5-6/2017
English edition

textile network

The international premium magazine for the textile chain

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Photo: Pulse of Europe

Pulse of Europe, Roncalliplatz in Cologne on 9 April 2017

The Pulse of...

Iris Schlomski, editor-in-chief

In just a short space of time, the idea created by a married couple of lawyers based in Frankfurt has succeeded in mobilising people throughout Europe who want to demonstrate their commitment to a peaceful European Union. The new initiative known as "Pulse of Europe" has been staging rallies in various European cities at 2pm every Sunday since February 2017. "Connecting", joining forces, engaging in dialogue – this is more important now than ever before!

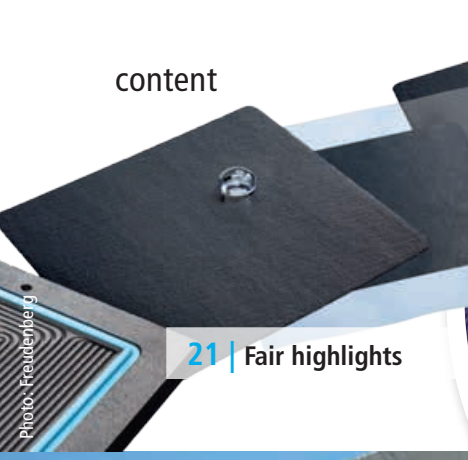
We live in an age where protectionism is rearing its ugly head at every turn and people are struggling to make ends meet in their ailing economies. Many fear the consequences of Brexit and the unpredictability of US President Trump. Others are being plunged into desperation through war (not only in Syria) and terror. Amidst all the doom and gloom, we should not, however, lose sight of the many rays of hope and positive acts of kindness. There are also glimmers of light from an economic perspective. Germany, for example, is currently flying, with GDP growing for the seventh consecutive year. German manufacturers are a leading force in the field of technical textiles and fibre-based materials (global market volume: US$ 163bn) and, according to the recent "Internationalisation Study" conducted on behalf of the German textile association Südwesttextil and the Baden-Württemberg Alliance of Fibre-based Materials (AFBW), Germany ranks second only to China. The study concludes that globalisation offers huge opportunities for suppliers of technical textiles and fibre-based materials, not just in Germany. Back to Frankfurt: the international trade fairs Techtextil/Texprocess will be taking place from 9 to 12 May 2017 under the headings "Connecting the future" and "Technology Crossing". The concept of internationality only makes sense if international business deals are possible. This can only happen when countries "connect", people join forces and engage in constructive dialogue, preferably in a congenial atmosphere. Our stand in the Foyer of Hall 4.1 will provide the perfect backdrop for connecting and engaging in dialogue. In collaboration with our exhibition partner VDMD, we will be holding daily interviews with researchers, lateral thinkers, experts and innovators. One of our special guests is Anja Gockel, the well-known designer of the year 2017! We're already very excited to hear what she has to say about technical textiles that are endowed with additional functions for fashion. Please see our website for more details! You can read more about the highlights at the fairs from page 18!

We hope you enjoy reading this latest issue of textile network

Yours

Iris Schlomski

content



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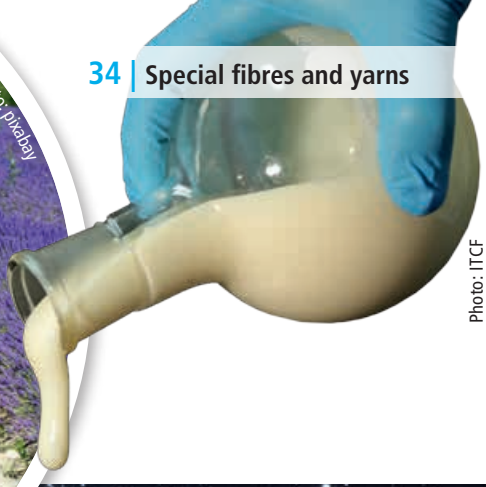

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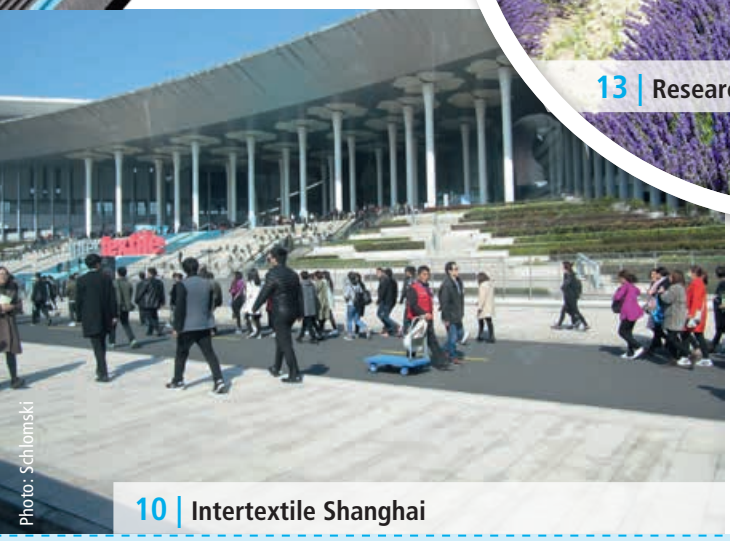

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TEXPROCESS
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Textile printing is more and more important in the home textile industry

INTERTEXTILE SHANGHAI HOME TEXTILES

Around 200 exhibitors

Intertextile Shanghai Home Textiles opened its doors at the National Exhibition and Convention Center in Shanghai from 15 to 17 March 2017. Around 200 exhibitors flock to Shanghai every spring to present their latest collections. The event falled in the most important ordering period for Chinese buyers of bedding, bed linen and bathroom textiles. Current sales figures for the Chinese market show steady increases for bed linen and bathroom textiles of 8.1 percent and 6.8 percent respectively. "The Chinese bathroom textiles market is prospering. Consumers are giving these products greater attention, and are looking for quality and function," sayd Wendy Wen, Senior General Manager Messe Frankfurt (HK) Ltd. "Last year's spring fair met with an extremely positive response from both exhibitors and visitors."

Highlights of Intertextile Shanghai Home Textiles included the presence of reputed companies such as Lenzing, Cotton Council International (CCI) and the India Pavilion. Lenzing, a leading supplier of cellulose fibres such as Tencel, Lenzing Modal, Micro-Modal, Pro-Modal, Lenzing Viscose and Lenzing FR, presented its latest activities in the hotel business. CCI appeared at the spring fair for the first time, shedding light on the entire cotton supply chain from sourcing to sales. The India Pavilion was organised by Powerloom Development & Export Promotion Council (PDEXCIL).

The autumn edition of Shanghai Home Textiles is scheduled to run from 23 to 26 August 2017.

[www.intertextilehome.com]

MILANO UNICA

Trends for 2018/2019

The official start of spring had only just been announced when, at the Museum of Science and Technology in Milan, the industry cast its gaze to the fabric and fashion trends for 2018/19. In anticipation of Milano Unica, which is due to run at the Rho-Però exhibition centre in the capital of Lombardy from 11 to 13 July, the organisers shed light on the themes that the designers have created for their collections, giving the fabric industry the "heads-up" and the opportunity to prepare accordingly.

During the Roadshow, Creative Director Stefano Fadda praised the excellent collaboration within the fashion industry that made the event possible. This sneak peek, well before the actual fair, can be seen as a useful tool for fabric producers in interpreting and implementing the trends as effectively as possible. The slogan for this project "Fashion and Cinema" was chosen with purpose because both fashion and cinema require exact direction to create an excellent product. Milano Unica will be presenting the results in July: Lights, camera, action!

Milan, Milano Unica and the Cathedral in Milan – great

Photo: Sachsenmaier

Impressions Proposte

PROPOSTE CELEBRATES

Back to its roots

After two years of staging Proposte in the last week of April, the organisers have rescheduled the fair, putting it back to its original dates at the beginning of May. And it appears that these dates are here to stay. Due to start on 3 May, the 25th anniversary edition of Proposte will open its doors at Villa Erba in Cernobbio until 5 May 2017. In 25 years, the trade fair has evolved into the most important event for luxury fabrics for upholstery, curtains and soft furnishings in Europe and internationally. "25 years represents an important milestone," says Piercarlo Viganò, President of Proposte which takes place at one of the most beautiful venues in Europe. The park around the historical villa which is situated on the shores of Lake Como, was once owned by the Visconti family and used, among others, as the set for Lucchino Visconti's film "Gattopardo".

It is a perfect setting for this luxury event which attracts an exclusive audience. The fabric collections themselves are exhibited in a modern exhibition centre which constitutes a branch of the Milan fair.

Proposte is also an important event for German trade buyers. Held in high esteem in the luxury market, it attracts many German visitors. A German, a Spanish and two American companies are celebrating their debut at this year's Proposte.

[www.propostefair.it]

[Ingrid Sachsenmaier]

PROPOSTE

More international

After more than twenty years of adhering to strict criteria in the selection of its exhibitors, Proposte tentatively opened its doors to international participants in 2015, accepting three Turkish manufacturers for the first time. This expansion looks set to continue with an initial focus on the US market. With the admittance of MTL Inc. and J. B. Martin Co., the trade fair intends to show the industry that it embraces outstanding names from the international home textiles sector.Moreover, from 2017 onwards, the German specialist Neutex Home Deco and the Spanish company Hijos de Antonio Ferre will likewise take part in Proposte. Since the first Proposte featuring 44 exhibitors, the fair has seen continual growth, with exhibitor numbers rising to 88 today. Proposte has grown from a small event for insiders to an important and exclusive exhibition of high-quality fabrics for upholstery and soft furnishings.

Impressions of the exhibition centre – entrance

Photos: Schlomski

Intertextile Shanghai Apparel Fabrics Spring Edition 2017

An unbeatable sourcing platform

The National Exhibition and Convention Center in Shanghai is more than just huge and describing it is difficult to put into words. In fact, you need to have seen it with your own eyes to really appreciate the sheer size of the site. It certainly begs the question whether such dimensions are really necessary?

Even the monumental stairway into the exhibition centre makes the visitor feel small and insignificant but perhaps that is the intention! Anyway, "one run, all done", as they say. This advertising slogan coined by a large German supermarket chain also applies to Intertextile, whose 3,341 exhibitors leave no wish unfulfilled, offering every kind of fabric and trimming imaginable. Divided into seven halls and clearly structured product groups, Intertextile presented itself to its trade buyers as a smoothly organised trade show for apparel fabrics. Having said that, it is almost impossible to cover all the ground in just three days, especially given that the other exhibition halls were hosting the Yarn Expo (fibres and yarns), PH Value (knitting), Intertextile Home Textiles (home textiles) and Chic (fashion) at the same time. Posting around 71,000 visitors from 103 countries and regions of the world (2016: 71,163 from 100 countries and regions), the organisers were visibly delighted with the outcome of the spring event. Talking to textile network, Wendy Wen, Senior General Manager Messe Frankfurt (HK) AG, stated: "Intertextile is one of the most important events for the global textile market. Its standing has once again been corroborated by the strong business results for both exhibitors and buyers. We're thrilled with the response and the high number of new business deals struck during the three-day event."

Union Knopf HK

Eberhard Ganns, Managing Director of Union Knopf (HK) Limited, was impressed with the high quality of the trade buyers: "We come to Intertextile as exhibitors since many years and are still as happy as ever to be here because we always make contact with potential new customers. This season, 70 percent of the visitors were either new or potential customers which is phenomenal!"

UK Hong Kong pointed out that it is not directly affected by the insolvency proceedings of its German parent company. Commenting on this situation, the Managing Director explained: "We are an independent subsidiary and have been here in Hong Kong since 1999. Our markets are located outside Europe in the US, India and China. We currently employ 58 members of staff here in Hong Kong, Beijing, Shanghai, New York, Los Angeles and Bangkok." The subsidiary's in-house design team creates its own Asian and slightly sporty collection which is fresh and unconventional and reflects the leisurewear tastes of Asian customers. So how does UK HK set itself apart from its competitors? Mr Ganns explains: "We offer an at-

The next edition of Intertextile Shanghai Apparel Fabrics, Autumn Edition 2017, takes place from 11 to 13 October 2017.

tractive and comprehensive range of services and creativity. We also offer good value for money. And we have the right answers for our customers when it comes to CSR and sustainability. Many companies in China are growing in size and quality, and are therefore taking a strong interest in our products. Around 20 per cent of the visitors to UK HK's stand were from abroad including Asia, Europe and the USA."

While talking to Ornelli Bignami, Creative Director Elementi Moda and curator of the S/S 2018 Trend Forum, it soon became clear what the summer season 2018 has in store for the industry: "Nature, future and culture". The colours extend from nuances of natural green, blue and brown for nature lovers to shades of canary yellow and loud pink for the "Care for the future" theme. This youthful theme also embraces sustainability, with a conscious decision to use recycled polyester, for example. Much interest was also generated by the "Meet with Culture" theme and its luxurious fusion of East and West. The inspiration from Africa and India gives rise to shiny effects, with sumptuous gold and silver, as well as coloured metallic finishes. Fancy looks in velvet and silk round it all off.

On the left side: Worth celebrating: 10 years of Hohenstein China, which translates into 90 staff in Hong Kong, Shanghai, Guangzhou, Fuzhou, Ningbo and Qingdao as well as more than 1,000 customers!

On the right side: The Japan Pavilion presented 19 companies as well as its own trend forum

Lanificio Comero

In the Milano Unica section, Gabriele Giannini of the Italian wool weaving mill Lanificio Comero pointed the way forward for high-quality menswear fabrics: Wool, linen, cotton and Lycra are the raw materials that Italian fabric dreams are made of, and are frequently found in blends. A continuing trend, for example, are wool and linen blends. The new natural stretch fabrics are likewise in ever greater demand because they are easier to process given their more limited elasticity. All this is made possible ▶

Made in Italy – the Milano Unica Trend Area

by the interplay between the construction of the weave and the yarns as well as the subsequent finishing process. Another innovation: wool fabrics in a garment dye look. "Until now, this look could only be achieved with cotton but now we can offer this trendy finish in wool fabrics as well," says Gabriele Giannini. The benefit? Woollen fabrics are far less prone to creasing than cotton and are therefore ideal for business suits. Founded in 1950, the family-run business is fully integrated, producing everything from the fibre to the finished woollen fabric in two locations in the Biella region. Every year, the company's 120 staff produce approximately 3 million metres of medium to high-end woollen fabrics. The enterprise believes there is still plenty of potential for exporting to China, with Chinese customers currently accounting for no more than one percent of its total business.

Linen in fashion

The panel discussion on "Linen in Fashion: Sustainable Trends and Consumer Answers" generated plenty of interest. Organised by the Celc – the European Confederation of Linen and Hemp – it shed light on the cultivation methods of Europe's flax farmers and the many special properties of linen. 10,000 companies in 14 EU countries are involved in the linen business, with the biggest flax producers being Belgium, the Netherlands and France. European flax farmers account for 80 percent of global flax production. Even so, flax is still a relatively rare product, clinching just a one percent share of the world's fibre demand. And what makes flax so special? Marie-Emmanuelle Belzung, General Manager of Celc: "Above everything else, flax is an extremely sustainable fibre with minimal water consumption and a high CO_2 factor. Besides its many other positive properties, flax achieves excellent dyeing results. Flax is a versatile fibre, ideal for all applications and easy to combine with other fibres. Linen can be used in all densities from ultra-light and transparent batistes to the heaviest of canvas. It can also be brought up to date with coatings and textures to reflect anything from casual to sophisticated trends right the way through to waterproof variations for outdoors."

Grüezi Weba

Exhibiting at Intertextile for the first time was Weberei Appenzell from Switzerland, or Weba for short. Alexander Barberi states, "Our speciality are high-quality shirt fabrics with functionality. We only use premium quality fabrics and work together with selected customers interested in collaborating in the luxury segment. We're hoping to build a small but discerning circle of customers here in China."

Cotton USA

In Hall 4.2 at Intertextile Shanghai Home Show 2017, Cotton USA presented its new marketing strategy dubbed "Travel in Comfort with Cotton the World Trusts". With the rapid rise of China´s economy and tourism in the past decade, the hospitality industry in China and Asia has experienced meteoric growth. Cotton USA is introducing a hotel collection to potential partners and licensees in the hospitality industry. Hotel partners can benefit by specifying and highlighting theur use of U.S. cotton-rich products so that in turn their guests when staying at a hotel can enjoy the safe and comfortable feeling. Karin Malmström, Direktor des China and Northeast Asia Cotton Council International: "With our new slogan 'Cotton the World Trusts' we are creating added value. We want to make it clear just how high the quality of US cotton really is, not just in China." More in our next issue.

[www.intertextileapparel.com]

[Iris Schlomski]

Inspiration for S/S 2018 was provided by the Trend Forum in the Trend Area in Hall 5.2

Photo: pixabay

Technology Platform Microencapsulation TPM

The technology platform was established in 2009 and is the only network project on this topic in a German-speaking country. It concentrates and communicates knowledge on the topics of microencapsulation and particle applications, and identifies new ways to use them. Participants regularly receive information on the latest developments, publications and patents in the areas of microencapsulation and particle applications. Furthermore, a workshop is organized on selected topics every two years. Those interested in the TPM can attend this event upon request.

Fraunhofer IAP

Washable microcapsules that protect against insects and infection

The aim of the "Fraunhofer Technology Platform Microencapsulation TPM" is to give more visibility to microencapsulation technology and to take even better advantage of its versatile potential. The platform connects research institutions and companies that are active in the field of microencapsulation or are interested in this type of technology. It is jointly supported by the Fraunhofer Institute of Applied Polymer Research IAP (Potsdam-Golm) and the Fraunhofer Institute for Chemical Technology ICT (Pfinztal), as well as the Fraunhofer Research Group "Particle Technology and Raw Material Innovation" at the Nuremberg Institute of Technology. Eight companies are currently participating in the project, including BASF, Clariant, Follmann, Lanxess, Lonza, the August Koehler Paper Mill and Symrise. In summer 2016 the very successful project extended for a seventh round and another two years.

Lavender, peppermint and eucalyptus oil

The microencapsulation of essential oils that protect, for instance, against viruses, microbes or insects, is one of the technology platform's current topics. Permanently affixed to textiles, the capsules have to remain effective and continue to release over time. Potential applications are clothing and household textiles, as well as medical, cosmetic and industrial textiles – for instance, antimicrobial clothing for hospital staff, or bed covers with integrated mosquito protection. "In order to ensure that the textile retains its special effect even after it has been washed, we are developing microcapsules that can be charged through impregnation with the active ingredient either directly during the washing process or subsequently thereafter," explains Monika Jobmann, microcapsule expert at the Fraunhofer IAP. "We prefer using environmentally friendly and natural materials – both for the particle shell and for the active ingredient – which are also environmentally biodegradable," says Jobmann. A one-year-old feasibility study was funded by the Federal Ministry of Food and Agriculture (BMEL) through the Agency for Renewable Resources (FNR), its project sponsor. This study, conducted by the Fraunhofer IAP, shows that the micro-containers can be attached to cotton fabric. This enables the active ingredient to be selectively dispensed and multiply recharged during or after washing. Developing these types of particles is a major challenge that requires a range of expertise: precise knowledge about the chemistry of the encapsulated oils and the wall materials, competencies in the microencapsulation technology itself as well as its scale-up, and knowledge about the methods and auxiliaries used to anchor the capsules to the textile. "TPM participants support this and many other projects through their know how, materials and analytics," the Fraunhofer researcher is happy to report.

[www.iap.fraunhofer.de]

Photo: Fraunhofer IAP

Even after multiple washings, the textile retains its color due to the blue microcapsules. This shows how stable the capsules are and how well they are affixed to the textile

Carbon fibres

Photos: ITCF

Special fibres and yarns - Part 3

From research to product

Lightweight design in architecture and the automotive field, medical engineering, energy and material sciences are all key terms that characterise the research landscape in Germany. Across the world, German high-tech innovations have the reputation for being particularly high quality and technologically advanced. Textile and fibre research accounts for a significant share of these innovations.

But how are such textile innovations developed? In which high-tech areas are they firmly established? How are the new ideas generated that provide industry with the stimulus to develop new products?

ITCF building

Institute of Textile Chemistry and Chemical Fibres (ITCF)

- member of the German Institutes of Textile and Fibre Research (DITF), Germany's largest textile research centre
- 50 employees
- public foundation trust belonging to the state of Baden-Württemberg
- application-orientated, industry-related research, focusing on support for small and medium-sized industrial enterprises
- Linked to the professorship at the University of Stuttgart Institute of Polymer Chemistry

We chose one textile research institute, the Institute of Textile Chemistry and Chemical Fibres (ITCF) in Denkendorf, southwest Germany, to give us some answers. Some 40 scientists, engineers and laboratory technicians work here on the material sciences of the future. Networks with other research institutes, frequent contact with industry and well-grounded scientific approaches are the key to answering these questions.

New materials to keep the environment in good health

First, we take a look at wet spinning techniques, where cellulose fibres are produced by a system consisting of several metres of stainless steel baths, drying chambers and galettes that stretch and wind. There is a long history, going back eighty years, of spinning cellulose in Denkendorf. To this day, the breadth of experience with this material continues to provide the basis for new ideas, materials and applications. Purcell, a new type of composite consisting of cellulose fibres in a matrix that is itself made of cellulose, is one example. "Purcell has the same advantages as other established composite fibres, such as great strength and low weight," explains Dr Frank Hermanutz, Working Group Manager at the ITCF. "At the same time, though, the material is fully recyclable and, being an entirely natural substance, completely biodegradable, as well as having an exceptionally eco-friendly and energy-efficient production process. This gives us a product for technical lightweight design applications that can meet the ever more demanding processing requirements for materials in a closed-loop material cycle."

The new material is a paradigm for the way in which applied research also contributes to implementing societal goals. "The German government specified in its high-tech strategy the goals that Germany should seek to support, in its quest to be a leader of worldwide innovation," explains Prof. Michael R. Buchmeiser, Institute Director at ITCF. "The associated model of an innovative Germany not only sets out the conditions for a competitive industry but also emphasises its importance to science and to society. Both are significant elements when it comes to achieving such goals. As

CMC ceramic fibre composite material

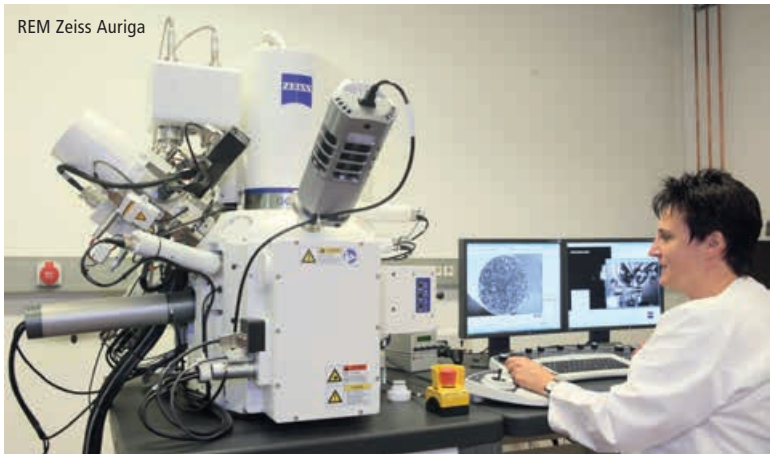
a research institute, we find that we, and the range of topics in which we are involved, are at the heart of several key elements of innovation policy. Those topics include resource efficiency and recyclability of raw materials, and support for electric mobility through the use of textiles with integrated functionality or for lightweight design."

Networks promote exchange of expertise

In order to seize new trends in materials development, however, it is also important to have strong links with university institutes and other research establishments. The ITCF meets this requirement especially well: the Institute Director also holds the chair at the University of Stuttgart's Institute of Polymer Chemistry. Thus, ideas emerging from pure research are also channelled into the application-orientated research carried out at the ITCF. The exchange of knowledge with researchers from other areas of specialism encourages 'thinking outside the box' and synergies are created that can lead to completely new products. Laser-drilled spinnerets, used in the production of extremely fine fibres, are one example of this. These cellulose 'super microfibres', as they are known, have some unusual properties, due to their particularly large surface area. They are very good at absorbing moisture and feel pleasantly soft to the touch. Various applications in the fields of hygiene, clothing and industrial engineering are able to take advantage of such fibres. Their production at the ITCF, however, was made possible only with the aid of spinnerets with particularly fine and regular holes. This aspect was accomplished by the Institute of Laser Tools as the University of Stuttgart. As part of a joint research project, modern laser technology was used in the development of a process for laser drilling of fine, high-precision holes. At the ITCF, the prototypes were tested on spinning processes. The regular exchange of expertise between the institutes has led to qualitatively better outcomes.

Young researchers for new ideas

The close connection with the university also attracts young researchers with their fresh ideas to the institute. Postgraduate students are therefore represented in all areas of research and their work ensures a good theoretical grounding for product development. "The findings from undergraduate dissertations and postgraduate theses are used directly in our research projects," explains Dr Bernd Clauss, who regularly supervises doctoral and masters students in his working group. "They carry our research work resolutely forward. Many companies – from small and medium-sized enterprises to large groups – can no longer afford their own research departments. They rely on support from external research institutes and thus they too benefit from students' research. It is a symbiotic benefit, as it can also often open the ▶



REM Zeiss Auriga

Textile pulp for ceramic fibres/Dry-spinning

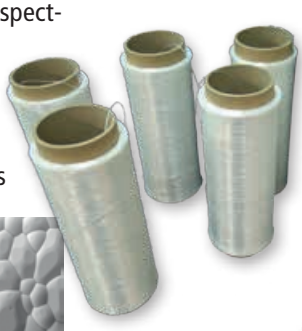
door to the first job for our post-graduates. And this collaboration is equally important to the institute itself, because we need to stay close to the end product, the application, all the time, so that we are undertaking work that can be profitably employed in industry."

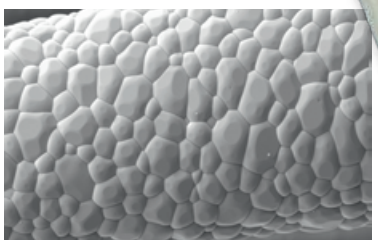
The working group led by Dr Clauss is working on the development of ceramic fibres and the composite materials that can be made from them. These extraordinary fibres not only have the high-tensile properties of familiar carbon fibres but can also withstand temperatures of over 1,100 °C. A ceramic fibre composite in which the fibres are contained in a matrix made of the same ceramic material reveals some remarkable properties. Even under severe mechanical strain and extreme temperature differences, this material remains stable and shows no evidence of brittle fracturing. It is a small but highly specialised market in which ceramic fibres, commanding prices of well over 1,000 euros per kilo, are able to assert themselves. They belong to the technical textiles sector – a branch of the industry in which fibres have to demonstrate particular qualities if they are to gain acceptance for demanding technical applications.

Technical textiles as a model for the future

Technical textiles represent a particular focus of the research spectrum at ITCF, whether they are carbon fibres from natural raw materials such as lignin and cellulose, self-repairing fibres for composites or fibres with a large surface area for technical filter media. The wide variety of these high-tech products is reflected in the demands made on the analytics that are necessary for their development. X-ray structural analyses, rheology, mass spectroscopy and electron microscopy are the tools used to define the structure of the new materials and to guide specifications. And this is where the networking of the research establishments comes full circle. Because although the ITCF is well placed as far as high-end analytics are concerned, interchange with scientists from neighbouring disciplines using different measurement techniques is often still highly beneficial when it comes to answering new questions. A Tuesday morning in the ITCF seminar room: every last space is occupied by institute staff and guests from the university arena, attending the regular colloquium. For the

Ceramic fibres





REM image of ceramic fibre

Purcell composite material

Purcell microscopic cross-section

INTERVIEW

Fibre research – what does it entail?

We recently invited Dr. Stephanie Pfeifer, a budding scientist at the Institute of Textile Chemistry and Chemical Fibres (ITCF) in Denkendorf and a Doctor of Chemistry (University of Stuttgart), to speak to us about this fascinating topic. The close scientific links between the ITCF Denkendorf and the Institute for Polymer Chemistry in Stuttgart have led her into the field of fibre chemistry.

Textile network: Dr. Pfeifer, ceramic fibres are a relatively unknown product in the world of fibre and textile manufacturing. How does your research field differ from others?

Stephanie Pfeifer: Working with ceramic fibres means that you have to think in interdisciplinary terms. Our research not only focuses on chemistry but it also embraces findings from fields such as material science and physics. This is what makes our daily work so exciting and allows us to approach issues from completely different angles. I'm still fascinated by the fact that ceramics, which by their very nature are brittle and easy to break, can be used to produce fibres that are considerably thinner than a human hair. We process these fibres into 'Ceramic Matrix Composites', otherwise known as CMCs. These are fibre composite materials that are made solely from ceramics and boast special properties.

Textile network: What industrial applications lend themselves to these composite materials?

Stephanie Pfeifer: For the most part, CMCs lend themselves to applications requiring materials that can withstand high temperatures and are not susceptible to mechanical failure even when exposed to sudden and great fluctuations in temperature. In energy engineer-

ing, stationary gas turbines or burner nozzles in furnaces are frequently clad with CMCs. The material is also widely used in the aviation and aerospace industry: some of the components in aeroplane engines, for example, can be made from CMCs. In fact, this material is increasingly making inroads in this sector, as it is gradually being used in certain commercial planes as standard. Medicine is another exciting area for ceramic fibre composite materials. Under certain circumstances, it can be used as a substitute for bone. Human tissue widely accepts this material as a substrate and it generally has good physiological properties. It will, however, be some time before it can be marketed for applications of this kind. We still have a lot of development work to complete before reaching this stage.

Textile network: What conditions do you need to ensure your research is relevant to industry?

Stephanie Pfeifer: Pure research and industrial relevance are not always easy to reconcile in the world of science and yet they are both of elementary importance. To be able to align my research topics to industrial needs, I not only need to work in a modern research environment but I also depend upon hands-on feedback from the industry. I benefit greatly from professional networks such as the 'Allianz faserbasierter Werkstoffe' (Alliance of fibre-based materials) and the 'Ceramic Composites e.V.' society. These are great places for finding contacts to companies and research institutes. It's also really important for me to forge personal contacts. Conferences and committees that support projects also provide opportunities to meet and discuss issues with industry representatives. This is an important foundation for developing new ideas.

Dr. Stephanie Pfeifer, a budding scientist at the ITCF Denkendorf, talks to textile network

Dr. Stephanie Pfeifer successfully completed her dissertation and doctoral thesis in Denkendorf and joined the ITCF with her research focus "Oxidic ceramic fibres for high-temperature applications". Since completing her doctoral thesis under the supervision of Prof. Dr. Buchmeiser, she has assumed the role of Scientific Assistant in the Working Group led by Dr. Clauß where she has been supervising projects on the development of ceramic fibres and ceramic fibre composite materials since the middle of 2014.

The autonomous and creative working environment at our research institute gives us plenty of scope to create new research approaches. And, of course, I need access to state-of-the-art laboratories and technology centres to be able to advance my research.

Dr. Pfeifer, many thanks for talking to us!

The interview was conducted by Ulrich Hageroth on behalf of textile network.

most part, lectures on specialist topics are given by representatives of industry or scientists from other research institutes. "Close collaboration with representatives of other institutions is very important to us," comments Prof. Buchmeiser. "It is only through such collaboration that exciting ideas are born which are then brought to fruition in multidisciplinary projects."

By now, one thing is clear: marketable products no longer emerge from behind the researchers' closed doors. The exchange of experience and knowledge, together with solid technical expertise, are the key to innovation in textiles – and to the future of the German economy.

[www.itcf-denkendorf.de]

[Ulrich Hageroth]

Space in Living

We look forward to seeing you!

In cooperation with the European Space Agency (ESA) and the German Aerospace Centre (DLR), Techtextil in Frankfurt am Main is presenting "Living in Space" from 9 to 12 May 2017, which highlights diverse applications for technical textiles using aerospace as an example. Texprocess, which runs concurrently, will also be involved, presenting four themes that spotlight high-tech textiles and textile processing technologies from and for the aerospace industry.

Under the heading "Space in Living", we at textile network are presenting our innovative "Chill Lounge" at our Stand F86 in the Foyer of Hall 4.1 in collaboration with the Association of German Fashion and Textile Designers (VDMD). Every day, we will be holding several short interviews with interesting personalities from the industry. They will take place on Tuesday, Wednesday and Thursday and will start at 10am in the morning and 3pm in the afternoon. The interviews will be held by textile network's Editor-in-Chief, Iris Schlomski, the President of the VDMD, René Lang, and the Managing Director of the VDMD, Mara Michel. The programme of interviews can be found at www.textile-network.de and www.vdmd.de. It is also available at our stand and in the list of events advertised by the fair.

We would like to invite you to engage in an active dialogue, to network at our stand and also to chill with us every evening from 5pm.

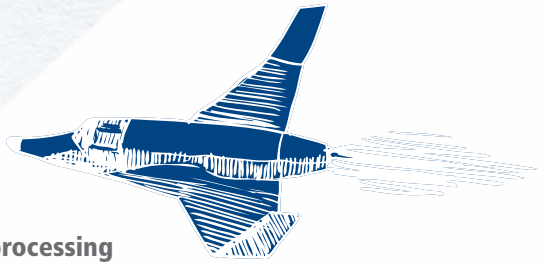
Come and visit us at Stand F86 in the Foyer of Hall 4.1 (between Halls 5/6 and 3) from 9 to 12 May 2017.

We look forward to seeing you there!

Photo: DLR

Techtextil/Texprocess 2017

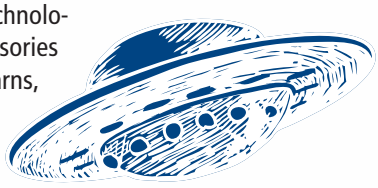
The industry takes off



The Techtextil exhibition in Frankfurt/Main, Germany, is the international fair for technical textiles and nonwovens. More than 1,600 exhibitors from over 50 countries will be present at the Techtextil exhibition 2017, covering the complete value added chain in the field of technical textiles. The product groups include research and development, planning and consulting, technology, machines and accessories as well as fibres and yarns, nonwovens, coated textiles and Bondtec. This is an opportunity for all applications to be discussed and the necessary production machinery to be explained.

The Texprocess fair, also in Frankfurt am Main, is the international fair for the garment manufacturing and textile processing industry. It showcases the latest machines, plant, processes and services for the processing of textile and flexible materials. Texprocess is witnessing growth particularly in the fields of CAD/CAM and cutting, making, trimming (CMT). Steady increases are being recorded for the product groups stitching, joining and fastening technology and materials which have always attracted a lot of interest.

Texprocess takes place concurrently with Techtextil, the international fair for technical textiles and nonwovens. To sharpen the definition of the fair, the product segments Cutting, Making, Trimming (CMT), CAD/CAM and digital printing have all been grouped into Hall 4.0. Exhibitors operating in this field are exhibiting here from both fairs. Hall 4.0 will thus accommodate design, IT, CAD/CAM, CMT and digital printing as well as the special area IT@ Texprocess.



Photos: freepik.com

Textile processing technologies for aerospace

In cooperation with the European Space Agency (ESA) and the German Aerospace Centre (DLR), Techtextil is presenting "Living in Space", which highlights the diverse applications for technical textiles and their processing using aerospace as an example.

Hall 6.1 of Techtextil will be home not only to the exhibitors of functional textiles for clothing but also to an interactive Special Area, which is based on applications for technical textiles and four theme areas, shedding light on high-tech textiles and textile processing technologies from and for the aerospace industry. The highlight of this area is a virtual reality experience which will take visitors to Techtextil and Texprocess on a virtual journey through space where they will learn where technical textiles are used and how they are processed.

[techtextil.messefrankfurt.com]
[texprocess.messefrankfurt.com]

Human Solutions

This year's highlight is the Digital Fashion Board, which replaces the analog Moodboard and captures the spirit and era of modern digitalisation. It is vital that the solutions that drive digitalisation in the apparel industry are networked. In the case of the Digital Fashion Board, this means product development and visualisation in 3D – with information that comes straight from the company's PLM system. The Digital Fashion Board is used to make faster – and consequently cost-saving – decisions on the pieces that are to be included in a collection. The decisions made with the help of the Board are based on virtual prototypes, even before a piece has been sewn. This solution also makes communication with partner companies much easier. And that's not all – Human Solutions will also have some surprises for visitors on the topic of "Digitalisation at its best."

[Texprocess | Hall 4.0 Booth C21]

exhibition highlight

Biodegradability of textile products

Photo: Hohenstein Institute

HOHENSTEIN GROUP

Passion for textiles – from an idea to a market success

Exhibits on the subject of the biodegradation of textiles will be one of the key focuses of the presentation. 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. The aim is to functionalise textiles in a stable, economical and sustainable way using fungal proteins produced with biotechnology as a replacement for per- and polyfluorinated hydrocarbons that are potentially dangerous to humans and the environment.

Photo: Hohenstein

Hohensteiner Institute, Aerial View

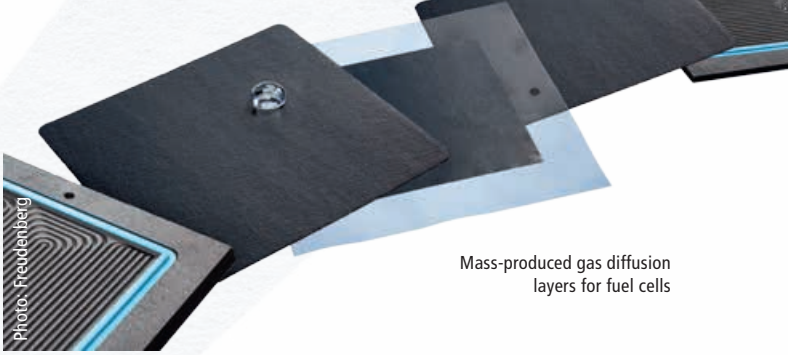
As part of a ZIM research project, the researchers at Hohenstein are currently developing a thermoelectric cooling bandage for mobile cold therapy for acute injuries and post-operation treatment. The difference from conventional cooling systems such as cool packs or compressors is the controlled, constant and moderate cooling involved, which prevents cold injuries up to and including frostbite. An important key focus of the project is the composition of layers of flexible textile and polymer materials with high thermal conductivity with the integration of electronic components in mind.

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.

Hohenstein is providing its expertise in the area of pattern making techniques and fitting tests as a contribution to the lecture on "Issues with Fitting in Online Trade". Nowadays, experienced clothing technicians provide individual support for many renowned companies in developing clothing with the optimum fit. The latest findings from research projects and serial measurements performed by the Hohenstein Institute are constantly being incorporated into the wide range of services on offer. Some of the most recent findings, for instance, include the latest data on breast volumes for women, enabling further improvements to be made to bra cup sizes.

[www.hohenstein.de]

[Techtextil | Hall 3.1 Booth B21]



Mass-produced gas diffusion layers for fuel cells

EMS-GRILTECH

Speciality products for technically demanding applications

EMS-Griltech presents with its Grilon fibers and yarns custom-designed solutions for the bonding of technical textiles. Griltex Copolyester and Copolyamide adhesives are used for coating and laminating technical fabrics, nonwovens, clothing textiles and non-textile substrates. Grilon melt bonding yarns and binder fibers, Grilon bicomponent binder fibers and Griltex hot melt adhesives are key components in the reinforcement of technical textile constructions. Griltex Copolyesters are used to bond smooth surfaces such as PET or aluminium. The flexibility of the adhesives compensates the tension between substrates with different expansion coefficients. Nexylon FR is the world's first flame-retardant polyamide fiber. Using this fiber the working life of flame-resistant protective wear can be significantly increased. Wearing comfort is also much higher with its soft touch. There is potential for other interesting applications in technical textiles requiring inherent flame resistance.

[www.emsgriltech.com]
[Techtextil | Hall 3.0 Booth D47]

Griltex Copolyesters are used to bond smooth surfaces such es PET or aluminium

FREUDENBERG PERFORMANCE MATERIALS

Innovative solutions for energy storage and sports wear

Freudenberg Performance Materials will be presenting innovative solutions for e-mobility and stationary energy storage: gas diffusion layers for fuel cells, high-performance electrodes for redox-flow batteries and ultra-thin, ceramic-impregnated separators for lithium-ion batteries. Other highlights will include a new dimension in thermal insulation: comfortemp fiberball padding. This the first ever padding made from fiberballs combines the advantages of loose down fillings and padding in a quality that has not previously been achieved. For example, thermal insulation is as much as 80 percent higher than conventional padding while the new material is as light and soft as down. Lifestyle brand Napapijri will launch the "Superlight Parka" for the 2017 Fall/Winter season utilizing their owned Thermo-Fibre technology powered by comfortemp fiberball padding.

[www.freudenberg-pm.com]
[Techtextil | Hall 3.1 Booth F37]

If you are looking to ...

…increase productivity through digitalisation, automation, robotics and excellent, reliable sewing technology, then you should make a point of visiting our stand.

[Dürkopp Adler AG]
[Texprocess | Hall 5.1 Booth B90]

Photo: Senbert GmbH

Senbert shows flat-knitted textiles based on fully-fashion and 3D-knitting techniques

SENBERT KNITTING TRENDS

Fully-fashion and 3D-knitting techniques

"The main advantage of flat knitting technology is that it is possible to produce visual innovative and multi-functional textiles with a high degree of automation and with less material waste, which guarantees a sustainable manufacturing process", explains Erhard Senbert, owner of the company which was founded in 1951. Typical features are for instance: breathability, moisture management, stability, elasticity, visibility, conductivity, abrasion resistance, sound absorption, cushioning, cut- and piercing resistance and lightness.
Senbert develops and produces the knits at the company site in Bad Kötzting in close collaboration with their customers. The production is supported by the Czech partner company "Duo Mode spol. s.r.o".
The modern and diverse knitting machinery, with 45 flat-knitting automates (gauges E03 to E14) and the affiliated after-treatment and assembling department offers different possibilities of knitted products from small-batch to large-scale production. As the knitting technique can be used for many purposes, Senbert has customers from different branches. And for this reason the company supplies its goods in particular to well-known shoe labels, furniture manufacturers, supplier for workwear and protective clothing.

[www.senbert.de]
[Techtextil | Hall 3.1 Booth F23]

FROHN HIGHTEX GROUP

Fabric innovations for still more protection

In the division Pro-Belting of the Frohn Hightex Group a new generation of woven fabrics have been created by further development of the patented technology for producing high visible colors on fire retardant fabrics, made of Nomex in hi-vis yellow and Protex Q/Cotton in hi-vis orange, according to DIN EN ISO 20471 in connection with DIN EN 1149, DIN EN 469 or DIN EN ISO 11611 and DIN EN ISO 11612. A further development is a fabric (according to DIN EN ISO 15797), made of special fibers, which is industrial washable till pH 12, without noticeable lost of color intensity and stability; this fabric, which is free of aramides, is stabile against sourness and lyes and no aperture results at strong heat.

[www.frohn-textil.de]
[Techtextil | Hall 3.1 Booth H82]

Photo: pixabay

Pro-Belting created a new generation of fire retardant fabrics

Photo: Innotect

Innotect GmbH in Crimmitschau is an innovative, medium-sized company. The group also includes Iprotex, based in Münchberg, Germany

IPROTEX

Techtextil 2017

The company group Iprotex/ Innotect has two manufacturing sites in Germany and further locations worldwide. This innovative, medium-sized company specialises in developing and producing high-quality textile products for cable and hose protection in different industrial applications. The main focus is on processing yarns from polyester, polyamide and glass. Interesting materials such as Aramid (otherwise known as Kevlar) are used for crash and heat protection as they are designed to withstand extreme conditions. Production processes range from braiding, weaving and knitting. The company's technical textils are used by all major OEMs for automotive, railway, aerospace, medicine and composite applications. Furthermore, we offer a wide range of individual products and customised solutions.

[www.iprotex.com]
[Techtextil | Hall 3.1 Booth F68]

If you are looking to ...

... answers about digitization? Would you like to discuss your company's position on the topic with us and find out more about the solutions we can offer you? You can be sure of a warm welcome!

[Human Solutions]
[Texprocess | Hall 4.0 Booth C21]


Photo: Ettlin

Ettlin Lux is a special fabric that generates fascinating three-dimensional light structures from LED light

ETTLIN

Special yarns and fabrics

As a special exhibition highlight, the company will showcase its novel architectural fabric – the transparent yet cooling, weather resistant and anti-glare protection Ettlin Trans-Proof. Thanks to its dense surface, the fabric offers outstanding sun shading properties and protection against moisture and humidity. At the same time Ettlin Trans-Proof ensures a high level of air permeability. The result: Cooling shade and no risk of heat build-up. The brightness of airy spaces is retained due to a special finish that filters wavelengths and reduces harmful UV radiation. This makes Ettlin TransProof the perfect fabric for awnings, sunshades and carports. Another exciting high-tech material presented by the textile expert is Ettlin Lux, a special fabric that generates fascinating three-dimensional light structures from LED light. It is suitable for the most diverse applications. So it is used not only in the field of architecture and stage construction, for trade fair and shopfitting applications, ceiling and wall covering, but also for furniture applications and car interiors. Visitors can gain an insight into the fascinating effects of this high-tech material used for a 1.40-metre circular luminaire that decorates the joint Baden-Wuerttemberg stand. It also highlights a trade fair counter which stands out thanks to its colourful design in Baden-Wuerttemberg's colours of black and gold. Both Ettlin Trans-Proof and Ettlin Lux are produced using weaving machines with Easy-Leno technology. This method allows Ettlin to provide a wide range of completely new and unique products. Individual, customized designs can thus be implemented easily – even for smaller batches. Thanks to this technology, it is possible to perfectly combine functionality and design as impressively demonstrated by Ettlin Trans-Proof and Ettlin Lux.

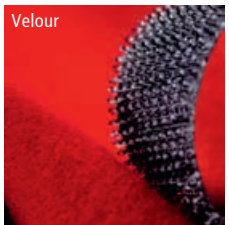
[www.ettlin.de]
[Techtextil | Hall 3.1 Booth D81]

ESCHLER TEXTIL

Specialist in high-tech knitted fabrics

Eschler Textil GmbH, a subsidiary of the Swiss company Schoeller Textil AG, celebrated its 50th anniversary in fall 2016. Eschler is a specialist in high-tech knitted fabrics and is regarded as a competent partner for innovative fabric developments for technical application purposes. The philosophy of the company, managed in second generation by Matthias Eschler, is to produce speciality instead of mass products. The DIN ISO 9001:2001 certified company with 50 employees generated a turnover of eleven million Euro last year. Since 2016 Eschler is a registered bluesign System Partner.

[www.eschler.de]
[Techtextil | Hall 3.1 Booth E72]


Velour


Spacer with different structures

Photos: Eschler Textil

Efka – Frankl & Kirchner

"We are committed to continuing with our 130 years of experience in the sewing industry and want to go forward together with our customers. That is why we hope to engage in an intensive dialogue with our customers with a view to continually improving our products. Our aim is to explore our customer requirements in greater depth in the future. In concrete terms, this means that the simple implementation of bespoke requirements will be at the centre of our future developments. Only through smart applications can the many advantages of the Efka drives and controls continue to generate real added value for our customers."

[Texprocess | Hall 5.1 Booth B71]

exhibition highlight


Photo: Gebr. Wylach

A wide range of services in the field of textile dyeing – the speciality of Gebr. Wylach Textilveredlung

TEXTILAUSRÜSTUNG PFAND

Sustainability is main focus

Beside the classical finishing technologies eco-friendly chemicals, like fluorocarbon- free hydrophobic substances, are more and more used in the company Textilausrüstung Pfand GmbH for different textile applications. As an example, unique, embroidered or printed nonwovens based on flax fibres are finished with this eco-friendly chemistry. These finishes flax based nonwovens are used for the creation of better climatic conditions in housing. Further applications for this kind of finishing are upholstery and textiles for sports.
Further novelties are functionalisation of partly voluminous warp-knitted/spacer and circular-knitted fabrics. One example for this kind of finishing is the common development of new blankets for medical and care, which was carried out together with partner companies and institutions. Energy consumption and duration for cleaning these blankets are obviously reduced compared to standard products. In addition to this, the new blankets show a longer mechanical life cycle.

[www.pfand-textil.de]
[Techtextil | Hall 3.1 Booth E40]

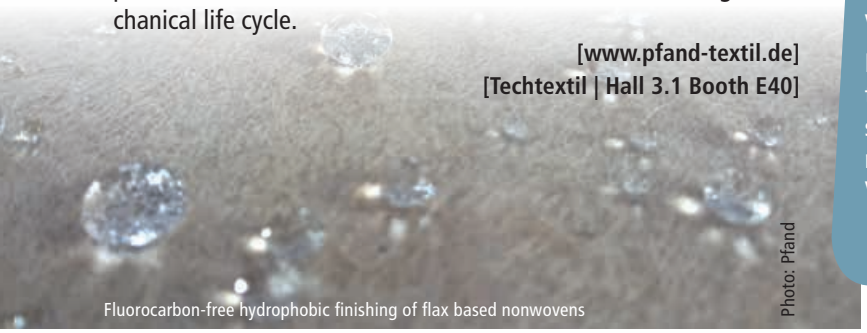


Photo: Pfand

Fluorocarbon-free hydrophobic finishing of flax based nonwovens

GEBRÜDER WYLACH

All about textile dyeing

"In addition to pure yarn dyeing and related special equipment, the range of customer-related services also includes mechanical processes such as twisting and spool winding. Yarns in strengths from 20 to 15,000 decitex can be processed, the company is specialized in technical yarns. With the help of ultramodern and computer-controlled machines, process reliability and reproducibility of procedures can be guaranteed. Quality control based on ISO-standards is installed by an in-house laboratory", says the company.

[www.gebrueder-wylach.de]
[Techtextil | Hall 3.0 Booth J55]

Veit Group

Innovative developments in the fields of hand ironing technology and steam generation as well as the Veit shirt finisher, Brisay pressing machines and the new generation of Veit fusing machines will form the focus of Veit's appearance at this year's Texprocess.

[Texprocess | Hall 6.0 Booth B57]

exhibition highlight

TITV GREIZ/IMBUT GMBH

A new path to light-emitting textiles

In a move to produce light-emitting textiles economically, the TITV Greiz, the Institute for Special Textiles and Flexible Materials, has modified conventional knitting technology to accommodate the fully automatic production of conductor paths, and the mounting and bonding of LEDs. The innovation is based on the functional LED flex substrate – Functional Sequin Devices (FSD) – in conjunction with modified sequin heads from embroidery machine makers Tajima and ZSK. For the world's first automated production of light-emitting textiles, the sequins used in fashion have been altered to serve as the carriers for the LEDs and other miniaturised components.
Until now, light-emitting textiles would be created by weaving or stitching flexible conductor paths into the textile. In a subsequent step away from the machine, tweezers would be used to manually position, solder and bond the tiny LEDs on the conductor paths. The imprecision associated with this task and the time taken to execute it made production costly to the extreme, making it impossible to manufacture light-emitting textiles commercially and limiting the method to small areas and prototypes.
The new manufacturing technology paves the way for a completely automated process for mounting the components on the textiles. In conjunction with this automated solution, the well-known benefits of embroidery technology really come into their own. In addition to highlighting this sophisticated technology that can easily be integrated into existing production processes, it is also worth mentioning the design freedom that this option brings. The pattern programming function for embroidery machines means that the LED-FSDs can be stitched onto the textiles in any freely determined arrangement.

[www.imbut.de]
[Techtextil | Hall 3.1 Booth A01]

For the world's first automated production of light-emitting textiles, the sequins used in fashion have been altered to serve as the carriers for the LEDs and other miniaturised components


Photo: Imbut

SANDLER

Street 3.1, Number D54 – welcome in the world of nonwovens

At this year's Techtextil exhibition, Sandler AG invites visitors to a garden of nonwoven novelties at no. D54: A veritable bouquet of high-tech materials for acoustic insulation in the home and the office, for transportation, and for filtration awaits the professional audience on an excursion to the home of innovative nonwovens.

At home is the watchword, because Sandler nonwovens for various applications render our home more comfortable.

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. In partition walls sound-insulating nonwovens create optimum conversational acoustics. These textile solutions also provide for a quieter every-day work-life in office partitions, additionally functioning as a design feature for individual room design. 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.

Filter media provide clean air to breath – for optimum indoor air quality at home as well as in industrial buildings. Sandler's latest development for this application are "enAIRsave" pocket filter media. Apart from excellent filtration performance, they put a premium on energy conservation.

On the go, Sandler nonwovens ensure a comfortable drive, particularly on long trips – in the automobile, in bus, train or the working vehicle at the construction site.

[www.sandler.de]
[Techtextil | Hall 3.1 Booth D54]

Welcome in the world of nonwovens at Sandler's home in Frankfurt at Techtextil

You are looking for ...

... an innovative and reliable technology supplier for the challenges of tomorrow, you should definitely look at the booth. As one of the market leader in the manufacturing of electronic drive motor and controls for industrial sewing machines we remain oriented in the latest industry trends.

[Efka – Frankl & Kirchner]
[Texprocess | Hall 5.1 Booth B71]

Getzner's textiles are used as balloon and sail materials and elsewhere

GETZNER TEXTIL

Skills and opportunities meet technical textiles from Getzner

Getzner Textil AG was founded as a family business in Bludenz, Austria, in 1818. Today it is one of the world's leading producers of high quality damask clothing fabric (Africa damask), fashion fabrics for shirts, blouses and corporate fashion, and the latest string to its bow, technical textiles.

Technical textiles is a field that has risen significantly in value and undergone notable development in recent years for Getzner Textil, specifically through strategic acquisitions and the expansion of its own facilities and resources, so that the company is today an important partner for several international customers of repute.

The textiles are used primarily in the fields of functional clothing, industry and for balloons and sails. Getzner's research and development makes use of the best-equipped laboratories and its own teams, providing textile solutions that use all kinds of fibres. Alongside the development of individual, technologically highly demanding textiles, it supplies its customers with a wide range of base products that can be individualised in many different ways. The range is divided into two product sectors: mobility and technical textiles.

Mobility includes upholstery fabrics using various production technologies such as jacquard velours, high quality dobby velours and jacquard flat woven textiles; high quality light and heavy filament fibres are also produced, together with customer-specific final make-ups.

The field of technical textiles includes Getzner woven products made from filament and staple fibre yarns, as well as the finishing of knitted, crocheted and woven fabrics made from cotton, viscose, polyester, aramids and blends of fibre and filament.

Warmth and protection – these have always been the two core functions of textile fabrics. Through combinations of various materials and the use of high-tech weaving processes, the range of possibilities has now vastly increased. Getzner textiles, for example, can provide functions such as waterproofing, antibacterial protection, moisture control, temperature control, flame retardancy, lightness, elasticity, antistatic function, high tensile strength and abrasion resistance.

[www.getzner.at]
[Techtextil | Hall 6.1 Booth B99]

ONTEC

The clever solution for efficient production of textile scrims

Anyone looking for clever solutions for textiles should not pass up the opportunity to visit Ontec. The company specialises in the manufacture of textile scrims which are generally around 20 to 40 percent thinner than a woven fabric of identical construction and with comparable strength values. In the finished product, the grid structure of these textile scrims is less obvious to the eye, resulting in a smoother, more uniform surface. Depending on the yarn type, either Latex, acrylate or PVC dispersions/PVC plastisols can be used for bonding.

The non-woven textile scrim is subsequently pre-set through contact roller drying and then completely dried in an IR drying step. It is also possible to feed in different materials such as non-wovens, films and similar and to laminate and dry them onto the scrim fabric. Either one or two layers can be fed in at the same time.

[www.ontec-automation.de]
[Techtextil | Hall 3.1 Booth J24]

Ontec specialises in the manufacture of textile scrims

Photo: Perlon

USA: Hahl Inc., Lexington – South Carolina. The Perlon Group is expanding

PERLON GROUP

The filament company invests

Just over a year after the merger of Perlon Nextrusion and Hahl-Pedex into the Perlon Group, the worldwide leading manufacturer of synthetic filaments, the company is consistently implementing important measures for its internationalisation strategy: The signing ceremony for the new building construction at the production site in China took place in Haining City at the beginning of 2017 in the presence of the top management team of the Perlon Group. The Perlon Group is also expanding its production facility in the USA. The construction of a new 650m² warehouse for finished products on the company site in Lexington will provide the company with the urgently required space in the production hall for synthetic filaments. The group of companies employs 3,000 people and generates revenues of 500m. At the Techtextil trade fair Perlon will exhibit its three product ranges, Qualifil – monofilaments, Hahl – synthetic brush filaments und abrasive filaments and Pedex – filaments for dental and personal hygiene applications. The focus will be on the Antistat product, a polyester-based bicomponent monofilament with carbon in the sheath. The low resistance of only 104 Ohm/cm helps to dissipate static charge during industrial manufacturing processes. The Perlon Group will surprise its trade fair visitors with further innovative bicomponent solutions.

[www.perlon.com]

[Techtextil | Hall 4.1 Booth C14]

Vetron/Typical

Vetron Trace is a sensor based technology, giving full control for the first time over an industrial sewing machine without using a pedal. Trace tracks the natural working movements of the operator, anticipating the operator's intentions.

[Texprocess | Hall 5.1 Booth B50]

exhibition highlight

IVGT

IVGT Association news

Consistent growth in technical textiles

New study about technical textiles

Industry consultants Gherzi, on the initiative of the European textile association Euratex and commissioned by the European Commission, have carried out a study on the international market for technical textiles and the sales opportunities for European producers. The study was presented for the first time on 23 February 2017 in Germany by Mr Hendrik H. van Delden, as part of a whole-day event at the IVGT attended by Mr Klaus Huneke, President of Euratex, and Mr Lutz Walter, Director of the European Technology Platform (ETP).

The study provides suggestions to European textile producers as to how they can gain better access to foreign markets, with strategic knowledge about the situation and product requirements in those markets. The four countries concerned – the USA, Brazil, South Korea and Japan – were selected as examples to illustrate regional factors such as high import duties, standards and so on. The study provides an overview of the global and European market for technical textiles. The focal areas for product analysis were yarns (filament and staple fibre yarns such as medical suture products), woven textiles, warp and weft knitted fabrics (both as grey goods and with finishes), and non-wovens (geo-textiles, filtration and automotive acoustics).

According to the report, the market for technical textiles in these product groups is worth a total of USD 147bn. Between 2010 and 2014, the global market for technical textiles grew by more than 6 percent a year, with above-average growth in the case of non-wovens. European turnover in technical textiles amounts to some USD 30bn a year, of which 48 percent is accounted for by exports. All of the markets examined offer substantial growth potential. The study runs to 385 pages and contains more than 220 graphic diagrams. Under EU regulations, the study is available exclusively to companies and organisations that are 100 percent European-owned.

IVGT events during the exhibition

9 May:
- 3 hotspot tours: highlights of 6 textile producers in tours each lasting 60 minutes

10 May:
- student information event
- IVGT and ETT Club press conference
- networking meeting for taping and braiding specialists

11 May:
- student information event
- technical textiles market discussion
- meeting of members of the European Technical Textile Club

12 May:
- Press conference: High-Tex from Germany 2018 – German manufacturers' exhibition

Strong increase in raw materials prices

Since late 2016, the IVGT has been noting with concern the continuously increasing prices for materials used as inputs in the production of polyester and polyamide 6.6. At the beginning of the new year, though, a further dramatic price rise occurred in raw materials.

Behind the steady increase, in particular in the case of polyamide 6.6, lie price changes in the most important basic raw materials butadeine, cyclohexane and ammonium. The global market for butadeine in particular is currently in turmoil. Led by China, a major consumer of this raw material, prices for butadeine are exploding and in February 2017 were already about 50% higher than the previous month.

This situation is affecting the entire textile chain and as a consequence, fibre manufacturers have now increased their own prices. In addition, companies in the German textile industry are also being affected by rising energy costs.

[www.ivgt.de]
[Techtextil | Hall 3.1 Booth F47]

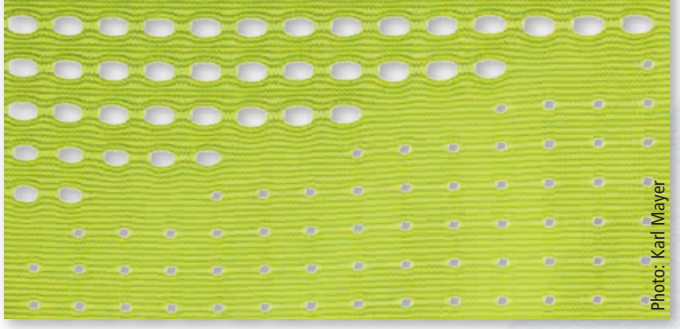


Photo: Karl Mayer

High-performance, warp-knitted textiles maximise performance and comfort in the sports and athleisure sectors

KARL MAYER

Building together for the future

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. General Building Regulations Approval has already been applied for to cover certain concrete components containing weft-inserted, warp-knitted textiles.

Stylish, functional stretch and non-stretch 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 open-work 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. 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.

[www.karlmayer.com]
[Techtextil | Hall 3.0 Booth E18]

SHIMA SEIKI

The latest in Whole-Garment knitting technology

MACH2XS123 15 L Whole Garment knitting machine

Photo: Shima Seiki

Shima Seiki will participate at Techtextil together with its Italian subsidiary Shima Seiki Italia. On display will be the company's latest technological contributions aimed at promoting knitted applications in the field of technical textiles, designed and produced on Shima Seiki's lineup of advanced computer design systems and computerised flat knitting machines. Knitting offers great potential for technical textiles with its inherent characteristics; stretch and compression. WholeGarment knitting by Shima Seiki maximises the benefits of shaped knitting by expanding that potential to 3 dimensions.

The latest in WholeGarment knitting technology will be demonstrated at Techtextil by the flagship MACH2XS machine that features the company's original SlideNeedle on 4 needle beds and patented spring-loaded full-time sinker system. Capable of WholeGarment knitting in all-needles, MACH2XS offers great flexibility for knitting high-quality WholeGarment products with a seemingly endless variety of knit patterns at very high speeds and efficiency, all while minimising dependence upon labour-intensive sewing and linking. WholeGarment knitting is capable of producing knitted items in their entirety on the machine, and allows 3D forms and tubing to be produced without sewing. The seam-free nature of the process also ensures continuity of yarn, allowing functional yarns such as conductive yarns to wrap around the entire body for applications in smart garments and wearable technology.

The latest version of Shima Seiki's SDS-ONE APEX3 3D design system will also be available for demonstrations in design and simulation of various technical textiles.

[www.shimaseiki.eu]
[Techtextil | Hall 6.1 Booth C52]

If you are looking for ...

… innovation and quality combined with passion and perfection, make sure to visit our booth. Innovative developments in the fields of hand ironing technology and steam generation as well as the shirt finisher, pressing machines and the new generation of Veit fusing machines will be in the focus.

[Veit GmbH]
[Texprocess | Hall 6.0 Booth B10]

The delivery speed of 400 m/min is world class in twisting industrial yarns. The Techno-Corder TC2

Visit textile network and the VDMD at Techtextil/ Texprocess in the Foyer of Hall 4.1 and enjoy our "Space in Living" in our Chill Lounge.

exhibition highlight

ALLMA

High-quality premium yarns with even more flexibility

Allma is delighted to welcome customers and visitors to inform them about the latest developments in twisting technology for industrial yarns. On the two-for-one twisting machine Techno-Corder TC2 for industrial yarns for example up to 9-ply yarn constructions can now be processed. The innovative Flexiply device allows for the production of innovative hybrid yarns. As a leading company in twisting and cabling of industrial yarns and tire cord, Allma sets benchmarks in terms of flexibility, productivity and quality.
The Techno-Corder TC2 is characterised in particular by its unique flexibility in production, material and yarn counts of industrial yarns. 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 Techno-Corder TC2. Through the use of different materials such as polyamide and aramid and different twists, yarns with new characteristics are created for technical textiles, tires and mechanical rubber goods (MRG).

[www.allma.saurer.com]
[Techtextil | Hall 3.0 Booth D02]

GROZ-BECKERT

Innovations of the product areas

A highlight of the weaving portfolio is the Posi-Leno leno system, which boosts efficiency by up to 100 percent. With its product area Felting the company 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. For Spunlance customers, Groz-Beckert is presenting 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. Presenting the Quality Management INH (Ideal Needle Handling) at this year's Techtextil, the area of Sewing is waving the banner of process optimization (read more on page 42). 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.

[www.groz-beckert.com]
[Techtextil | Hall 3.0 Booth F03]

"The acrylic weaving machine" by Groz-Beckert will provide insights into the operation of heald frames, healds, warp stop motions and drop wires

E-broidery illuminated textiles experiment with light and shadow

E-BROIDERY ELEMENTS

Light enchantment with textiles

How about bathing a room in bright light or bringing it to life with the gentle gleam of changing lights? The high-quality, globally unique e-broidery illuminated textiles experiment with light and shadow, creating sunny days or starry nights. Small, lightweight electronic components, hidden in the seam, are the secret of this new product experience. Starting from a minimum length of one metre, e-broidery LED-textiles can be customised with respect to the lighting design, dimensions, making-up and power connection. These bespoke e-broidery curtains are produced in St.Gallen, Switzerland. The installation created by producer Forster Rohner Textile Innovations promises to be an enchanting highlight of the fair.

[www.e-broidery.ch]
[Texprocess | Hall 6.1 Booth B09]

TEXPROCESS

Digital textile printing a focal-point theme

Digital textile printing is one of the focal-point themes at this year's Texprocess with the European Digital Textile Conference and Texprocess Forum. Moreover, the Digital Textile Microfactory in Hall 6.0 will present a textile production chain in action – from design, via digital printing and cutting, to making up. As well, numerous exhibitors, including Brother, Epson, Ergosoft and Mimaki, will be showing digital printing technologies.

"We are expanding our programme on the subject of digital printing in response to the growing demand for digitalised technologies for processing garments, technical textiles and flexible materials. This programme is of particular interest to manufacturers of technical textiles and companies that process textiles", says Michael Jänecke, Head of Brand Management, Textiles and Textile Technologies, Messe Frankfurt.

Elgar Straub, Managing Director, VDMA Textile Care, Fabric and Leather Technologies: "Thanks to digital textile printing, it is now possible to print apparel, shoes and technical textiles directly. Given the general trend towards individualisation, demand for individualised products is increasing in the apparel industry. This is turning digital textile printing into one of the future-oriented technologies for companies that process garments and textiles."

Originally developed for fashion fabrics, digital textile printing is also used for printing technical textiles, such as sports clothing, and textiles for the automobile industry whereby the primary focus is on functionalising textiles. For example, swimwear can be made more colour fast to resist frequent contact with water and chlorine, and exposure to the sun. Also, textiles can be finished by applying chemicals via an inkjet printer and thus be given dirt-repellent, antimicrobial and fire-retardant properties. Additionally, using an inkjet printer in the finishing process is advantageous in terms of sustainability and efficiency. Texprocess is being held concurrently with Techtextil.

[www.texprocess.de]

Digital printing offers many chances

Photo: Messe Frankfurt

Are you looking for ...

... high-quality pressing technology for outerwear, you should definitely visit our booth.

[Hornung GmbH Indupress & Co. KG]
[Texprocess | Hall 6.0 Booth B22]

Photo: Mimaki

One printer, two types of ink: The novel solution by Mimaki provides quick and efficient printing on synthetic (e.g. polyester) or vegetable (cotton, linen) textile fibres for the price of an entry level solution

MIMAKI

Printing made even more flexible

Mimaki is expanding its range of direct-to-textile printers (Tx300P-1800 and TX1800B) to include a model capable of using both textile pigment and sublimation ink at the same time. Thus, one single printing system makes it possible to print directly onto a wide variety of textiles without having to switch ink systems. With this novel and unique technology Mimaki has achieved a breakthrough in textile printing, increasing productivity and versatility.

"The textile and garment industry faces the challenge of providing short delivery times and customised products in small production lots. In response, we have developed this new printing system helping manufacturers to efficiently produce textiles and patterns in small quantities." Ronald van den Broek, General Manager Sales at Mimaki Europe elaborates: "This means that, now, print service providers can quickly and easily switch between fabrics and select the corresponding ink system. Additionally, since these inks do not require finishing processes like washing or steaming, they are much more eco-friendly."

Mimaki offers five different types of ink for textile printing: sublimation, dispersion, textile pigment, reactive and acid inks. Conventionally, each type of ink requires a different printer. With Mimaki's new development, however, textile producers are able to use the two most common inks in one and the same printing system. The textile printers Tx300P-1800 and Tx300P-1800B are designed to simultaneously print with textile pigment ink TP400 (for cotton and hemp fibres) as well as sublimation ink Sb420 (for polyester). As both types of ink do not require washing or steaming, this process also eliminates the need for large spaces, high volumes of water and highly specialised operating staff. The only set-up necessary are the printer itself and a work station for fixing the inks.

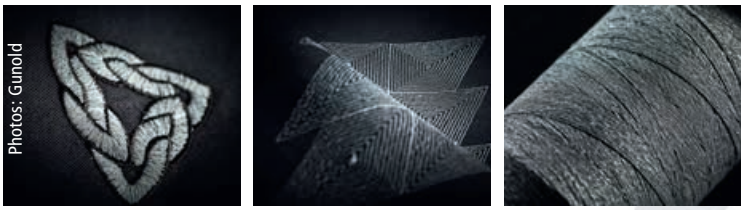
[www.mimakieurope.de]
[Texprocess | Hall 6.0 Booth B57]

GUNOLD

„Cry" – Crying with happiness

At this year´s Texprocess, Gunold's booth will sparkle and glitter! In time for this year´s 90th anniversary, the renowned company from Stockstadt has added a real thread innovation – Cry – to its extensive range of threads. The special feature of this thread innovation is retro-reflection caused by thousands of microscopically small glass beads. Glass beads and thread? Until recently this combination seemed technically unthinkable and indeed the realization is truly a masterpiece! Marketing Manager Stephan Gunold is particularly enthusiastic about the latest product of the company's extensive range of threads: "We are absolutely convinced of Cry. It is extremely innovative and allows for completely new optics on textiles, offering exactly what companies are currently looking for most A novelty that combines function and design."

[www.gunold.de]
[Texprocess | Hall 6.0 Booth B59]



Photos: Gunold

Appliqués, decorative seams or embroidery designs created with Cry result in fascinating sparkling effects and trade show visitors will be truly amazed!

AMANN GROUP

Specialist threads and yarns

Amann is poised to present not only its wide range of special threads and yarns, but also a variety of different applications and projects from various sectors. Sabaflex, a multi-talented product for all stretch materials, is ideal for achieving extremely stretchy seams. This sewing thread gives seams that little bit of extra stretch whilst minimising the risk of breakages even when exposed to extreme loads. Be it on footwear or leather, Serafil and Serabraid are perfect for decorative seams. Silvertech, the conductive speciality sewing and embroidery thread with a silver coating, has been developed by Amann specifically for light-emitting embroidery. In the field of workwear, this thread could, for example, be used on protective LED jackets. All of Amann's water-resistant finishes are now available in PFC-free variations which are kinder to the environment. At Techtextil, Amann will be presenting its newly established Amann Innovation Lab or "textile think-tank".

[www.amann.com]
[Techtextil | Hall 4.1 Booth B72]
[Texprocess | Hall 5.0 Booth B51]

Photo: Amann

Ever true to its "thinking solutions" claim, the Amann Innovation Lab develops solutions for tomorrow's market needs

Shima Seiki

The latest in Whole-Garment knitting technology at Techtextil will be demonstrated by the flagship MACH2XS machine that features the company's original Slide-Needle on 4 needle beds and patented spring-loaded full-time sinker system. Capable of Whole-Garment knitting in all-needles, MACH2XS offers great flexibility for knitting high-quality Whole-Garment products with a seemingly endless variety of knit patterns at very high speeds and efficiency, all while minimising dependence upon labour-intensive sewing and linking.

[Techtextil | Hall 6.1 Booth D51]

exhibition highlight

Enabled by digitization: 3D product development technology to experience it's breakthrough for fashion and apparel. The picture introduces a few of many Gerber avatars

Photo: Gerber Technology

GERBER TECHNOLOGY

"Embrace Your Digital Reality"

Based on its theme encouraging visitors to "Embrace Your Digital Reality", Gerber Technology is showcasing its digital solutions in Frankfurt. Everyone in the industry – from major players to small start-up labels – is talking about the industry's digital transformation. Mike Elia, President and CEO of Gerber Technology, says the shift is driven by a more tech-savvy customer base, a faster "fast fashion" cycle, and the need to solve massive inventory and returns issues. At Texprocess 2017, Gerber will showcase its Digital Solutions including the newest releases of the Yunique PLM product lifecycle management software, as well as the 2D and 3D developments for the Accu-Mark pattern design, grading and marker making solution. Moreover, the production planning software Accu-Plan will be available for demonstrations in various languages. Since Gerber's Digital Solutions architecture uses common file structures, data can easily be passed to the cut room, where smart machines, like the Gerber-spreader XLs series and Gerber Paragon line of multi-ply Gerber-cutters, can process the order with a simple barcode scan.

[www.gerbertechnology.com]

[Texprocess | Hall 4.0 Booth B31]

If you are looking for ...

.. embroidery machines, remember to visit Mountek and Tajima's stand. Here, you will find the entire range of Tajima embroidery machines, including the young TMAR model and the brand-new TMBU model. This year, Tajima is shining the spotlight on special embroidery processes and accessories. The company is featuring a leather embroidery machine developed in cooperation with the Italian Studio Auriga and Tajima Japan. Moreover, a laser bridge from Seit Elettronica, Italy, will be installed over several embroidery machines and shown in action. This system makes it possible to carry out cutting and engraving operations in and on textiles directly on the embroidery machines. In addition, Filacon Systems, Mountek's special machinery division, is showing the laying of carbon fibre rovings, the processing of heating wires as well as a machine with a special device for placing and fixing electrical components on textiles. The Edopath fibre laying software and the new Wirepath wire laying software will also be unveiled.

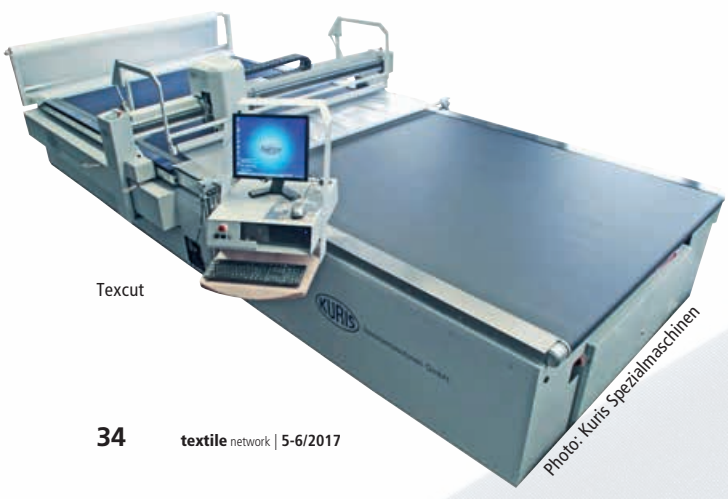
[www.mountek.de]
[Texprocess | Hall 6.0 Booth B11]
[Techtextil | Hall 3.0 Booth J12]

KURIS SPEZIALMASCHINEN

New Generation of Texcut

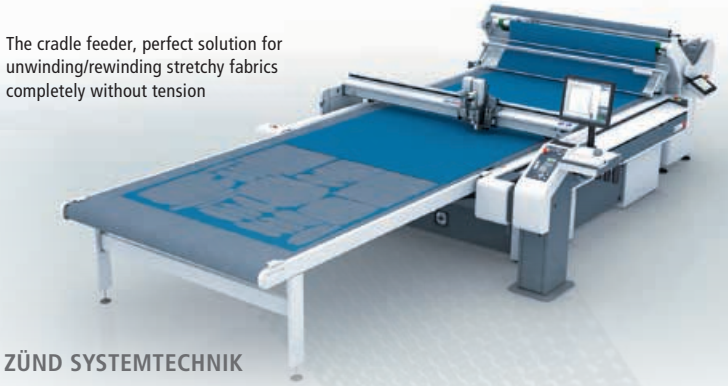
Kuris Spezialmaschinen GmbH, developer and manufacturer of innovative spreading and cutting technology, offers one of the broadest product programs within the industry. In the last few years, further solutions for different processes were requested in the course of automation and diversification. These include optical pattern recognition, fully automated labeling before cutting until a new cutting process into the product portfolio – the ultrasonic cutting.
Highlights at Texprocess are the new generation of the Texcut, as well as the corresponding fully automatic labeling unit as a useful addition for a highly efficient spreading and cutting process.

[www.kuris.de]
[Texprocess | Hall 4.0 Booth E81]



Texcut

Photo: Kuris Spezialmaschinen



The cradle feeder, perfect solution for unwinding/rewinding stretchy fabrics completely without tension

Photo: Zünd Systemtechnik

ZÜND SYSTEMTECHNIK

Digitizing is main focus

Zünd is presenting cutting solutions that allow for seamless integration in digital workflows. Zünd cutters are extremely flexible and designed to make cutting of textile materials efficient and economical. They give customers opportunities to create new business models through innovative digital cutting applications. Zünd has always put a great deal of emphasis on producing cutting and software solutions that are completely modular. Zünd's user interface and workflow suite, Zünd Cut Center ZCC, is compatible with all commonly used RIPs. To make the cutting process as simple and efficient as possible, a camera-based registration system, in combination with ZCC, takes care of matching cut to print. Ensuring accurate registration even with highly stretchy fabrics, the system can be made to capture parts of the print instead of using traditional registration marks. Zünd digital cutting systems are highly modular. At Texprocess a Zünd S3 system illustrates how this modularity benefits the user.

[www.zund.com]
[Texprocess | Hall 4.0 Booth 40]

GERTSCH CONSULTING & MODE VISION

Personalized Clothing & Industry 4.0

Photo: Gertsch Consulting & Mode Vision

Innovations for the Plattform "Pod – Pattern on Demand"

Fully automated processes are needed in order to to make one-piece production batches quickly, reliably and on-demand – particularly when it comes to providing personalized, made-to-measure clothing. Gertsch Consulting & Mode Vision, based in Switzerland, works actively in this field and will be presenting some interesting innovations for its platform "Pod – Pattern on Demand" at Texprocess 2017.
Now customers can access a newly developed application programming interface (API) for integrating the "Pod configurator" into their own web shops (e.g. Magento). The customer can in turn act as a co-designer and use this configurator to build their article of clothing. The primary advantage here is that as soon as an order is placed into the shopping cart in the online store, it also ends up in the "Pod – Pattern on Demand" system. No manual item comparison needs to be made on two different systems, since the web shop can obtain all of the data from the "Pod" system.

[www.gertsch.ch]
[Techtextil | Hall 4.0 Booth D06]

HUMAN SOLUTIONS

Digital transformation at its best

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?
The Human Solutions Group 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 in-formation 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.
The Digital Showroom, in which people in different locations can plan, view and revise the next collection. "Many companies in the apparel industry are currently focusing on digitization; but at which point in product development does it makes sense to start working digitally? And when digitization has been introduced, what's the next step? We'll be answering these questions at the Texprocess," says Dr. Andreas Seidl, CEO of the Human Solutions Group.

[www.human-solutions.com]
[Texprocess | Hall 4.0 Booth C21]


Photo: Human Solutions

Digital-Moodboard Human Solutions

JUKI

DDL-9000C – Digitalisation of the sewing process

Digitalisation of key parameters means factories no longer needs to invest time and effort in manually adjusting a machine line. The DDL-9000C can be adjusted once and the key settings copied across a line via the Juki Android App. The numerical entry of parameters means that exact values can be set and replicated on other machines ensure consistency that is not achievable with manual adjustments. Parameters that can be digitally set include the feed dog height, thread tension and many more.

[www.jukieurope.com]
[Texprocess | Halle 5.0 Booth C90]

A highlight at Texprocess:
Juki DDL-9000C

Photo: Juki

Photo: iStock

"With the support of its new software, Intex promises that the goods are always available at the right place"

INTEX

Brand new ERP and PLM Software

Online trading has been recording inexorable and tremendous growth. This, however, without the disappearance of other channels such as stationary trading, mail order or home-shopping. To always reach and win the customer over at all times, fashion sellers must above all understand how omni-channelling works. This means optimally distributing the goods on all sales channels, adjusting them to daily requirements and linking the channels together.

To meet these demands as well as the constant market changes caused by digitalisation, globalisation and verticalisation, the fashion industry must have control over its business processes. To do this, it is imperative to use smart software applications. Intex, an ERP and PLM provider, recognised these very challenges at an early stage and is now introducing its completely newly developed web application IX Fusion just in time for the Texprocess trade fair. IX Fusion creates transparency, accelerates supply chains and perfectly distributes the goods over the various sales channels.

In addition to the high-end solution IX Fusion Pro, which is precisely customised to the customer's requirements, there is also now the sleeker version IX Fusion Lite which particularly illustrates standard processes. The customer can also select add-on modules from the IX Fusion Plus range and book them, too. The range extends from PLM and SCM applications through modules which can manage production, sales or storage to features for web orders and CRM. The range under the IX Fusion App label also includes numerous modules as mobile apps. The customer can choose to either purchase software licences or to settle for the IX Fusion Cloud, thus spreading its investment over a longer period of time. If desired, a separate Intex unit offers IX Fusion Services and provides Intex customers with the IT infrastructure required.

But it doesn't end there. The software has so-called cockpits which ensure that the user only sees its own relevant data and is given advance warning on critical processes. This enables the highest level of management by exception.

According to a statement by Intex, for the first time ever a fully integrated system is available to the fashion industry which illustrates the entire value-added chain and which can be managed without almost any interfaces to third-party systems.

[www.intex.de]

[Texprocess | Hall 4.0 Booth E42]

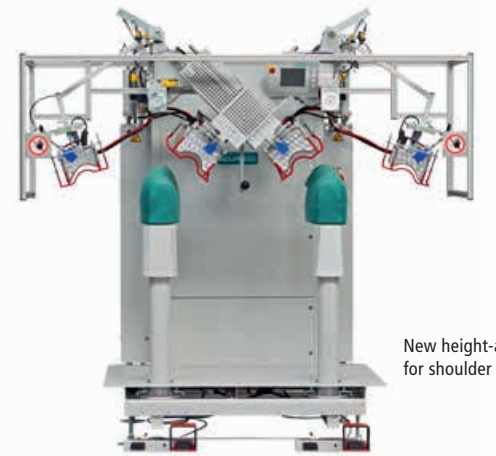
HORNUNG INDUPRESS

A new height-adjustment for shoulder pads

Hornung Indupress offers high-quality pressing technology for outerwear and has now a new generation of touchscreen microprocessor machine control and a new height-adjustment for shoulder pads: electropneumatic angular adjustment of the lower shape for modification to different shoulder pad sizes (in 9 steps each 2 mm) to be selected on the Touchscreen.

[www.indupress.de]

[Texprocess | Hall 6.0 Booth B22]



New height-adjustment for shoulder pads

Photo: Hornung GmbH Indupress & Co. KG

Juki

Digitalisation of key parameters means factories no longer need to invest time and effort in manually adjusting a machine line. The DDL-9000C can be adjusted once and the key settings copied across a line via the Juki Android App. The numerical entry of parameters means that exact values can be set and replicated on other machines, ensuring consistency that is not achievable with manual adjustments. Parameters that can be digitally set include the feed dog height, thread tension and many more.

[Texprocess I Hall 5.0 Booth C90]

exhibition highlight

If you are looking for ...

... from the heart valve to the tailgate? The scientific employees of ITA Institut für Textiltechnik develop light and high-strength materials, machines and processes which assist you in reducing your costs, devising new products and increasing your productivity. The ITA GmbH supports the implementation from research into practical application.

[ITA GmbH | Elmatex]
[Techtextil | Hall 3.0 Booth D05]

With the Pfaff 3819 "curved" sewing of programmed straight and curved segments is possible with just one machine for the first time

Photo: Pfaff

PFAFF

Absolute innovation in sewing curved jeans waistbands

The workstation Pfaff 3819 is a new sewing solution for the highest demands and standards. The machine, working with "material from the reel" delivers maximum productivity while maintaining consistent seam quality.
The entire sewing and cutting cycle may be programmed: protrusion of the waistband, skipped stitches, start and stop of the waistband. The special "curved version" of the Pfaff 3819 which is designed for processing fashionable ladies' jeans is a world first. The challenge in these jeans is attaching a curved waistband in a neat manner. In this area, the waistband is divided into different curved and straight segments to optimally fit a woman's anatomy.

With the Pfaff 3819 "curved" sewing of programmed straight and curved segments is possible with just one machine for the first time.
An innovative puller system combined with intelligent software is the core of this new development. Different seam sections are available upon demand via a knee switch (curved and straight). The Pfaff 3819 enables the user to attach a perfectly curved waistband in one operation using one machine. This machine will be shown for the first time at the Texprocess exhibition

[www.pfaff-industrial.de]
[Techtextil | Hall 5.1 Booth B80]

Die CMS 330 HP W

Photo: Stoll

STOLL

Modern flat knitting technologies

Stoll will be showcasing a large variety of flat knit application examples at the Techtextil show. 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, orthetic 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.

[www.stoll.com]
[Techtextil | Halle 3.0 Booth F39]

Vetronnet

Photo: Xi'an Typical Europe

XI'AN TYPICAL EUROPE

Innovative sewing and welding technology

Vetron/Typical will show two main highlights: These are the "Vetronnet", a cloud management software for the control and optimisation of sewing processes, and Vetron Trace. CEO Holger Labes: "This year, we're appearing with our joint brand Vetron/Typical for the first time as we wish to demonstrate our close collaboration with our Chinese parent, whilst enhancing the quality of the products sold under the Typical brand through the input of our German engineers and technicians." Vetron Trace is a sensor-based technology which, for the first time, gives full control of an industrial sewing machine without using a pedal. Trace tracks the natural working movements of the operator anticipating their intention. Sensors analyse the movement of the hands in 3 dimensions, sending the information in real time to the machine. The sensors measure, among others, the forward motion of the hands, regulating the speed of the machine accordingly. Special functions are triggered by customisable gestures. Removing the pedal results in huge improvements in terms of ergonomics and safety. As a control device outside the operator's field of view, the pedal has the potential risk of unintended machine run. In future, gesture control has room to develop further safety functions such as stopping the machine when the operator's hand is too close to the needle area. Especially in terms of ergonomics, this innovative technology has strong advantages over a pedal. It is particularly beneficial for standing operations.

[www.typical-europe.com]
[www.vetron-europe.com]
[Texprocess | Hall 5.1 Booth B50 and B54]

Photo: Efka

Efka – the most powerful sewing machine motor ever

EFKA – FRANKL & KIRCHNER

A fancy app with real added value

At the last Texprocess Efka introduced the fundament for the future with the new 6xx Series controls and new programming panels with communication via smartphone or tablet app. And this is only the beginning. That is why the first highlight is the new Efka app which redefines the term 'user friendly'. Functions such as changing parameters and sending those back and forth between controller and smartphone via NFC were already available. The remote maintenance application has been extended in accordance with Industry 4.0 so our technicians can now connect to the control via Bluetooth and the app. Problems can be analyzed more easily and quickly in real-time and are directly addressed by bi-directional communication. Other functions such as video training or signal tests are planned and the functionality of the app will be steadily expanded going forward. Best of all, using the Efka app is free and available for all our customers. The second highlight at this year's show is the introduction of our most powerful motor yet produced – the new DC1280. With 16 Nm of torque at 2,000 RPM, this motor is designed for the most demanding applications and is compatible with all the AB6xx controls like our other motors.
Efka's unique Direct Drive technology is another show highlight with a growing number of head mount brackets increasingly being used. In addition is the new development for fully retractable sewing machines.

[www.efka.net]
[Texprocess | Hall 5.1 Booth B71]

Hornung Indupress

The provider of high-quality pressing technology for outerwear is presenting a new generation of touchscreen microprocessor machine control solutions for Industry 4.0 (integrated into the microprocessor control) and a new height-adjustment for shoulder pads: electro-pneumatic angular adjustment of the lower shape for modification to different shoulder pad sizes (in 9 steps, each 2 mm) to be selected on the touchscreen.

[Texprocess | Hall 6.0 Booth B22]

exhibition highlight

M-Type Premium sewing machine

Photo: Dürkopp Adler

DÜRKOPP ADLER

Sewing production in the digital age

The "Industry 4.0" pioneer presents a special highlight, a system for optimising sewing production based on an extremely large digital machinery network. It also incorporates a further development of the programmable M-Type Premium sewing machine for moderately heavy materials, with which complete networks can easily be created. In the field of automated garment production, a completely new generation of sewing systems will be unveiled for piped pockets. The company also has a real experience in store for trade buyers.

[www.duerkopp-adler.com]
[Texprocess | Hall 5.1 Booth B90]

CORDURA BRAND AND DUPONT TATE & LYLE BIO PRODUCTS

Shape the future of sustainable textiles

Invista's Cordura brand and Dupont Tate & Lyle Bio Products announce a collaboration to deliver a new chapter in innovative sustainable textile solutions for performance fabrics. Now, designers of apparel, footwear and gear will have access to leading durable performance fabrics that incorporate sustainable materials.
Cindy McNaull, global Cordura brand and marketing director: "At the core of our brand's DNA is a dedication to delivering durable next generation fabric technologies. Products made with Cordura fabrics are long-lasting, which means they need to be replaced less often, helping reduce waste. We constantly look at ways to increase the utility and durability of our products and ways we can benefit the environment. Ultimately, our belief is that 'Sustainability Begins With Products That Last', and this forms the perfect backdrop for our collaboration with DuPont Tate & Lyle Bio Products."

Photo: Invista

Sustainability Begins With Products That Last

Dupont Tate & Lyle's Susterra propanediol durable coatings and waterproof, breathable membranes are manufactured through a proprietary fermentation process using plant-derived glucose. In addition to being renewably sourced, Susterra is manufactured using a sustainable process that produces 50 percent less greenhouse gas emissions and consumes 42 percent less non-renewable energy than equivalent petroleum-based diols. At the manufacturing facility's full capacity, that is equivalent to taking 40,000 passenger cars off the road and turning off one million 100W incandescent lightbulbs for one full year.

[www.invista.com]
[Techtextil | Hall 4.1 Booth G25]

If you've ever asked yourself ...

…how disruptive a new technology will be for my company – after all, sound bites such as these always make the headlines – you should speak to the experts at Gerber Technology's stand, attend the presentations at the Texprocess Forum, read the textile network/VDMD interview series and visit the iaf Symposium to gain plenty of inspiration and positive insights into new opportunities, consultation options and the implementation of innovative ideas – also for SMEs.

[Gerber Technology]
[Texprocess | Hall 4.0 Booth B31]


Dilo Compact Line for Needling Carbon Fibres

Photo: Dilo

DILO GROUP

All about staple fibre nonwoven production lines

Dilo machines may be used for the production of nonwovens used in automotives, as floor coverings, synthetic leather, geotextiles and for filtration, just to name the most important fields of application. An example of an innovation is the "Vector 200", a new crosslapper by Dilo Machines which is unique with an infeed speed of more than 200 m/min. 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. 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. Furthermore, Dilo Group 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, Dilo Group's portfolio includes carding systems of wider working width and higher web speeds. Dilo Temafa offers in close cooperation with Dilo Spinnbau 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.

[www.dilo.de]
[Techtextil | Hall 3.0 Booth H31]

Leister Technologies AG

Laser welding – a brand new technoloy

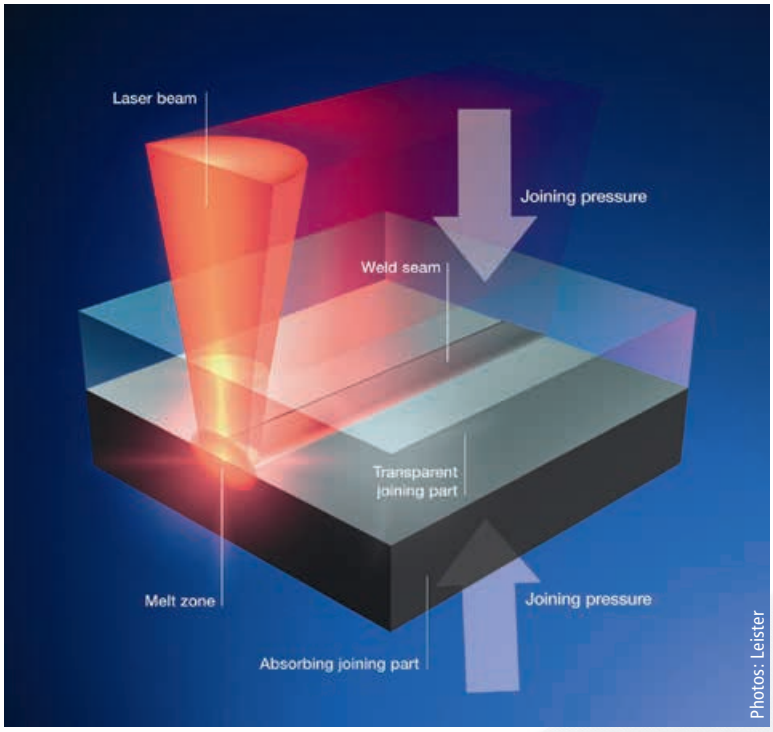
Hot air and ultrasound welding are joining methods that have been known for decades. Laser welding on the other hand is a brand new technology that is not yet being used for industrial manufacturing in the field of apparel production.

Leister produces plastic welding equipment and laser systems, and has extensive experience with the welding of thermoplastic synthetic materials. The Swiss company has been researching laser technology for many years, and has now developed a textile laser welding machine that works similar to a normal sewing machine. This high-end piece of equipment is currently being used for the production of apparel prototypes. More than 40 specialists work on developing the technologies of the future.

The benefits

The benefits of laser-welded textiles are readily apparent. There is no damage whatsoever to the exterior of the textile material, creating a seamless effect. Laser-welded seams are extremely flat, elastic, and skin-friendly. Since laser welding does not require adhesives of any kind, it is also especially environmentally friendly due to the recycling process. But how does laser welding work exactly? Leister works with IR laser systems. Here the optical characteristics of the textile material in the invisible spectral range are relevant. Both an IR-absorbing and a non-IR-absorbing textile material are needed to create seams of high quality. Working with 2 non-IR-absorbing fabrics is possible as well. However, an IR absorber applied either by means of ink jet printing or manually is in part required in this case.

Furthermore, the two thermoplastic materials being welded have to be the same. This means PET only joins reliably with PET, PP only with PP, and so on. Leister has done well with PA6. Numerous tests have also been successfully conducted with PA66. However, blends such as 80 percent PES and 20 percent EL are possible as well. What can be welded together well or not depends mainly on the underlying laws of physics. Out-of-the-box thinking is essential for using this innovative technology. Companies with a pioneering spirit have a unique opportunity to develop their own know-how in this field. Frederike Lehmeier, development engineer at Leister Technical Textiles & Industrial Fabrics: "We have done a lot of research in order to get where we are today. Our experience with laser plastic welding accumulated over many years was advantageous. We already knew how to create firm connections with the help of lasers. However, numerous other strict requirements have to be met for textiles."



Laser welding principle

Photos: Leister

Shoe with multifunction seams

High demands

These depend on the concrete application. In the clothing industry for example, this means the product has to be washable and very comfortable to wear. Since the textile is flexible in comparison to plastic, the textile itself is a challenge, too. Frederike Lehmeier sees great potential in the sports technology field: "Sportswear in direct contact with the skin is exposed to stresses and perspiration. Other focal points may include breathability, skin friendliness and the feel in general."

Aesthetics also have to be considered. The article of clothing should not only be functional but look good as well. Here the color and structure also play a role. In selecting the materials, the designer has to remember that the weldability of the materials being joined is a prerequisite for the laser technology. This means one has to mentally laser-weld the article of clothing once in the planning phase in order to see whether this is possible. The manufacturing process therefore begins with the careful selection of materials, which is a challenging process that requires extensive knowledge.

But this is not a disadvantage. Once a suitable combination of materials is found, the manufacturer is able to successfully fill a niche. Laser welding may first create the impression of stumbling over restrictions. Frederike Lehmeier: "I can imagine that laser welding may be substituted for gluing applications and take over aspects of classic sewing. However, I do not expect an established technique to be simply replaced by laser welding. This innovative technique is a supplement for the textile industry. It opens up entirely new possibilities for designers that could not be implemented in that form before. These have to be identified, and we support companies along the way with our knowledge."

The company's target group could be athletes who put a premium on comfort and performance, but also other customers who want to enjoy ultimate wearer comfort thanks to the smooth, soft laser seams. Undergarments such as bras or bustiers are made even more comfortable with laser welding.

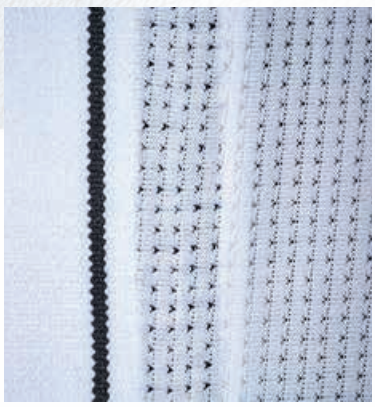
The possibilities are varied. Next to the classic clothing industry, the field of wearables may also be important in the future. In this market segment in particular, a secure connection is becoming more important than ever before for the production of hybrids, for example when sensors or other technical components have to be integrated into clothing.

Frederike Lehmeier, development engineer, Leister Technologies AG

[www.leister.com]
[Techtextil | Hall 3.0 Booth H03
[Nancy Renning]

About Leister Group

- Corporate structure with holding company and 11 subsidiaries
- More than 60 years of experience: Development, Fabrication, Worldwide sales and marketing for technical products
- Strong competence in technique and application
- Innovative company culture
- Niche market player
- Worldwide market leader of plastic welding equipment
- 670 employees in eight countries
- 98 percent export
- Market presence in 125 countries



Laser welded seam

Skin-friendly compression and comfort

Groz-Beckert

INH Quality Management

Needle breakages are part and parcel of garment production. When a needle breaks, finding every fragment is a priority in ensuring that there are no potential risks for customers claiming damages. This is where Groz-Beckert's INH quality management provides a novel solution. INH – Ideal Needle Handling – is designed to support companies in their sewing processes and the handling of sewing machine needles.

INH management helps clients meet different brand requirements through a standardised process, while simultaneously improving environmental standards, boosting productivity and complying with other guidelines. Thus, the system creates a streamlined process for handling needles, from receiving needle shipments to documenting breakages and disposing of them for recycling.

The first step to implementing INH is a thorough analysis of the current procedures for handling sewing machine needles. Based on the results and taking into account customer specifications, the INH system is then customised following three steps of implementation.

INH Secure: Understanding existing procedures and integrating them into INH.

INH Balance: Adding INH elements to existing procedures to create a comprehensive INH process.

INH Environment: Analysing and integrating connected processes into INH.

Therefore, the individually adapted INH quality management system is able to close any gaps between the existing production process and applicable standards and is continually reviewed and revised to that end. INH not only provides smooth and time-effective needle handling. It improves time and labour efficiency, thus significantly reducing idle times and increasing output. Waste is effectively minimised or eliminated entirely. The system ensures that needles leave the sewing factory in a recyclable condition and in their original packaging. Additionally, regulations regarding the handling of broken needles and ergonomically designed equipment strengthen occupational health and safety procedures, protecting seamsters and other staff dealing with sewing machine needles.

Photo: Groz-Beckert

Needle dispensing trolley

Tools

At the core of INH quality management is the needle dispensing (INH) trolley. It is specifically designed for the process and optimally configured to substitute the entire original dispensing station, moving the needle dispending trolley towards the sewing machine instead of the machine towards the trolley. Beyond saving time, this process limits the risk of losing broken needle fragments while moving them to the dispensing counter.

The needle dispending trolley includes any tools needed for replacing and collecting sewing machine needles. New needles are kept ready to be exchanged directly on the machine and used needles are collected in a box for recycling. Broken needles are immediately attached to storage sheets with adhesive tape and stored in hanging folders on the trolley (basic model).

Additionally, the needle dispending trolley features an emergency kit including a second set of basic tools for simultaneously exchanging another needle, if needed.

Finally, the needle return box is for collecting and returning broken and damaged sewing machine needles. A scale indicating the length of the needle helps to determine whether

Broken needle fragments remaining in clothing items could pose a risk for end customers and potentially lead to legal action. Thus, in order to eliminate any grounds for claims, brand owners and clothing manufacturers require sewing factories to keep a detailed record of every single case of needle breakage and to store all fragments for a certain period of time. However, relevant procedures are often not properly defined or factories receive different instructions from different brands, making it difficult for sewing companies and operators to integrate the correct handling of needles into their processes. INH quality management by Groz-Beckert provides the solution.

all of its broken fragments have been found. A needle log is provided for the documentation of any relevant data.

Smart INH

In addition to the basic needle dispensing unit Groz-Beckert offers a smart version of its trolley. The idea is to reduce time as well as the space required for documenting and storing broken needles in folders, while simultaneously providing an immediate and environmentally friendly disposal by taking pictures of damaged and broken needles, and filing them digitally. The standard work station is equipped with a tablet holder and two software components: the mobile app INH@site installed on the tablet as well as the browser software INH@office. Broken or replaced needles are photographed with the app, which guides the user step by step through an intuitive interface documenting relevant information. Thus, required data such as location and time, production order, line and machine number or operator can be directly attached to the matching photographs. The data can then be retrieved with the browser software using the QR code on the needle log in the return box. Subsequently, the data set is digitally stored and can be accessed, viewed and managed worldwide using the INH@office software. Other features include a dashboard providing a real-time system overview. Further, authorised persons can carry out online audits and various analyses at any time. The software also serves to maintain and manage other information communicated via the app, such as related to machinery and needle types. Thus, all sewing operations can be organised and controlled with INH@office.

On that note….

In early 2017, Groz-Beckert took over the Aachen-based Ferd. Schmetz Group. Schmetz is a long-established German producer of industrial sewing machine needles with around 700 employees worldwide. The acquisition includes the production sites in Germany, Switzerland and India as well as Schmetz's global distribution network.

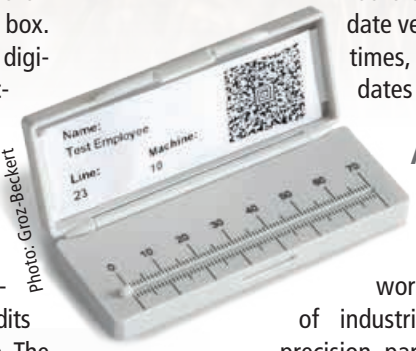


Photo: Groz-Beckert

Needle return box

Thorough and comprehensive documentation

Smart INH not only records needle breakages, but all needle exchanges, effectively eliminating any possibility of deliberate damage and providing thorough documentation. The application's secure operating system can only be accessed by authorised personnel as determined by the browser software. INH quality management also encourages sewing staff to work autonomously and handle sewing machine needles responsibly. The INH@site app and the INH@office browser software form the digital heart of Smart INH. Groz-Beckert ensures that an up-to-date version is available at all times, including regular updates and improvements.

Photo: fotolia

Before now, the search for broken needle fragments was literally like searching for a needle in a haystack

About Groz-Beckert

150 countries – one textile world!

Groz-Beckert is the world's leading provider of industrial machine needles, precision parts and fine tools, as well as systems and services for the production and joining of textile fabrics. All around the world, the products and services support the textile processes of knitting and warp knitting, weaving, felting, tufting, carding and sewing.

The company, founded in 1852, employs around 7,700 people and turned over about 665million euro in 2016. All of the threads come together at the headquarters in Albstadt, Germany. The family-owned company also disposes of other production sites in Germany, Belgium, the Czech Republic, Portugal, USA, India, China and Vietnam. Scores of sales affiliates and sales partners top off the international presence.

Groz-Beckert offers its customers a comprehensive partnership – without boundaries and on site in over 150 countries.

[www.groz-beckert.com]

[Techtextil | Hall 3.0 Booth F03]

Digitalisation is just one of several mega trends

Photo: Shutterstock

Gherzi van Delden

Opportunities besides Intel, Google and the like

Looking back in time, the textile industry developed very much in chime with the advanced industrialisation of North America and Europe, and was rewarded with rising outputs, climbing profits and growing global demand for European textile products. In the 1970s, the Third World increasingly emerged as a viable production location.

Over the past twenty years, the industry has been shaped by the relentless advance of globalisation with production shifting between continents and demand for textiles on the rise. However, the trend to move manufacturing to countries with low labour costs saw Europe's textile industry go into sharp decline.

Traditional business models built on competitive advantages such as fixed cost degression, raw materials procurement, production innovations and so on, were prevalent in the prolonged phase of growth into the year 2000, and generally brought success to the textile business. As time passed, the focus shifted to enhancing market cultivation, followed by a phase of supplier optimisation and innovation, allowing the textile industry to assert itself in Europe. However, pressure from consumers and intermediaries demanding cheaper goods became so strong that retailers and brands started sourcing and manufacturing more and more products in low-wage countries.

"Consumers wield the power"

Consumer behaviour has seen a drastic transformation over the past 10 years, driven by the over-supply of goods and the diversity of customer solutions. Today's consumers demand and expect. They can choose from any number of different manufacturers and retailers. In the majority of cases, buying decisions are first and foremost swayed by price, even over quality. The quality offered by the big fast fashion retailers and discount stores is not necessarily always poor; it has merely been adapted to the expected period of use and the demands of price sensitivity. Fast fashion and tempting offers have influenced consumers to such a degree that they wear their newly bought garments for no more than 16 months on average. Textiles have never been cheaper and have never had such a short life span. European consumers are constantly lured by "Sales" and are encouraged to fill their wardrobes with even more clothes. From yarn twist to seam thickness, in the 21st century quality is being stripped to the bone, often to the point of being unsaleable.

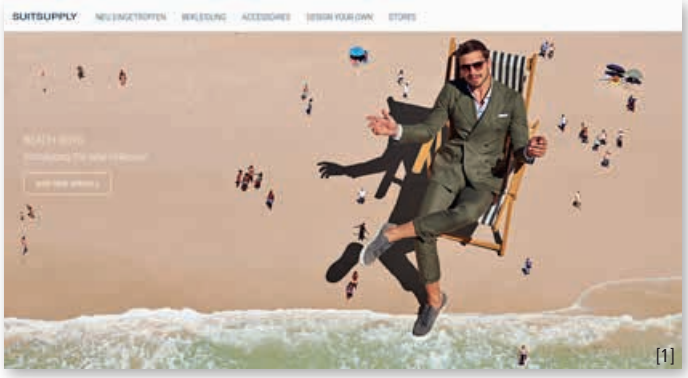
At the same time, the apparel market is being transformed by digitalisation: Once upon a time, the retail landscape was shaped first by the department store, then the inner-city shopping centre, followed by the discount and outlet factory store. Today, the retail trade is losing market share to online and/or mobile sales. (Global) full-range traders, chains,

[1] A positive business model for textiles can be shaped in part by online and mobile channels. Example suitsupply

[2] Example Manufactum

[3] Example Sensorifitness

[4] Example Woollaa



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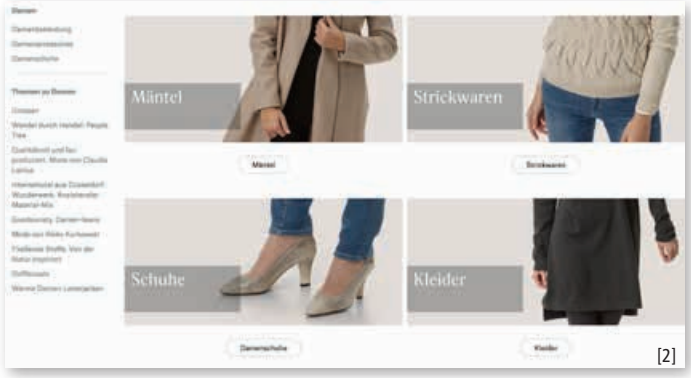


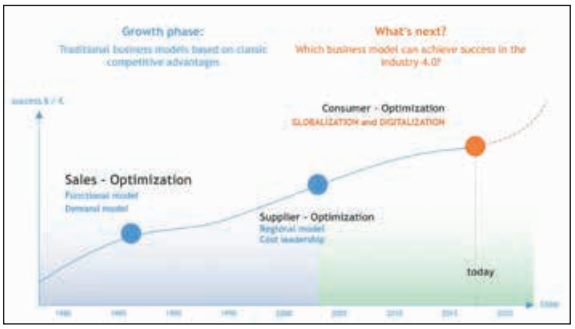
[2]

labels and brands are all on the rise (Lidl, Zara, H&M…), with online growing faster than bricks-and-mortar sales. Standard and mass goods are being supplied en masse by amazon. So where do we go from here?

Downstream pressure in the textile chain

Anton Schumann, Senior Consultant of Gherzi van Delden GmbH, Krefeld, sees downstream pressure growing as a result of digitalisation in the textile chain: "The traditional model for the textile chain is changing as we speak and is opening up additional options for players right along the chain – from producers to retailers. Just compare the recent figures for online sales and the statements by bricks-and-mortar retailers (cf TextilWirtschaft 12/2016). The industry is changing! The trade / retailers are increasingly being sidelined. Producers of textile goods can now communicate directly with the end consumer using suitable platforms and communication channels. The industry is becoming more tightly knit, as consumers strive to use the industry for their own needs through digitalisation. Mass-customisation is just one buzzword from this area that illustrates only too well the power now wielded by the customer. End consumers expect, demand, recommend and develop innovations and are constantly changing their consumer behaviour because they have the power to compare suppliers and are under no obligation to buy from any one company."

Textiles have never been cheaper and have never had such a short life span. European consumers are constantly lured by "Sales" and are encouraged to fill their wardrobes with even more clothes. From yarn twist to seam thickness, in the 21st century quality is being stripped to the bare minimum, if not to the point of being unsaleable.
End consumers expect, demand, recommend and develop innovations and are constantly changing their consumer behaviour because they have the power to compare suppliers and are under no obligation to buy from any one company.
[www.suitsupply.com] [www.manufactum.de] [www.sensoriafitness.com] [www.wollaa.com]

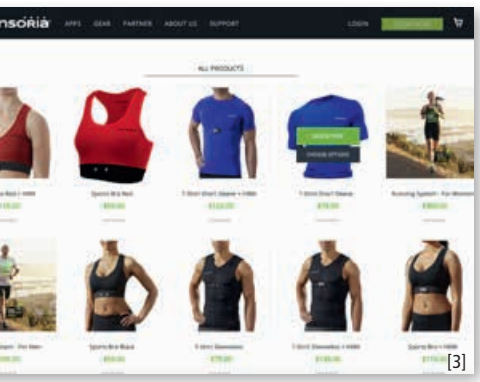


Development of the textile industry

Schumann sees mobile and online apps and platforms as important trends. Textile producers can and should go online: "This enables them to plan, develop and steer sales and future developments directly with their customers. This can lead to enormous cost savings."

New and improved textile business models

Given the size of European textile companies – the majority will produce in Asia where the lion's share of future consumers is located – and their financial and operational possibilities, various opportunities can be found in niche markets and direct sales.
A positive business model for textiles can be shaped in part by online and mobile channels. Probably one of the most successful examples is suitsupply.com, a menswear company that launched around 10 years ago as a supplier of men's and boys' fashion. With an efficient platform that appeals to customers and a quick and pro-active supply chain management system, the company has created a successful business with healthy sales.
Holistic solutions and new business models are also at the heart of seldom Strickmanufaktur, which works on the basis of mass-customisation and direct customer requests. Their recipe for success since 2002 has been rooted in continuous cost controls, the philosophy to produce for a high-priced niche and the manufactum.de online store.
Their maxim is to "focus exclusively on developing and producing unusual knitted garments…Sustainability naturally also embraces the working conditions of our staff and our dealings with our business partners."
Sensoria Fitness, a company founded in 2013 and employing 15 staff, provides runners and joggers with "A smarter way to run!", all thanks to smart textiles. Textile sensors integrated in socks evaluate data such as foot pressure.
Working on the basis of mass-customisation and customer wishes, Woollaa promotes itself with the following message: "Woollaa is an industrial knitting machine connected to the internet. Using specially designed editions, you can create your very own individual garment with your own story, directly online and in real time …we only produce things that people really want... Nothing is thrown away…"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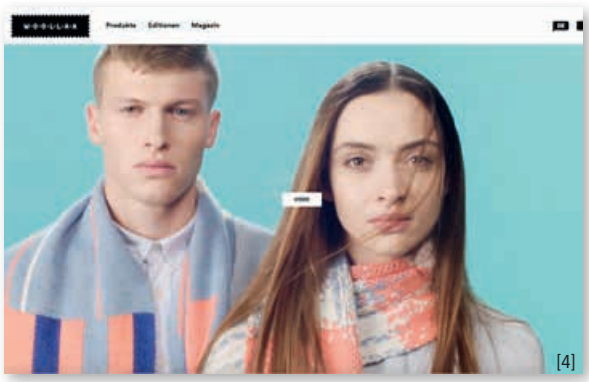
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Photo: Freunde von Freunden

Textile worker, Bagru, India

Gherzi is an international consultancy and service provider in the textile industry. Since its establishment in 1929, Gherzi Textil Organization, Zürich – Mumbai – Hong Kong has been supporting companies involved in various fields from polymers/fibres to the finished component or textile. Anton Schumann held a paper on the topic of this article in Chemnitz in April 2016 and Berlin in October 2016. This article contains extracts from this paper.

[www.gherzi.com]

INDIA AND PAKISTAN

Things could be much better

As long ago as 1996, India awarded Pakistan the status of most favoured country. Pakistan, however, did not confer a similar status on India. There is general consensus that both countries could expand their bilateral textile trade quite considerably, if it were not for the world of politics placing obstacles in its way.

It is a well-known secret that India exports its goods to Pakistan on the flourishing black market. This means that the state of Pakistan, a country blighted by Islamic extremism, is losing out on essential income through taxation. Both investment and technology are long overdue in Pakistan and again, India could be an important source of private financial investment. Pakistan mainly exports leather goods, dried fruit, tin and oil seed to India, whereas India supplies cotton, organic chemicals, plastics, man-made fibres and woven cloth etc. to Pakistan.

Both countries have a well-developed textiles industry, supplying foreign markets with textiles, bedding, apparel and much more. Together, India and Pakistan post a bilateral trade volume of just US$ 2.5bn. Business minds from both countries believe that bilateral trade could climb to around US$ 6bn within two years if political differences could be resolved. Chairman of the India-Pakistan Business Council, S.M. Munir, recently stated that trade between the two countries had contracted by 20 percent. Further declines are expected over the next few months should tensions between the two neighbours remain high.

[Manik Mehta]

Moving positively into the future with smart textiles

Digitalisation will reward the textile industry, the "oldest industry" in the world, with many new options for creating new and extended business models, particularly in the field of smart textiles. Several mega trends besides digitalisation, such as mobility, urbanisation, environmental awareness, health and protective and safety needs, look set to generate further growth.

Whereas the global market for smart textiles was pegged at US$ 795m in 2014, it is expected to expand at an annual rate of 34 percent to US$ 900m from 2015 to 2020 (www.advancedtextilessource.com). A 40 percent climb is anticipated in the sports and fitness segment in the same period.

And so the wheels keep on turning: we have already witnessed considerable advances from passive intelligent textiles, that record environmental factors (1st generation) to active textiles with components such as sensors, actuators and control units, that convert and record electrical stimuli (2nd generation), and ultra-smart fabrics, which are supposed to work like a brain and stimulate, respond or adapt to environmental conditions (3rd generation).

Conductive textiles were developed 15 years ago, for example, in Leeds and Chemnitz. However, it was not until 2015 that Google & Levi's launched the Project Jacquard which culminated in the development and production of a smart textile for the end consumer. Since October 2016, the Levi's Commuter Jacket has been generating healthy sales. A small but very profitable smart textiles industry has been developing in the US and the UK which supplies the military and security forces with underwear and clothing. In addition to the position of the wearer, this technology can also record and transfer vital signs.

"Project Jacquard by Google & Levi's"


Photo: Miha bodytec

Conclusion

Anton Schumann: "The textile industry needs to have a rethink. So rather than expecting to develop business with textiles, they can and have to initiate business through data. This is why the collaboration between Google and Levi's has been so successful."

Companies need to identify the potential and risks of new technologies and communication channels. This can lead to successful business areas, even in times of over-capacities, slowing demand and continuing pressure on prices. Design thinking, global thinking and innovative business models that pursue holistic solutions can prove successful. Customer-led solutions must be combined with a corresponding promise of value if companies are to sway buying decisions in their favour. Thinking about the product is secondary!

[www.gherzi.com]
[Gisela Gozdzik]

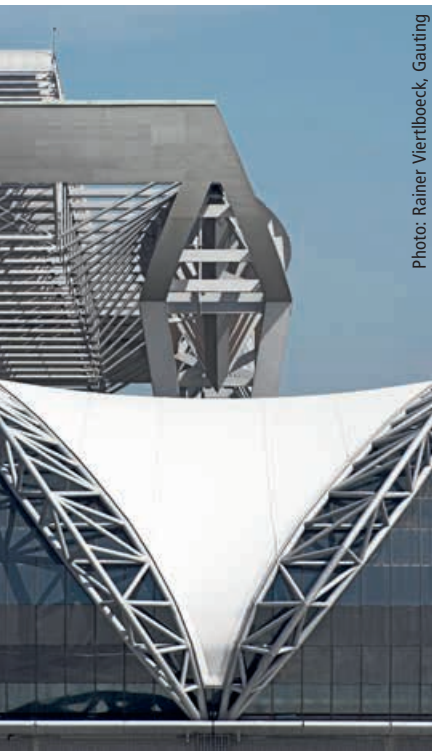
Left: (Carbonisation): Dr. Martin Kirsten, Scientific Assistant at the ITM, next to the institute's stabilisation and carbonisation machine for the production of carbon fibres

Right: Summit for textile researchers and industry experts - this year in Dresden

Aachen-Dresden-Denkendorf International Textile Conference

Textiles contribute to construction innovations and tomorrow's market shares

Textile institutes and SMEs invest much time and energy into developing high-tech materials and structures to generate tomorrow's sales. These may include high-performance, fibre-based materials, textile materials for lightweight construction or intelligent fibres. Today's innovative fibre composites, polymers and functionalised textile structures are already creating huge opportunities for small and medium-sized companies across many industries.



Bangkok: Building with textiles: The segmental arched roof planned by Werner Sobek at the new airport in Bangkok measures 561m x 210m and rests on just 16 pillars at a height of roughly 40 metres

Summit for textile researchers and industry experts

Taking place in Dresden on 24 and 25 November, this year's Aachen-Dresden-Denkendorf International Textile Conference will present numerous new research and development findings which are ready to be transferred into industrial applications. Market-relevant developments and trends will also take centre stage. The increasing use of bespoke carbon fibres, such as those produced at the Institute of Textile Machinery and High Performance Material Technology (ITM) at the Technical University of Dresden, for example, is giving rise to completely new technological outlooks and high-tech products for a wide range of different industries.

Surfaces in the spotlight

Prof. Sebastian Koltzenburg, Principal Scientist at BASF, will talk in his presentation about processes that specifically alter the surface properties of various materials and objects using the thinnest of textile layers – this method can create washable objects, enhance the soiling behaviour of textile fibres, provide hospital textiles and instruments with antibacterial finishes or make human hair easier to comb, to name but a few examples.

Prof. Werner Sobek, architect and engineer, will look at the hitherto unimagined technical possibilities in the construction of façades using textiles, paving the way for extremely lightweight, multifunctional and adaptive building shells. These shells can glow, breathe or adapt independently to changing environmental conditions. He will argue that the huge potential for creating visual and tactile properties for façades is yet to be unleashed. Sobek's aim, therefore, is for fibre-based construction to become firmly established, such that its design potential is fully exploited and its constructional properties in terms of light, acoustics, aesthetics, breathability and moisture transfer are mastered as a matter of course.

Around 80 other speakers from companies operating in the automotive, aerospace and aviation, and chemicals industries, the technical textile supply chain and universities, will discuss the latest findings and possible new applications for fibre composites and polymers, for functionalising textile structures, creating protective and functional textiles as well as mega technological trends. Other topics will include composites, applications in lightweight construction, protective and safety applications, new materials, technologies and system developments. The event which has since established itself as one of the most important industry platforms in Europe takes place once a year, alternating between the textile research centres of Aachen, Dresden and Denkendorf (Baden-Württemberg). This year, the speakers will also be joined by experts from Austria and Switzerland, reinforcing the international flavour of this industry summit meeting.

[www.aachen-dresden-denkendorf.de/itc]

At a glance:

Germany is the leading force for technical textiles in Europe and tops the table of exporters; annual sales total 13bn Euro, with the proportion of exports hovering at around 45 percent. "Thanks to excellent advances in research, our innovative companies are already offering textile solutions with specific mechanical and protective properties and 'intelligent' additional functions," states Prof. Chokri Cherif, Director of the ITM. The aim of this conference is to bring together companies, research institutes and universities so that they can underpin these competitive advantages by discussing ideas, experience and information.

The Aachen-Dresden-Denkendorf International Textile Conference is taking place from 24 to 25 November 2016 at the International Congress Center in Dresden.

Exclusive Series: Industrie 4.0 explained - Part 3

Digitization is finding its way

In order to support employees during maintenance and inspection solutions for human-machine interaction are necessary. In the following article the term „human-machine interaction" is used for assistance systems which help the employee doing his work by providing appropriate information and/or physical assistance, so that the employee can focus on his core tasks.

Assistance systems include technologies for information provision and learning support, technical aids for calculation and robots for process support. The functionality of these systems can range from displaying work instructions to visual or multimedial support and context-sensitive augmented reality. The focus of current research is on information technology assistance systems, learning systems, assistance robots and cognitive assistance systems. The last one is a special form of assistance systems of the cognitive sciences, which is not considered in detail in this article.

Information technology assistance systems

Currently mainly information technology assistance systems are frequently used. These are very flexible in the field, i. e. they are used for quality assurance, maintenance, personnel planning as well as process monitoring. The assistance is carried out by mobile devices, which appear in diverse variations from tablets and smartphones to data googles and smart watches. Common in everyday life, these technologies are increasingly finding their way into the industry in the context of digitization in order to provide employees with information on the move. The functionality in harsh industrial environment with dust, vibration and moisture is ensured by appropriate high IP-protection classes. The various technologies differ in type and scope of the information provision. On tablets diverse and comprehensive information with numerous interaction possibilities can be allocated. For smart watches, on the one hand, a specific adaptation of the information scope is necessary. But on the other hand the compact design provides advantages in applications where both hands must be used or only messages with a small amount of information have to be transmitted. The possibilities for interaction are much more special as with data glasses and less extensive compared to tablets.

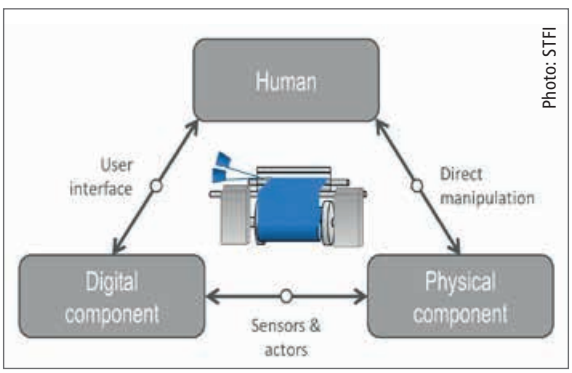


Photo: STFI

Human-machine interaction (see Zamfirescu et al., 2012)

Localization as added value

Besides the pure information provision the functionality is enhanced by localization. Thus, information can be resolved in a location-specific manner and provided at the location of demand. This context-sensitive data provision also enables a roll-specific processing, so that the employee gets only the information which is relevant to him and his current work assignment. For localization technologies such as QR codes, Bluetooth or RTLS (Real-Time Locating System) can be used. Additional to the displaying of information, as-

Part 1 / issue 1-2/2017: Digitization – networked production

Part 2 / issue 3-4/2017: Digitization is finding its way – Smart Maintenance

Indoor-localization of employees by RTLS-tags attached to their clothes

sistance systems are also used for decision support by analyzing and evaluating, for example machine data. The data obtained via Industrie 4.0 communication interfaces can be evaluated directly on the spot using big data approaches and the results can be used for decisions. The interaction capability and the network connection of the mobile devices allow direct triggering of subsequent processes, such as the access to a spare parts catalog and the subsequent ordering or the generation and triggering of maintenance orders.

Learning and robot systems

Assistance systems also include learning systems. In the construction phase of machines these can be designed digitally up to virtual commissioning. Under certain conditions environments for virtual commissioning can also be used for virtual interactive learning systems, e. g. in form of 360° projections or virtual reality.

Based on current design data, instructions can be derived for assembly, commissioning, operation and maintenance of a production system. For example, machine operators can already be qualified before commissioning. Thus, the learning environment is used to transfer factual and procedural knowledge. Complex working and learning situations can be created in the environment. Through real-time interactions in the digital world experience can be gained. Furthermore, also learning scenarios are possible during plant operation. For this purpose stationary control panels as well as mobile devices such as smart glasses can be used. By means of videos and animations with direct interaction, the process and system understanding can be increased and knowledge of the operation can be conveyed. Besides, current research tendencies tend to generate learning contents during the operation by gathering experience knowledge. A further characteristic of assistance systems are robots, which share a work space with humans and enable a direct interaction. By the help of sensors and intelligent algorithms they are enabled to perceive their environment and thus persons. In addition, they can communicate with humans multimodally, navigate autonomously and make decisions independently. Assistance robots are able to support by measurements, testing and joining of textile components. In the field of assistance robots programming, navigation, cognition, multimodal interaction and safety are current research topics. Marketable but still researched solutions are touch-sensitive outer layers of robots to enable optimal collaboration in shared workspaces. In matters of on-site programming, in the future robots will be programmable even easier. So far, movement paths have been generated by means of teach-in programming, which stands for driven via a control panel. In the future, these movement paths can be generated on the basis of algorithms that imitate man-given motion sequences. Applications are currently in the field of joining components. Humans in production environments are increasingly supported in their activities by new technologies for human-machine interaction.

How the role of humans and their tasks will change by the digitization will be considered in the fourth part of the series in the upcoming edition of textile network.

Smart glass as interaction interface to the machine

[Sten Döhler[1], Andreas Merkel[2], Dirk Zschenderlein[1]]
[Sächsisches Textilforschungsinstitut Chemnitz e.V. (STFI)[1], Futuretex Management GmbH Chemnitz[2]]

In the next issue textile network 7-8/2017 you can read Part 4 wich has the title "working world"

Puma has set up a programme in cooperation with the IFC and BNP Paribas, to offer its suppliers easier access to financing opportunities

Photo: istock

Puma

Full speed ahead towards digitalisation

The fact that digital transformation of the supply chain is not just a much-used catchphrase, but is already actually happening, is demonstrated by the example of Puma, the sports goods manufacturer. The company, based in Herzogenaurach in the German state of Bavaria, employs over 11,000 people worldwide and aims to become the fastest sports brand in the world. Alongside increasing the desirability of the Puma brand, optimising its product development and improving the quality of its distribution, strategic measures undertaken by Puma also include accelerating its organisational and internal processes, as well as upgrading its IT infrastructure. In this regard, Puma has established a cloud platform with which to optimise and standardise processes with its suppliers. This platform controls all of its global ordering and invoicing streams as well as coordinating the despatch of goods, providing both Puma and its suppliers with transparency down to goods unit level. With the right technology, therefore, Puma is already working on the supply chain of the future.

Puma promotes sustainability with digital financing project

Sustainability, however, is also a core theme at Puma. Sectors such as the clothing industry often work with a large number of small suppliers, especially from countries of Asia such as Bangladesh, Cambodia, China and Vietnam. Puma itself currently has 133 product manufacturers (tier 1) and material producers (tiers 2 and 3) in Asia. This is where its products can be manufactured at particularly low cost. The conditions in which the local workers are producing the goods, however, continue to damage reputations through negative headlines, as with the collapse of the Rana Plaza textile factory in Bangladesh a while ago. At the same time, though, it is difficult for these small local suppliers to come by the affordable finance that they require for production. For this reason, sports goods manufacturer Puma has set up a programme in cooperation with the IFC (a member of the World Bank Group) and BNP Paribas, to offer its suppliers in just such countries easier access to financing opportunities. The suppliers for their part are required to demonstrate improvements in social, employment and ecological standards. Puma has set up its own supplier evaluation system for this purpose: suppliers may be given a rating of A, B+, B-, C or D and the system is monitored by a regular inspection process that takes place either annually or every four months, depending on the rating. The Puma Vendor Financing Program, as it is called, awards financing at rates that vary according to this rating. This is a financial incentive for the suppliers, but they also benefit over the longer term from improved social standards, as a result of improved performance from the workforce and lower overall running costs. The fact that the programme is controlled and monitored digitally means in turn that data flows throughout the shared cloud network linking Puma with its suppliers. Already, 15% of Puma's suppliers are participating in the financing initiative and more than US$ 100m have been distributed through the programme.

Puma's example shows that, whether by simplifying operating processes and increasing

Everyone is talking of Industry 4.0 and of digital transformation. Companies are faced with a decision: should they invest and jump onto the train, or risk missing their connection? According to a recent survey that questioned senior management of large international businesses specifically about digitalisation of the supply chain, 75 percent of respondents regard digital transformation of the supply chain as important but only 5 percent are satisfied with current progress. As many as 70 percent said they had launched digitalisation initiatives; but increasingly the question of concrete results is being raised, and whether heavy investment in digitalisation will really pay dividends.

The fact that digital transformation of the supply chain is not just a much-used catchphrase is demonstrated by the example of Puma

Our author Stefanie Wagensonner is a supply chain expert and is responsible for marketing to the DACH countries at Infor member GT Nexus, the largest cloud platform in the world for global trade and supply chain management, which handles goods worth over US$ 150bn a year. Among its over 28,000 customers on the platform are many global companies.

transparency or by creating financing opportunities along the supply chain, digital transformation is no empty catchphrase but is already a reality. It is enabling completely new approaches, not only to improve the financial success of the business but additionally to promote sustainability. Even though we are undoubtedly still at the very beginning of a major revolution, it pays companies to be courageous and to become one of the pioneers of digitalisation right now.

[www.gtnexus.de]

[Stefanie Wagensonner]

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IFWS/IFKT

Swiss National Section in 2017

Following a series of successful events in 2016, preparations for this year's congress and annual general meeting on 19 May 2017 are in full swing. The organisers are proposing various themes that will be conferred at the meeting upon small teams for further exploration. The choice of areas will be extremely extensive and will require considerable planning, including several meetings and conferences. Future perspectives in conjunction with 'traditional textile thinking' will be discussed in depth with a view to helping the industry adjust its bearings in a positive competitive environment. This year's conference will also discuss the framework for medium-term planning in the future. The high number of students from the textile technology pathway at the Swiss STF College are taking part which is seen as a positive development. As is customary at this event, a factory visit will also be offered. This year's tour takes place at textile finishing firm Schellenberg Textildruck. Members and friends of the German and Austrian National Sections are also invited to attend the event. Questions and registrations should be sent to: ifsw@gmx.ch

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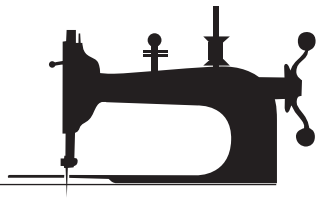

market place

FIBRES AND YARN

The next issue of textile network will be published on 30th June 2017 and these are some of our topics:

Zünd

In 2016, German office furniture producer König+Neurath invested in state-of-the-art digital cutting technology from Zünd. Since commissioning the new G3 L-3200 cutter, the company has seen a marked improvement in cutting efficiency.

Photo: König+Neurath

USA

Gina Locklear had wanted to join her family's sock manufacturing business in Fort Payne, Ala., since she was in college. That was in the early 2000s. Momentum towards cheap imported socks was robbing the north-eastern Alabama town of its revered reputation as the "Sock Capital of the World."

Photo: Emi-G

Photo: Trevira

Trevira CS

As part of its Club Concept, Trevira recently invited suppliers of Trevira CS fabrics to enter their latest developments into its fifth fabric creativity competition. By taking part in the annual contest, fabric suppliers can collect Trevira CS Club points. If they are placed first, second or third in a category, they are heavily rewarded with extra Club points.

Sustainability

As one of the world's biggest producers of denim and flat woven fabrics and the uncontested market leader in Latin America, Vicunha Textil also sets new standards in terms of sustainability, environmental protection, service and social responsibility. The company processes 100,000 tonnes of cotton per year, most of which is sustainable BCI cotton from Brazil.

Photo: Vicunha

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Managing Director:	Ulrich Stetter
Head of editorial office:	Sabine Stenzel
Head of online editorial office:	Daniel Keienburg
Manager sales / distribution/ marketing:	Christian Matthe
Editor-in-chief:	Dipl.-Ing. Iris Schlomski Phone: +49 5527 979440 Fax: +49 5527 979441 Nordhäuser Straße 34 37115 Duderstadt/Germany i.schlomski@meisenbach.de
Editorial Staff:	Anja Menzel (Assistenz) Phone: +49 951 861-117 Fax: +49 951 861-170 a.menzel@meisenbach.de
Contributing	Iris Schlomski, Ingrid Sachsenmaier, Manik Mehta, Sten Döhler, Dirk Zschenderlein, Andreas Merkel, Stefanie Wagensonner, Gisela Gozdzik, Nancy Renning, Ulrich Hageroth
Advertising Sales:	Bernd Raithel Phone: +49 951 861-145 Fax: +49 951 861-161 b.raithel@meisenbach.de
Advertising Administration:	Matthias Fichtel Phone: +49 951 861-169 Fax: +49 951 861-161 m.fichtel@meisenbach.de
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The winners of the Next 2016 new talent awards (left to right): Jens Vieth (2nd prize), Katja Brüsewitz (special prize), Leonie Hempelmann (3rd prize) and Aylin Savas (1st prize) with speakers Thomas Buschmann of Deutsche Bank AG, Oliver Labjuhn of Bugatti GmbH and Rolf A. Königs, CEO of the Aunde Group

Photos: Zitex

The winners of the Next 2016 new talent awards (left to right): Leonie Hempelmann (3rd prize), Aylin Savas (1st prize), Katja Brüsewitz (special prize) and Jens Vieth (2nd prize) with Detlef Braun, Director of Zitex Mode & Textil NRW

Last but not least

Next 2016 new talent competition

Innovation is the magic word when it comes to resisting competitive pressures from the Far East. The development of highly specialised products such as technical or high-tech textiles requires a technically skilled and innovation-friendly workforce, with the right training for an industry that is looking to the future. In order to publicise the opportunities and career paths available in the textile and clothing industry more widely, the Next competition recognises new entrants to the textile and fashion sector who have performed outstandingly in their commercial and technical training, notably in those fields where the recruitment problem is severe but where the industry's future actually lies. Detlef Braun, Director of the NRW textile and fashion journal 'ZiTex', explained what made this prize for new recruits so special: "The Next award, which we are presenting for the sixth time, recognises talented members of the next generation who have not only performed best in their training in commercial and technical occupations but have demonstrated a high level of engagement beyond the training itself." It covers a number of qualified trades and occupations: machine operator in textile technology and finishing, production mechanic, product inspector, product designer, product finisher, textile laboratory technician, manufacturing technician, fashion needleworker, and fashion and bespoke tailor.

An expert jury adjudged the three best entries and also awarded a special prize. The first prize in Next 2016 went to Aylin Savas, who completed her training as a product finisher, specialising in textiles, at Eing Textilveredelung und Handelsgesellschaft, based in Gescher. At 19, Aylin Savas is the youngest of the award winners. Her employer recognised her high level of qualification and offered her a permanent position following completion of her training in mid-2016.

The Next 2016 second prize was awarded to Jens Vieth, textile laboratory technician specialising in textile technology, who trained at Polyvlies Franz Beyer in Hörstel. He discovered an interest in laboratory activities and testing while still at school, so once he had completed his final school exams he started his training as a textile lab technician at Polyvlies Franz Beyer, where he was similarly offered a permanent position once the course was completed.

The Next 2016 third prize went to Leonie Hempelmann, who has completed her training as a fashion needleworker at bugatti GmbH, in Herford. After completing her final school exams and spending time abroad in Australia, she began training as a fashion needleworker at bugatti and is now undertaking further training to become a fashion tailor.

The special prize covers not only trade-specific skills but also a demonstration of social commitment and extramural interests such as music or sport, as well as involvement with a team or in a voluntary activity. This year the prize was awarded to Katja Brüsewitz, who trained as a textile product inspector at Gardeur GmbH of Mönchengladbach. Katja Brüsewitz demonstrated a true willingness to get involved and a high degree of interest during her training, which she completed successfully in June 2016. She has now joined Gardeur as a skilled employee.

[www.zitex.de]

All 21 nominees, with the winners of the Next 2016 new talent awards

Rolf A. Königs, CEO of the Aunde Group of Mönchengladbach, congratulates the winner of the Next special prize Katja Brüsewitz, Product Inspector at Gardeur GmbH, Mönchengladbach

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E-mail: vertrieb@meisenbach.de
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