Innovative Apparel Show is the element coupling the Techtextil to Texprocess - that is to say the material producers and the processors.

Four international technical colleges of fashion and design from Germany, France, Italy and Portugal are to present their visionary outfits developed from technical textiles and functional clothing fabrics with modern processing technology every day of the Techtextil and Texprocess in the context of a fashion show. The creativeness of these young designers are being given free rein. The previous event showed a coat in the show made of a textile that under normal circumstances would be used in the growing of vegetables.

It is a fact that especially in smarter fashion there is frequently technology more likely to be found in industries far removed from fashion such as from architecture, automobile sector, aerospace or medical industry. Textile warming elements such as those incorporated in car seats are found in chic winter coats and silver thread known to medicine for wound dressings ensure that clothing illuminates when equipped with LEDs. Techtextil and Texprocess show precisely these materials together with the technology needed for their processing. They provide designers and clothing producers with the inspiration for new materials and designs.

It is always astonishing, almost unbelievable how and in what ways technical fabrics find application. Are you able to present our readers with a totally exotic example?

Mr. Jänecke: I could name a few. In the area of medical technology for example there are technical fabrics in protheses and artificial blood vessels. The last Techtextil actually exhibited an artificial uterus for premature births made out of textile material. Technical fabrics are also utilized in the automobile and aerospace industries especially in connection with the construction of light-weight structures. The Techtextil 'Living Space' area shows for example carbon yarn used to manufacture the housing for the solid-fuel boosters for the Ariane 6 rocket.

The launch vehicle, which is still in development, is scheduled to take its maiden flight in 2020 according to ESA.

In addition to the trade fair there is a programme of conferences on offer which to us look especially interesting. The 'European Digital Textile Conference' makes its debut, as well as the familiar Techtextil Symposium sponsored by Euratex. There is the first joint event with the Dornbirn Congress on chemical fibres which is to present a block on the subject of the 'fibre industry geared to sustainability & resource management'. Besides which the Texprocess Forum also presents an exceedingly interesting programme of talks centering around the subjects of 'Industry 4.0' and Digitalization. Why does all that not compete for visitors to the exhibitors and how are the events actually perceived?

Mr. Jänecke: The Techtextil and Texprocess supporting programme is an important complement to the trade fairs themselves. Techtextil Symposium alone offers around 50 presentations, the Texprocess Forum around 40. Our focus for the first European Digital Textile Conference together with WTiN and in conjunction with Texprocess and Techtextil is the industry trend to digital textile printing. We also try to keep up with the latest impulse in the industry in the supporting programme which supporting program offers visitors the opportunity to inform themselves more intensively on current results of research and product development in the industry as well as the chance of discussion with experts not normally encountered at the trade fair stand. As ever, good preparation also pays off here. I recommend fair visitors interested in specific events in the programme to identify them in advance of the actual trade fair. The most effective method is to use the respective event apps, the convenient Techtextil or the Texprocess Navigator which allow you to create a list of favourites and therefore not miss any important event.

Speaking about Techtextil and Texprocess Innovation Awards. The projects have been submitted and probably already evaluated, the award presentations are to take place immediately on the first day of the trade fair in hall 4.0 in the Europa room. How satisfied are you with the quantity and quality of submissions? Could you whet our appetite?

Mr. Jänecke: We have never had so many submissions for Techtextil and Texprocess Innovation Award as in this year. Those entitled to take part were the exhibitors at Techtextil 2017 as well as all companies, institutes, universities and technical colleges not exhibiting and individual persons. Conditions: The developments submitted are not to have been available longer than two years in the market or are just before their market launch. In addition they are not to have received any other award. The submissions were of high quality and very diverse.

The jury had set itself a difficult task in decision-making. We may justifiably look forward to the award ceremony on the first day with some excitement.

We are pleased that the award ceremony is to be attended this year by Dirk Wiese, the permanent Parlamentary Secretary to the Federal Economic Ministry. Ingolf Baur, the scientific presenter is again to host the award ceremony.

Is it possible that this year Texprocess is even more fascinating than Techtextil with all the innovations regarding digitalization and Industry 4.0? Should we actually expect disruption of entire sections of the former value chain, e.g. by fully automated sewing lines?

Mr. Jänecke: The textile industry really is in a massive transformation process. It is addressing many important industry developments. Key words are 'digitalization', the 'internet of things' and industry 4.0'. These subjects are addressed at Texprocess, both in the presentation programme as well as with the Digital Textile Micro Factory.

In conjunction with the German Institute for Textile and Fibre Research Denkendorf and renown companies of the textile industry we present a complete clothing production network - from design through digital printing to automated cutting and manufacture. The micro-factories provide companies with the chance of producing just in time and with great flexibility. In addition use of materials is optimized with this model and as such ensures greater sustainability in textile processing. A similar situation applies for Techtextil, where I expect once again to find many new developments, innovations and trends. I am convinced all participants of both trade fairs are to come away with new and positive inspirations.

Why should anyone reading this interview visit the trade fair?

Mr. Jänecke: No other trade fair combination shows textile materials across such a broad spectrum of applications with the technologies of processing from the fibre to finished product together at one site. The numerous speciality areas and comprehensive supporting programme enable Techtextil and Texprocess to offer specialist information, inspiration and industry contacts in abundance.

And what are you personally expecting primarily from the trade fairs?

Mr. Jänecke: Firstly I am pleased about the largest size ever of both the trade fairs. And I am looking forward to the great variety of new developments presented by the exhibitors two years after the introductory events.

Interview with: Mr. Erwin Postma

Managing Director ProboSignB.V.

by Oliver Schmidt

"We do not only launch products but we disrupt traditional markets!"

Would you be so kind and introduce Probo to our readers?

Mr. Postma: Probo is a fulfilment partner in digital print exclusively for resellers. In our high-tech production plant we combine ultra-modern machinery and the latest printing techniques with a smooth online ordering process. At Probo we produce a wide and complete range of digital printed visual communication products. Probo has 100% production in the Netherlands, our customers are only professional resellers. That is our only and main focus.

Furthermore Probo is an innovative company, we are always exploring and investing for the latest printing techniques. We are specialised in producing many unique orders every day. Customers of Probo can order big and small amounts at any time for reseller prices, and we are able to deliver a lot of materials and products within 24 hours to the end user (drop shipping).

Our business model is about sharing, caring and growing together. Consider us to be your innovative production plant, the silent force who puts your efforts in the spotlight and let's your business flourish. And last but not least we believe in strong partnerships with our resellers, growing together as partners, that's our main goal. Probo offers digital printing services for soft signage as well as textiles. For example you have curtains, tablecloth, bed linen, pillows and garden parasols in your range of products. How important are textiles already for your business? And is it a growing business?

Mr. Postma: Let me start explaining our philosophy. We believe in innovation as a product and are always looking for opportunities to develop the print possibilities for our resellers. We do not only launch products but we disrupt traditional markets. With unique on demand printed products (from 1 piece/m2) with fast delivery and reseller prices. Now coming to textiles. We already printed different textiles on our two Durst Rhotex machines like flags, textile frames fabrics etc. With the Durst Alpha we can innovate signproducts as well. For example we have innovated our number one commodity product: The PVC outdoor banner. We developed a 100% recyclable Pro Pes Banner. A banner with a better light fastness (7-8 on the Alpha), sharper print quality, lightweight, water repellent and possible to fold. While the PVC banner has to be rolled up at all times. This makes a huge difference in the shippings costs for length sendings.

Beside of that, a whole textile world opens up. We see a huge demand of companies who want to work with us to change the market with textile printing on demand. And it grows every week. In the world is 30.000.000.000 m2 of all textiles printed, only 3% digitally printed. In recent years this has already doubled, and if you ask us the great forecasts are gonna be beaten. A few years ago we saw the market changing in other industries (printing & sign) as well. Now we see same movements and hear the same reactions from some traditional companies. We believe in personalization and unique products printed on demand without having (over)stock. Daily we notice the big demand to be unique. You don't want to have the same curtain as your neighbours have.

You are printing your fabrics on Durst digital printers. What type of machines are you using and what are the reasons for choosing durst from all the manufacturers of digital printing machines?

Mr. Postma: With the Alpha series Durst introduced a new generation of super high-performance multi-pass inkjet printers for economical and efficient processes in digital textile production. The first printer of this type worldwide, was delivered to our production plant.

The reason for choosing Durst is because the machines from Durst are the best a company like Probo can get. For example 90% percent of our machines are Durst machines. They are reliable and they offer us the best quality in print. Thereby Durst is the only manufacturer who has a textile printer with this specific specifications. Durst says their new Greentex pigment ink requires no pre- or posttreatment when used with standard materials such as cotton or polyester. Which are your experiences with this new ink and what do your customers say?

Mr. Postma: It's great to make the next step in digital printing with waterbased eco inks. The demand of eco inks and products is growing and gives our reseller a great unique selling point to their customers.

The pigment ink is 30% better than any other with more binder in it, so you can achieve good fastness without pre treatment already. But we use our Brückner stenter frame as well to do our own pre- and post treatments. This increases the possibilities for the best results. We build a laboratory to test every step by ourselves, like rubb, washing, fixation and the pre- and post treatments. So we can make our fabrics water repellent, fire-resistant, antibacterial or add a softener or UV blocker for example.

We had some great feedback from our customers who are surprised about the possibilities and the quality. For example the sharpness, light fastness (unique), flexibility and color intensity. We made some great qualities matching with our customer demands, like curtains and sun sails to combine our expertises. Besides the fact you are able to offer individual products which make your business very unique. Would you say the quality of your digital printed textiles is comparable to textiles produced on screen printers? Or what are the main differences?

Mr. Postma: Not comparable, it gives us more possibilities in print. Printed individual products on a high level. Due the symmetrical alignment of 8 colors, identical color sequences are printed in both print directions to eliminate banding and to increase the speed by 30% compared to an asymmetric printhead assembly. In addition we are more flexible with this 8 colors. With the eco friendly water based eco inks we make the next step in Textile printing. because of the pigment inks technique we can guarantee the best outdoor quality in light fastness (7-8), great for example sun sails/ screens and outdoor furniture. As we are developing with the well known brands in this industry.

At Heimtextil 2017 in Frankfurt the "Digital micro textile factory" was introduced as a future scenario for the textile industry in the context of "Industry 4.0" and a batch size of "1". Is this something you are smiling about because you are doing this business since a couple of years?

Mr. Postma: Good question, this is for a lot of companies the future. The alternative for China with manufacturing nearshore, fast delivery, no stock and printed textiles on demand.

For Probo this is still an existing process, the products that we prepare and deliver every day are fully made at our factory. Our resellers are able to get all kinds of textile products on demand and personalized. Every unique product of our textile line is being fully automated. Ordered, printed, cut, confectioned, packed and shipped by Probo.

Are your digital printing services a business everybody can do by using the right printing machine? And how would you rate experience and knowledge?

Mr. Postma: Doing business in the printing industry like Probo is doing is not only depending on the right type of machinery. Providing this kind of printing services requires a lot more, for example a high-end infrastructure and an state of the art online ordering process are needed to do business on a scale like Probo. The combination of manufacturing industry and 100% e-commerce makes Probo unique. All orders are being ordered on the Probo website.

What are your next steps? Are you thinking about international expansion or is there an idea to widen your range of products by adding apparel?

Mr. Postma: The combination of manufacturing industry and 100% e-commerce makes Probo unique. All orders are being ordered on the Probo website. From the 1st of May is our site multi language in Dutch, German and English. This opens up a new world with more international partnerships.

Because of the huge potential and the steps we have made. We will start this year a (textile) print plant in the USA. A great opportunity for a reseller to do business oversea. Beside of that we offer American companies new opportunities in textile print on demand and make the bridge to Europe..

Your customers are resellers like sign makers, exhibition builders and ad agents. Why don't you offer your services direct to consumers and don't you think this might become a huge market?

Mr. Postma: We believe you need to add value to your strengths. We are good in digital print & fulfilment. Our partners add value with creation, marketing or montage. We can be very transparent because of the reseller model and create awesome things together (co-creation) with our partners. We are the manufacturing unit of our reseller and we will invest in the newest techniques and markets in print. We bring different specialties together, to complement and reinforce each other.

Probo started Motiflow as well? What ist the idea behind this new service?

Mr. Postma: In the textile/ home decor market we noticed a big demand of creation. In sign we see a lot of corporate identity or promotional prints. In textile a lot of patterns. To help our clients with this patterns and to expand their print possibilities we started Motiflow. Because Design is key to everything Motiflow does. Design helps us stand out: from the clothes we wear, to the homes we live in, to the products we use.

Design tells a story about us and what we stand for. But professionalquality design has traditionally been expensive or out of reach for most people; we want to change this.

Motiflow gives designers a platform to deliver printed surface patterns and buyer can choose from the most beautiful, handmade surface patterns from these independent designers, based on personal style, seasons and trends. All people have to do is to install the Motiflow app from the App Store or visit the website.

The business expertise of our customers combined with Motiflow patterns take their products or services to a higher level and increase the growth potential of their companies. At this moment we are developing an API to give our customers a solution to integrate the "Motiflow Patterns" into their websites.

We're passionate about helping people of all abilities design the best looking and highest quality print products: products that will help them or their business, home décors or apparel look great. Our mission is to delivering high quality printed products with unique designs, from the best surface pattern designers, easy accessible, against fair prices available for our resellers. And our company vision is simple but ambitious: "great design for everyone".

Leading nonwovens trade fair declared a success by both exhibitors and visitors alike

Record INDEX17 attracted

suominen aller range of visito

Photo © 2017 index17

NDORAM

NDEX[™]17, one of the most successful ever global nonwovens exhibitions, ran from the 4th to the 7th of April at Palexpo in Geneva. With worldwide representation from across the nonwovens and related industries, displaying a diverse range of products and services, The fair once again delivered on its promise to serve as a 'global meeting point' for the industry. Visitors and exhibitors both proclaiming it an allround great success.

A total of 12,758 visitors made their way through the doors of the exhibition centre (a rise of over 2% on the 2014 edition), eager to to see the 666 exhibitors (an increase of over 13% INDEX 2014) from 41 countries in nearly 24,000 m2 of stand space.

Those in attendance could engage with a larger portion of the industry than ever before and avail of a wide variety of presentations, demonstrations and tutorials. Additionally, the sector seminars on transportation, medical and geotextile nonwoven products were popular throughout the exhibition, with several editions offering standing room only. "With more exhibitors and visitors than ever," said Martin Rapp of Glatfelter (and Chairman of EDANA) "INDEX[™] truly stands as the flagship exhibition of the nonwovens industry and a vital business development tool for industry players of all sizes"

"Our industry has evolved to a great extent" said Pierre Wiertz, general manager of EDANA, "nonwovens and related materials are increasingly used in the automotive, filtration and construction sectors for example, illustrating how the sector offers innovative solutions for a wide range of purposes. This evolution was also reflected in the makeup of the visitors to this year's show, with a wider range than ever before.

The products and services they saw throughout the exhibition provide a snapshot of how our industry is developing – and it is a privilege to witness this first-hand and know that the success of our sector is in safe hands.

Looking ahead to INDEX[™] 20, we are reminded of how both resilient and innovative the nonwovens industry really is."

Exhibitors shared their delight with the quality of the attendees visiting the show, alongside feedback from visitors who were pleased with the range of the exhibitors on offer, covering the entire chain from machinery and raw materials producers to converters and providers of added-value treatments and processes.

Oerlikon Neumag and Teknoweb Materials partner for disposable nonwovens

At the opening of the INDEX17, Oerlikon announced that the Manmade Fibers segment of the Swiss Oerlikon Group and the Italian company Teknoweb Materials s.r.l. have come to an agreement in principle on establishing a new, jointly-owned company. This is expected to be completed within the next few weeks. With this development, Oerlikon strengthens the Oerlikon Neumag nonwovens systems business within the Manmade Fibers segment and expands into the attractive disposable nonwovens market.

As a result of the partnership, the Manmade Fibers segment further advances its interests in the attractive disposable nonwovens market. With a market volume of around CHF 300 million and average growth of between 4 and 5 percent expected over the next few years, the disposable nonwovens market is particularly interesting for Oerlikon Neumag. In addition to the markets for technical nonwovens production solutions in which it already operates, this will also allow Oerlikon Neumag – with its machine and systems solutions – to participate more actively in one of the, in terms of volumes, fastest-growing areas within the overall nonwovens market in the future. Drawing on Oerlikon Neumag's innovative airlaid, meltblown and spunbond technologies and the Teknoweb's innovative nonwovens solutions, the newly-formed company will have excellent market access with a global sales and service network. Together, it will be possible to tap into market potentials more swiftly.

Suominen GENESIS® presented Pro All Purpose

Suominen introduced GENESIS® Pro All Purpose, a brand-new nonwoven substrate for general purpose professional wiping. The development of GENESIS® Pro leverages Suominen's wetlaid heritage and builds on their new investments in wetlaid production technology. Suominen stated GENESIS® Pro All Purpose is the strongest professional wipes material on the market, both wet and dry.

They say that it has the highest thickness, unbeatable absorption capacity and also the fastest absorption. All in all GENESIS® Pro All Purpose in lighter weights should outperform its heavier competitors in key performance areas.

Freudenberg PM presented "advanced wound care components"

Freudenberg Performance Materials exhibited innovative solutions for a variety of applications. These include laminates of hydroactive nonwovens and hydrophilic polyurethane foams as well as high-performance nonwovens for hygiene products and for cosmetic applications. Supermicrofilament textiles, eco-friendly backings for carpets were also on show.

One of the major opportunities in advanced wound care is to create a moist environment that accelerates healing. This is precisely the objective of Freudenberg Performance Materials' products. Freudenberg Performance Materials has combined hydrophilic polyurethane foams with hydroactive nonwovens.

These laminates absorb wound exudates significantly faster and have a considerably higher retention capacity than foam wound dressings.

Antimicrobial solutions help to reduce the bacterial load in infected wounds and also act as a barrier in wounds with a high risk of renewed infection.

A first-time exhibitor proclaimed themselves "extremely pleased with both the logistics and content at INDEX" and that they would recommend the exhibition to their peers, a sentiment echoed by a visitor who commented that "INDEX really is the global meeting point for the nonwovens industry. It is now one of the most important dates in my calendar". Several exhibitors also reported that the quality of visitors had significantly increased from previous editions, with efforts to engage visitors from broad industry sectors clearly paying off.

Next INDEX20 will take place from March, 31st 2020 to April, 3rd 2020 at Palexpo in Geneva.

INDEXTM17 Awards

The Awards showcasing excellence in the nonwovens and related industries. Congratulations to Berry Plastics, GDM, Glatfelter, Hassan Group, Magic & Suominen. EDANA's INDEX[™]17 Awards are the highest accolade for excellence in our industry and highlight the creativity and innovation demonstrated by businesses of all sizes and from all parts of the nonwovens supply chain.

In congratulating the winners, and recognising the outstanding efforts of the nominees, Pierre Wiertz, general manager of EDANA, said "The winners and nominees recognised here today are testament to the commitment to innovation in our industry, but also to the ability of creative developers in the whole nonwovens supply chain to meet the challenges of our times, from resource management to energy storage, relief help and social responsibility.

Winners of the INDEXTM17 Awards

Winners for each category, together with summary comments from the judging panel were:

Nonwoven roll goods: Berry Plastics - Nuvisoft[™]

This proprietary melt spun technology combines a unique filament profile geometry with a soft bond pattern for enhanced softness. Nuvisoft[™] allows for enhanced coverage at lighter weights, lower air permeability, denser winding and facilitates improved printing.

Finished or composite products made from, or incorporating, nonwovens:

Glatfelter - Dreamweaver Gold™ 20 microns

A nonwoven separator for ultra-safe lithium ion batteries, Dreamweaver Gold provides outstanding safety and cycle life with low electrical impedance and high porosity in a uniform stable sheet.

Raw materials or components (e.g. fibre, binder, polymer, tape) of special relevance to the nonwovens industry and related converted products:

Magic - Spongel

A super absorbent polymer (SAP) made entirely from renewable resources, Spongel offers the highest level of absorption and retention of liquids available for bio-based materials. Mainly a cellulose-based material, it is suitable for both food packaging and hygiene applications.

Innovation in machinery of special relevance to the nonwovens industry:

GDM - Rear Wing Zero Waste

An upgrade for the baby diaper manufacturing line, the new kit saves on raw material usage and reduces size change time to zero. The all-new design includes linear motion technology for side shifting without replacing the mechanical cam and the possibility to automatically correct the rear wing position.



Sustainable product: Hassan Group – Self Sufficient Relief Tents

The result of a social responsibility project aimed at providing eco-friendly nonwoven tent fabrics to improve living conditions in refugee camps. The fabrics provide comfort through improved heat and sound insulation, increased flame retardancy and enhanced breathability and anti-bacterial properties.

Sustainable process or management practice: Suominen Corporation - Blind Hiring Recruitment Process

A pioneering recruitment process which increases diversity in the workforce and ensures equal opportunities for applicants of all genders, ethnicities and ages. The initiative offers a proven method to prevent prejudice and nepotism in the recruitment process.



Index-Award Winners 2017

These products and services provide a snapshot of how our industry is changing and developing – it is a privilege to witness first-hand the fruit of these efforts and know that the success of our sector is in safe hands."

The winners were presented with their specially commissioned bronze sculpture and a diploma at the awards ceremony, which was attended by industry media, exhibitors and visitors to the show. Designed by worldfamous Belgian sculptor, Olivier Strebelle, the stunning work of art is both beautiful and representative of the diversity of EDANA's members and their products. Olivier Strebelle, born in 1927, had already gained an enviable reputation by the age of 20 and today his sculptures are displayed in major cities in Europe, in the United States and Asia.

The INDEX[™]17 awards jury was comprised of a former senior nonwovens entrepreneur and manager, a representative of the nonwovens industry trade press, an international independent consultant and two top academic nonwovens R&D experts.

EDANA nonwoven production statistics

European nonwovens production grows 2.5%

EDANA disclosed its preliminary 2016 annual statistics, on the opening day of INDEX[™]17, the largest global meeting place for the nonwovens supply chain and their customers.

Providing a comprehensive snapshot of the nonwovens industry across Greater Europe, the latest figures demonstrate both the industry's momentum and durability.

Per the figures collected and compiled by EDANA, the overall production of nonwovens in Europe grew by 2.5% in volume in 2016 to reach 2,378,700 tonnes despite an uncertain economic climate. While growth in output in the European Union outperformed Greater Europe overall, some countries demonstrated impressive development.

Jacques Prigneaux, EDANA's Market Analysis and Economic Affairs Director said "Germany, Italy and Spain all witnessed growth, with Spain's particularly impressive at 5%, while recent star performer Turkey remained stable, more than compensating for the minor decline recorded in some other European markets."

Divergent trends were also observed between the various production processes of nonwovens. The production of fibre-based materials Drylaid and Short-Fibre Airlaid technologies for example recorded an increase of 2.2% and 2.9% respectively, while Wetlaid remained relatively stable.

Spunmelt nonwovens recorded a growth rate of 3.3%, reaching a production total of 1 million tonnes for the very first time. The highest growth rate was observed in material produced via the air-through bonding process, with a 13.1% increase.

Although the primary main end-use for nonwovens continues to be the hygiene market, with a 30.7% share of deliveries (by weight), significant growth areas for nonwovens were recorded in other sectors; agriculture and garments (both recording double digit growth), air filtration (+3.2%), construction (+4.5%) and food and beverage (+4.2%).

Countering this, a minor decline of -1% was recorded in the automotive industry. Medical and personal care wipes sectors both remained stable with a very slight fall of 0.4%.

Jacques Prigneaux added "The whole EDANA team would like to thank participating companies for their valued input to our annual survey, and for delivering their information on time.

This data, combined with continuous monitoring of the industry, ensures EDANA statistics are a valuable planning and benchmarking tool for all our member companies."

Pierre Wiertz, General Manager of EDANA said "For over 40 years, the annual EDANA statistics – the most comprehensive report of its kind – have proved an invaluable source of business intelligence for our member companies, offering unparalleled insight into the industry thanks to exhaustive research and direct input from producers."

"EDANA's leadership in nonwoven statistics gives us both an advantage and a responsibility to provide quality global industry data, and we are pleased to work with INDA in authoring and publishing the Worldwide Outlook 2014-2020, which provides current and forecast statistics, supplemented with data from ANFA (representing companies form China, Japan, Korea, and other Asian nations).

This global report is for sale from both EDANA and INDA." continued Pierre.

A detailed breakdown of the annual statistics is available exclusively to EDANA member companies - one of the most valued benefits of membership.

Impressions Index 17









Interview with: Mr. Shahwaiz Ahmed Director/Owner Indus Group

The key to success of Indus Group, Pakistan

MAKVIZ (SSM agent) have interviewed Mian Shahwaiz Ahmed (one of the owners):

What made you believe that SSM AG was the best for achieving your desired result?

Mr. Ahmed: In 2005 we bought the first machine CW1-D assembly winder from SSM AG. Since it is a drum winder we didn't get many extra benefits comparing to other options available in the market, however we found the best after sales service and support from SSM. Later on we bought some Japanese and Indian assembly winders which were not as good as the SSM drum winder machines.

In 2014 MAKVIZ came up with the new idea of knot-free packages on same size TFO pot. We bought the first TW2-D precision assembly winder from SSM and surprisingly with the help of the precision winder we got knot free package which helped us to improve the efficiency of our TFO machines and eliminated our major complaint of twist variation due to knots/splices.

Having this experience we bought seven SSM precision assembly winders (TW2-D / TWX-D) within our group up till now.

How did you find the machine/service of SSM and are you happy with the completed job?

Mr. Ahmed: With no second thought, SSM manufactures the most eligible machine to perform the desired job and we enjoy the best after sales services from SSM compared to any other supplier in the world.

Would you extend your production with SSM machines and recommend them to a friend?

Mr. Ahmed: We are in process to replace our old winders and SSM' precision winders are our first and only choice, since we are proud to have the SSM brand in our production facility. We are already recommending SSM precision winders to other textile companies.

What are the two most significant improvements that have resulted from work with SSM AG?

Mr. Ahmed: We are able to achieve approximately 25-30% more weight on the same package dimensions, with the help of SSM precision winders, compared to random wound package. We are running SSM's new model TWX-D at highest speed without any yarn breaks, due to proper tension control on all spindles, which helps to gain higher efficiency on the TFO process.

Mission statement of Indus group

Mr. Ahmed: We aim to provide superior products, financial security, high performance and quality services that fully meet the needs of our customers and maintain the financial strength of our company. We invite our valued Clients to come and see us how beautifully we are doing all this.

Indus Group

Indus Group started its business in 1955 with one cotton ginning factory and now they are one of the best established textile groups in ginning, yarn spinning and towel businesses with over US\$70 million annual turnover.

The spinning operation comprises six spinning mills having 225,000 spindles. A wide variety of yarns are produced in these mills. The spinning mills annually produce approx. 42'000 tons of yarn. In their twisting set up they have 100 TFO machines with a daily production of approx. 66'543 kg. Main count range is Ne 6/2 to 80/2. So far, Indus Group is working with around 600 spindles of SSM assembly winding machines: CW1-D, TW2-D and the latest TWX-D



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Shaping the future - Oerlikon Barmag at the JEC 2014

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Schönherr and Stäubli demonstrating innovative developments at DOMOTEX Hanover.

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Mr. Ghulam Murtaza (technical director, Karachi)



Mr. Shahid Iqbal (technical director, Hyderabad) and in the white shirt Mr. Farrukh Sharif (director Makviz)





Second German Textile Trade Colloquium discusses 'smart production'

How unbelievably widely diversified textiles and textile composites are applied no longer requires explanation to the 150 participants of the German Textile Colloquium. They gathered on the 28th and 29th March in Aachen for a meeting of the industry in order to exchange notes on new production methods and matching functionality. The trade colloquium is held in collaboration with research institutes from the textile strongholds of Aachen, Dresden and Denkendorf, meeting alternately every year at one of the three locations.

'Printing on plastic fibre composites is in its early stages but opens up interesting multi material perspectives', Peter Sander Head of Emerging Technologies & Concepts at Airbus Germany said. He spoke at the conference in Aachen on the production potential of 3D printing in civil aircraft construction. According to Sander, who develops new production technologies and concepts for the aircraft constructor, there are meanwhile over 500 thermoplastic serial components produced by the 3D printer in the A350. 'These component parts will in future be able to provide short fibres made of carbon for increased strength and stability. Currently research is focused on the technical implementation, the first producers are already working on a short fibre mixture for fibre composite brackets in aircraft. Julie Dancre, student of design at ENS Cachan and the Sorbonne in Paris, presented work on active materials. Together with the Swiss product designer Christophe Guberan and scientists at the Massachusetts Institute of Technology they are working on paper, wood and textiles which have the ability to change their form independently and selectively.

Dr. Michael Dreja, Corporate Director International Research Laundry & Home Care at Henkel, spoke in his plenary session on new functionalities in detergents and their effect on textiles. He demonstrated which new raw materials in the area of bleaching, polymers and enzymes are affecting textiles today and will do so increasingly in the future. 'We have set ourselves the target that every innovation is to contribute to progress in the sustainability of our products', Dr. Dreja says. 'This is only achieved by cooperating closely with our partners in research and with our suppliers'.

The Aachen Textile Innovation Day, a component part of the convention presented results and technology transfer from Aachen research to the industry as the central focus. Arash Razaey from the Institute for Textile Technology at RWTH Aachen discussed in his presentation the uses of digitalisation and the inclusion of the person in the textile production process.

Dr. Helga Thomas, project leader at the Aachener DWI – Leibniz-Institute for Interactive Materials, presented a project jointly conducted with the University of Bayreuth. Research on composites of carrier textiles and nanofibres has recently been conducted on the sterilisation of water and applications in particle filtration - a basis for new types of filters for applications in the oil and gas industries amongst others.

The Aachen-Dresden-Denkendorf-Conferences are arranged by the DWI -Leibniz-Institute for Interactive Materials reg.assoc., Aachen, the Institute for Textile Maschinery and Textile High Performance Material Technology of TU Dresden together with its friends and sponsors and the German Institutes for Textile and Fibre Research, Denkendorf.

The next German Textile Trade Convention is to take place in Dresden on 13th and 14th March 2018. The next Aachen-Dresden-Denkendorf International Textile Conference is to take place in Stuttgart from 30.11. to 1.12.2017.

Saxony's State Minister for Arts and Science Dr. Eva-Maria Stange visits ITM

On the 6th April 2017 Dr. Eva-Maria Stange, Minister of State for Science and the Arts of the State of Saxony, together with Dr. Uwe Lienig of Business Development Sachsen GmbH as well as Prof. Gerhard Rödel, Prorector for Research at TU Dresden, are to attend the ITM. The agenda consists of a tour of the ITM textile machine hall at Dresden-Dobritz, where Prof. Chokri Cherif, Institute Director of ITM, together with his two scientific directors, Prof. Krzywinski and Dr. Diestel, are to present the current research operations being undertaken along the entire value supply chain and the excellently equipped infrastructure available at the Dresden-Dobritz location of ITM.



Prof. Gerhard Rödel (TU Dresden), Dr. Eva-Maria Stange (SMWK), Dr. Uwe Lienig (Business Development Sachsen) and Prof. Chokri Cherif (ITM, TU Dresden); f.l.t.r.

Digital Capability Center has opened in Aachen

Aachen has once again reaffirmed its position as a leading research hub. Last Friday saw the doors open on the Digital Capability Center (DCC) – a new kind of learning factory focusing on Industry 4.0. Manufacturing specialists and managers as well as future engineers can explore this realistic factory environment and offers them the tools they need to drive their own company's digital transformation. The motto: Explore – Try – Apply. The DCC is a joint venture between top management consultancy McKinsey & Company, the ITA GmbH, and leading technology companies including software provider PTC. The DCC Aachen is the first of its kind in the world – McKinsey will be launching other DCCs this year in Singapore, Chicago, Beijing, and Venice.

Hands-on workshops at the DCC help companies take a systematic and targeted approach to discovering Industry 4.0. They learn where and how to deploy the latest technologies along the entire value chain – from initial customer inquiry through development, production and delivery, to follow-up service. It also addresses challenges faced by management and those relating to empowering employees, as well as general acceptance of the changes brought about by a transformation. Workshop participants develop specific solutions to tackle challenges they face in their own businesses and gain insights into key digital solutions and technologies, such as real-time diagnostic tools and big data analytics, predictive maintenance, digital performance management, 3D printing, and collaborative robots.

"Many companies have already started thinking about Industry 4.0 but get stuck when it comes to implementation. What the DCC has to offer helps companies realize the concrete value add of digitized production," said McKinsey Senior Partner Christoph Schmitz to journalists on Friday. Not only that, but Industry 4.0 represents both a major challenge to and an opportunity for the economy. McKinsey founded the global DCC network in response to the question of what Industry 4.0 means for companies in practice and how a digital transformation can be successfully realized. Christoph Schmitz: "Companies that start using Industry 4.0 technologies can see maintenance costs and machine downtimes drop by up to 50%, while boosting productivity by up to 55%." For the most part, these technologies are already available. "What usually happens in practice is that the multifaceted, interdisciplinary skills are lacking to select the relevant technologies and deploy them in a targeted way. The organizational transformation is the biggest challenge."

DCC Aachen revolves around the production of a smart wristband that can be individually customized by the workshop participants (key phrase: lot size of 1). The production line itself maps a typical brownfield scenario comprising a mix of older and modern machines, each with different controls and interfaces. The insights gained can be very easily translated to almost any practical application in a wide range of industries.

McKinsey's partner in Aachen is the ITA GmbH. "Through this textiles learning factory we're making a vital contribution to the digitization of production in Germany.

News from Textile Research Centers

We're empowering companies and their employees to successfully realize networked production. This will help German companies remain global leaders," said ITA Director Thomas Gries.

The DCC is designed to help workshop attendees explore and learn how to use the latest digital technologies and increase productivity by applying them. To that end, international software company PTC has contributed its considerable expertise in the Internet of Things (IoT) and augmented reality. "PTC technology enables companies to bridge the physical and digital world," said Kathleen Milford, Executive Vice President at PTC. "The DCC provides the perfect setting for companies to begin their own digital transformation.



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