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TEXDATA
INTERNATIONAL

INTERVIEWS
DILO, VDMA, SAURER

ITMA 2023
START FOR A NEW TEXTILE WORLD

ITMA 2023

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Energy Efficiency?
New Materials?
Digitalization?
Traceability?
Recycling?

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ITMA 2023 Hall 1, B211

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FROM THE EDITOR

DEAR READER,

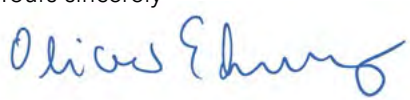
after 4 years, the ITMA, the biggest event in the textile machinery industry, will take place again from 8 June. The international textile industry will meet in Milan for 7 days and the Italian fashion metropolis will once again become the textile centre of the world. ITMA is the central, outstanding trade fair for the textile world with the status of an Olympics in sport and the 2023 edition has the potential to enter the history books. The reason for this is as simple as it is obvious. This year could see a peak in developments that began at ITMA 2011 and continued in 2015 with the fair motto „Master the art of sustainabilty". The efforts made at that time for more sustainability in the production of textiles, i.e. less or better use of materials, energy and water and more environmentally friendly chemicals, have now become binding requirements in some areas or will become so in a few years. This means that every purchasing decision must take much greater account of sustainable aspects, possibly also at the disadvantage of investment costs and productivity. The lowest costs or even the best prices are foreseeably of no use if the products can no longer be sold in the most important target markets. „Faster, wider, higher" is being replaced by „higher quality, gentler, smarter". This is the political and social „change of times" that the industry is naturally also facing. However, it seems to be both open to the changes and very well prepared. There are hardly any solutions in the exhibitors' ITMA pre-announcements that do not lead to a significant improvement in sustainable production. In conjunction with the possibilities of digitalisation that have been gained in recent years, this is also readily measurable. Although the issue of specifying the product environmental footprint (PEF) in the EU regulation for „green claims" was recently averted, it will not be off the agenda. The principle is in place, it is only a matter of implementing generally applicable calculation and survey concepts.

We have dedicated the entire issue to ITMA because it simply deserves it in terms of its importance, and we would also like to give you a lot to take away. About the trade fair, about the surrounding events and about the exhibits. In our preview, you will find a comprehensive overview including a selection of topics that will be in the spotlight. In addition, as usual, we have a preview of the announcements by market-leading exhibitors and we have three interviews from different corners of the industry that deal with change. This is about machinery for spinning, machinery for the nonwovens industry and textile machinery manufacturing in general.

It's time to at least strategically adapt one's own business model and make it fit for the future, step by step. ITMA is, of course, an outstanding opportunity to take a comprehensive look at the technical possibilities of this future. And of course, also to have one's nose in the wind of change and to feel live where the journey is heading. This should not be underestimated, because ITMA is not only a showcase for technology, but also the major global meeting place for the industry.

We, for one, are looking forward to ITMA. In all aspects. On the one hand, we are looking forward to the technologies and a firework of innovations and, on the other hand, to the people who shape these technologies and thus the entire industry. To many familiar faces as well as new contacts. I would almost say: to the textile family. You probably feel the same way. In any case, I hope that your ITMA visit exceeds your expectations, even if they are high. Actually, that's all that's possible. And I wish us all a great ITMA.

Yours sincerely



OLIVER SCHMIDT

#Editor-in-chief

CONTENT

CONTENT

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PARIS AGREEMENT AND EU TEXTILE STRATEGY CALL FO

EXTILE WORLD.

R RADICAL CHANGES

ITMA. A word that excites the textile industry like no other. Only every four years does the mother of all textile machinery fairs take place in Europe and this Olympiad corresponds to the innovation cycle of the textile machinery industry, so that at these "games" the best in the world always exhibit their latest and best products.

The size of the event, the thrill in the blood and the force of innovation make the fair so special. In other words, absolutely unique. But first things first and a little more factually.

Founded in 1951 by CEMATEX, the ITMA, whose first event was held in Lille, is going into its 19th round from 8 to 14 June, back in the Italian city of Milan after 2015, at the new Fiera Milano Rho exhibition centre, which is ideally equipped to host all kinds of engineering and mechanical engineering fairs. Fiera Milano Rho is one of the largest, most modern and efficient exhibition centres in existence. Connected to the city by metro and rail, the complex offers 345,000 gross covered square metres (plus another 60,000 square metres outdoors), twenty halls, 74 meeting rooms, 10 of which are in the Stella Polare Congress Centre, 84 catering facilities, 10,000 parking spaces for visitors and 5,000 for exhibitors.

Press conference at ITMA 2015 © 2023 TexData International

ITMA IN ITALY

When it was first announced in Barcelona in 2011 that the Italian fashion city had won the bid for 2015, the Italian textile machinery manufacturers, led by their association ACIMIT, rejoiced and the feeling arose that ITMA was "coming home", even though strictly speaking this is not historically correct. And for the 2023 edition, the joy of the Italian textile machinery manufacturers and the association is again clearly perceptible to have a home game again. This was made clear, among other things, at the ITMA pre-press conference of the Italian association ACIMIT in Stresa in March. ACIMIT sees the home ITMA as an opportunity to put the spotlight on Italy's excellent technology and to stimulate new investments in the textile industry. The figures for 2022 were already positive. Both Italian production and exports of textile machinery increased by more than 10 % compared to the previous year. The production value exceeded 2.6 billion euros. Of this value, 87%, i.e. around 2.3 billion euros, was realised abroad. Italian exports went mainly to Asia and Europe. And with ITMA, the positive development is now to be continued. ACIMIT President Alessandro Zucchi said: "Our manufacturers are very confident for the event next June. This is shown by the figures on the Italian presence at the event: almost 400 Italian exhibitors, about 36,000 square metres, with an increase of more than 20 % in occupied space compared to the previous edition in Barcelona.

30% of the total exhibition space at ITMA 2023 will be occupied by Italian machinery manufacturers". It remains to be seen whether the event itself will generate similar or even greater enthusiasm than ITMA 2015 managed. At that time, the exhibitors experienced a veritable rush of visitors who crowded the stands in a way that we otherwise only know from leisure events such as football matches or concerts.

THE GENERAL SITUATION FOR ITMA 2023

The forecasts for the success of ITMA are as usual difficult, the starting position of the world economy could once again be better. Pandemic. Supply shortages. War. Inflation. Climate change. All these major problems of our time hardly give cause for optimism for ITMA. This can perhaps be drawn from the fact that the global situation at ITMA 2015 was anything but rosy. At that time, ITMA had completely defied the situation and shone with record visitor numbers and a revival of business. There were also record attendance figures at the last ITM 2022 fair in Istanbul, the first major fair after the pandemic. The visitors' desire to see the latest technologies at a fair was huge and this could well continue at the ITMA innovation fair.

Moreover, the question arises whether the "big economic indicators" really have a decisive influence on the success of a fair like ITMA. It is at this fair that the course is set for the textile future and here the future forecast for a specific sub-sector or even a specific product may be much more decisive than the current general economic situation.

The various growth forecasts are not bad at all for the textile industry, which is benefiting from an increasing population trend, and for individual segments very high growth rates are predicted.

EXHIBITOR NUMBERS REACHED - NEW VISITOR RECORD?

Let's look next at a few facts about ITMA 2023. On 14 February, CEMATEX, the European Committee of Textile Machinery Manufacturers and owner of ITMA, reported that the 220,000 square metres of exhibition space at the Fiera Milano Rho exhibition centre is fully booked.

Impressions from last ITMA 2015 in Milano

Over 1,600 exhibitors from 44 countries will be present and 100 companies are still waiting to be allocated space in their preferred sectors. In total, there are 20 product sectors covering the entire textile and apparel manufacturing value chain, including textile composites.

More than 100,000 visitors are expected again this time, and some people responsible for organising ITMA are even expecting a new record number of visitors. However, critical voices also came from the textile industry in the run-up to the fair. Visa issuance for some countries in the EU was slow and the organisation of VISA was often inadequate. ACIMIT President Alessandro Zucchi promised at the pre-ITMA press conference to remedy the situation. Probably successfully, as more positive signals have recently come from the industry regarding VISA.

ITMA is supported by more than 160 organisations, including other textile machinery associations such as TEMSAD, JTMA and ATMA, international textile associations such as the International Textile Manufacturers Federation (IMTF), the Association of the Nonwoven Fabrics Industry (INDA), the International Apparel Federation (IAF), the European Recycling Industries' Confederation (EuRIC), the European Specialist Printing Manufacturers Association (ESMA), the ZHDC Foundation, Textile Exchange and many national and specialised textile associations as well as chambers of commerce of the individual textile countries. Interestingly, EDANA is no longer among the supporters.

And those who miss the Industrial Fabrics Association International (IFAI) should look for ATA, because the organisation has changed its name to Advanced Textile Association.

Platinum sponsor is Colorjet India, as 4 years ago. Gold and Diamond sponsors do not seem to exist. At any rate, we were unable to identify any and an enquiry to this effect remained unanswered.

As four and eight years ago, Italy recorded the most exhibitors with a proud number of 418 (+13%), followed by China with 238 exhibitors (-14%), Germany with 200 exhibitors (-10%) and Turkey with 190 exhibitors. This again puts China in second place, albeit with a decrease, compared to a 50% increase in 2019. The four top exhibiting nations cover around 2/3 of the exhibitors. Switzerland has 49 exhibitors, including 36 members of the Swiss Textile Machinery Association.

As usual, Cematex has divided the individual machine segments into chapters and then assigned the chapters to specific halls. Unfortunately, no information was published on the number of exhibitors in the respective chapters.

However, it can be assumed that textile finishing (chapter 8, halls 9,11,14 & 18) is at the top, followed by spinning (chapter 1, halls 1, 3 & parts 2). Digital printing (Chapter 9, Halls 5 & 7) is likely to come next, or weaving (Chapter 4, Halls 6 & 10).

Warp knitting and knitting machines (Chapter 5, Halls 2 & 4) had around 200 exhibitors in 2019 and almost 200 exhibitors accounted for the nonwovens production machinery sector (Chapter 3, Hall 10) in 2019. The numbers should be about the same again.

ORGANISATORS - PROVEN RELIABLE

The fair will once again be organised by ITMA Services, ITMA's own well-coordinated team, which has already organised the last fairs. It can therefore be expected that everything will run smoothly and that ITMA will be a very well-rounded event. This is also indicated by the first-class preparation of the fair, which brought about some innovations. For example, the list of exhibitors was transferred to a new platform, ITMA Connect. Here, visitors can not only view the exhibitors but also make contact via the platform.

CONGRESSES AND EVENTS

The ITMA is rounded up by a supporting programme of high-calibre conferences corresponding to its level. The topics and their contents make it very difficult to visit the exhibition halls on these days as an alternative

ITMA SUSTAINABLE INNOVATION AWARD PRESENTATION

This prestigious award, launched by CEMATEX in 2015, recognises collaborative efforts across the textile and apparel value chain to develop new and sustainable products and promote outstanding research in the industry.

The award will be presented in the Industry Excellence Award category to a customer of an ITMA 2023 exhibitor who has used technological innovation to drive business sustainability for the benefit of people, planet and profit, and in the Research & Innovation Excellence Award category to a master's student of an ITMA 2023 exhibitor for research and innovation for outstanding postgraduate research achievements in the textile and apparel industry. Finalists for the "Industry Excellence Award" are Mr. Alberto Candiani, owner of Candiani, nominated by FK Group, Mr. Celestino Panzeri, Product and Business Development Manager, Limonta, nominated by Navis TubeTex and Mr. Steffano Pizzingrilli, CEO, Denim Moda, nominated by Jeanologia. Finalists for the "Research & Innovation Excellence Award" are Ms Eva Wingerath, nominated by the ITA of RWTH Aachen University, Ms Maryam Sodagar, also nominated by the ITA and Mr Philipp Benjamin Weigel, nominated by the ITM of the University of Dresden. The winners here will receive cash prizes of 10,000, 5,000 and 3,000 euros. A further presentation of the winners and finalists of the ITMA Sustainable Innovation Award will take place on Friday, 9 June from 10:30 - 12:35 hrs in Hall 3.

ITMA CONGRESS "INNOVATOR XCHANGE"

Whereas in 2011 and 2015 the one-day World Textile Summit was the outstanding drawcard in the accompanying programme, the ITMA 2023 Congress may not be as prestigious, but it will be longer and more focused. Over five days, from 9 to 13 June 2023, the event, called Innovator Xchange, will provide an excellent platform for visitors to learn about the latest innovations at ITMA 2023 and gain insights from industry experts on four trending topics: Advanced Materials, Automation and Digital Futures, Innovative Technologies, and Sustainability and Circular Economy.

On all days, this accompanying programme will be held in Hall 3 from 10:30 to 17:00. It starts on 9 June from 10:30 - 12:35 with another presentation of the winners and finalists of the ITMA Sustainable Innovation Award. This will be followed in the afternoon by the event "Impact Financing for Sustainable Transformation" from 13:30 - 17:00. Speakers here will include Mr Dirk Vantyghem, Director General EURATEX and Ms Valentina Superti, Director for Entrepreneurship and SMEs at the European Commission.

On the second day on "Advanced Materials", the keynote address "Sustainable Trends in Textiles - The Real Challenges" will be given by Prof. Parikshit Goswami, Professor of Technical Textiles at the University of Huddersfield. Other topics include "Vegetech™: A plant-based membrane that works better than animal leather" by Ahmad Ibrahim of Groupe CTT and "Noocycle, a unique chemical recycling technology for PLA" by Ms Luna Aslan of NOOSA. The keynote of the third day with the theme "Automation & Digital Future" will be given by Kevin McCoy, VP New Balance. His topic is: "Automation and Reshoring - the Revolution in US Manufacturing". Other topics include "Towards the Digital Product Passport in the Textile Industry" by Mr Axel Pieper, CTO Brückner, "SmartMill - Digitising Yarn Manufacturing" by Mr Pierre Lanfer, Research Associate at ITA and "Apollo direct-to-garment platform" by Ms Moran Levy-Finklshtein from Kornit Digital. The fourth day has the theme "Innovative Technologies". The keynote address "Developing infrastructures and system platforms for advancing functional fabrics" will be given by Dr Jesse S. Jur from the AFFOA. Other presentations include "Smart Textiles & AI-based Textile Material Inspection System (WiseEye)" by Mr Barry Tai of AiDLab and "Revolutionary Continuous Dyeing and Heat Setting of Polyester by Rotary Spray System and aNIR® Technology" by Mr Bertram Seuthe of DyStar and Mr Jayanta Sanya of WEKO and RotaSpray.

On the last day, the theme is "Sustainability & Circularity". The keynote address "Innovation, crucial for the future of the textile industry" will be given by Mr Germán García Ibáñez from Inditex. Other presentations include "Innovative assessment of textile circularity through a business-to-business web service using blockchain technology" by Ms Gabriela Maestri from DITF and "Enzymatic fibre separation for sustainable waste processing" by Ms Jeannie Egan, student at North Carolina State University College of Textiles.

ITMA TEXTILE COLOURANTS AND CHEMICALS FORUM

For the fourth time, the industry cluster will meet in this event to discuss solutions for sustainability and green chemistry. The keynotes will be on dealing with microfibre losses in manufacturing with the Keynote speakers Ms Sophie Mather, Founding Director of Microfibre Consortium and Mr Prasad Pant, Director - South Asia of ZDHC Foundation and on innovations to reduce water, energy and chemical consumption in the dyeing process with keynote speaker Mr Suhas Khandagale, Global Material Innovation & Strategy Manager of H&M Group.

THE ITMA NONWOVENS FORUM

The theme of the ITMA Nonwovens Forum, which unlike in 2019 will not be held in conjunction with EDANA this time, is "Harnessing sustainable innovation and digital technologies in the nonwovens industry". Attendees will gain insights into current topics related to nonwovens machinery and processes, new applications that are transforming the textile industry,

Sustainability innovation award ceremony at ITMA 2015

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Hall 3
Booth C101

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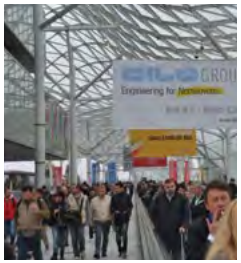
SPINNING

and the latest trends and innovations in nonwovens manufacturing that promote sustainability. Cematex President Ernesto Maurer will give a brief welcome address and keynote speaker Dr Bryan Haynes, Technical Director Global Nonwovens at Kimberly-Clark, will give the presentation "Ready Now Nonwoven Solutions for the Global Plastics Crisis". According to Dr Haynes, who holds a PhD in Mechanical Engineering from the University of Tennessee in Knoxville, the Single-Use Plastics Directive was a wake-up call for the nonwovens industry. As such, he would like to urge industry players to explore "coopetition" or cooperative competition, as this will accelerate the time to market for solutions. One more presentation is coming, among others, from Mr. Lothar Kaierle of Trützschler Nonwovens with the topic "Needling made easy - combining outstanding machinery with digital best practice" and Mr. Johann Philipp Dilo will present the Dilo "MicroPunch - Intensive Needling" as at INDEX. At the end, there will be a panel discussion on the topic "Use of sustainable innovations and digital technologies in the nonwovens industry". The Nonwovens Forum will take place on Sunday, 11 June from 10:30 hrs to 16:30 hrs in the Congress Centre, Taurus Room.



ITMA 2015 was full of visitors around the clock. © 2023 TexData International

PLANET TEXTILES

The Sustainable Apparel Coalition (SAC) will host the 2023 edition of Planet Textiles at ITMA 2023 on 12 and 13 June.

Planet Textiles is an international sustainability conference and will bring together textile and apparel companies, industry leaders and stakeholders committed to improving sustainability in global supply chains. Delegates will explore technological innovations and the latest thinking on circular economy, sustainability measurement, decarbonisation and much more.
Key themes planned include collective action on climate, sustainability data, decent work for all, the nature of sustainable fashion and the changing legislative landscape. The Opening Keynote will be given by Zubeida Zwavel, Executive Director, Centre for African Resource Efficiency and Sustainability.

ZDHC IMPACT DAY 2023

Also taking place in Hall 3 on 11 June from 09:00 - 17:30 is ZDHC Impact Day 2023, a partner event run by The ZDHC Foundation, in the Congress Centre, Sagitarius Room.

STARTUP VALLEY - CHANGE BEGINS WITH INNOVATION

With its new Start-Up Valley initiative, CEMATEX is focusing on companies that are at an early stage of development and offer new, groundbreaking solutions and technologies. In this way, the association aims to promote and inspire innovation in the textile, apparel and fashion industry.

At ITMA 2023, 16 outstanding start-ups will present themselves on the textile industry's largest global stage, curated by a panel of industry experts. The start-ups' themes and purposes colourfully traverse the garden of innovation and include new fibres and machine technologies, software, dyeing processes, 3D-printed machine parts and even the digital twin of a sewing machine worker. Not to be missed.

TRAVEL

You can get to the exhibition grounds by taking the M1 metro to Rho Fiera Milano station. A single ticket valid for 90 minutes after stamping costs €2.20, the personal, non-transferable 10-ride ticket costs €19.50. Day and two-day tickets - valid for 24 or 72 hours after stamping cost: €7 (day ticket) and €12 (two-day ticket). The weekly ticket "2x6" with 2 journeys of 90 minutes each per day, on 6 days in the same week costs 18.50 €. There are also shuttle buses from Malpensa, Linate and Bergamo airports.

HALLS / LAYOUT

The halls on the exhibition grounds are arranged to the left and right along a central path connecting the east entrance (metro) and the west entrance (car parking). In addition, there is the south entrance at the Congress Centre as the main entrance. A total of 12 halls with their ground floor will be used for ITMA. All 20 chapters of the product section, ranging from spinning to finishing, software, logistics as well as fibres, yarns and fabrics, are divided among them as usual.

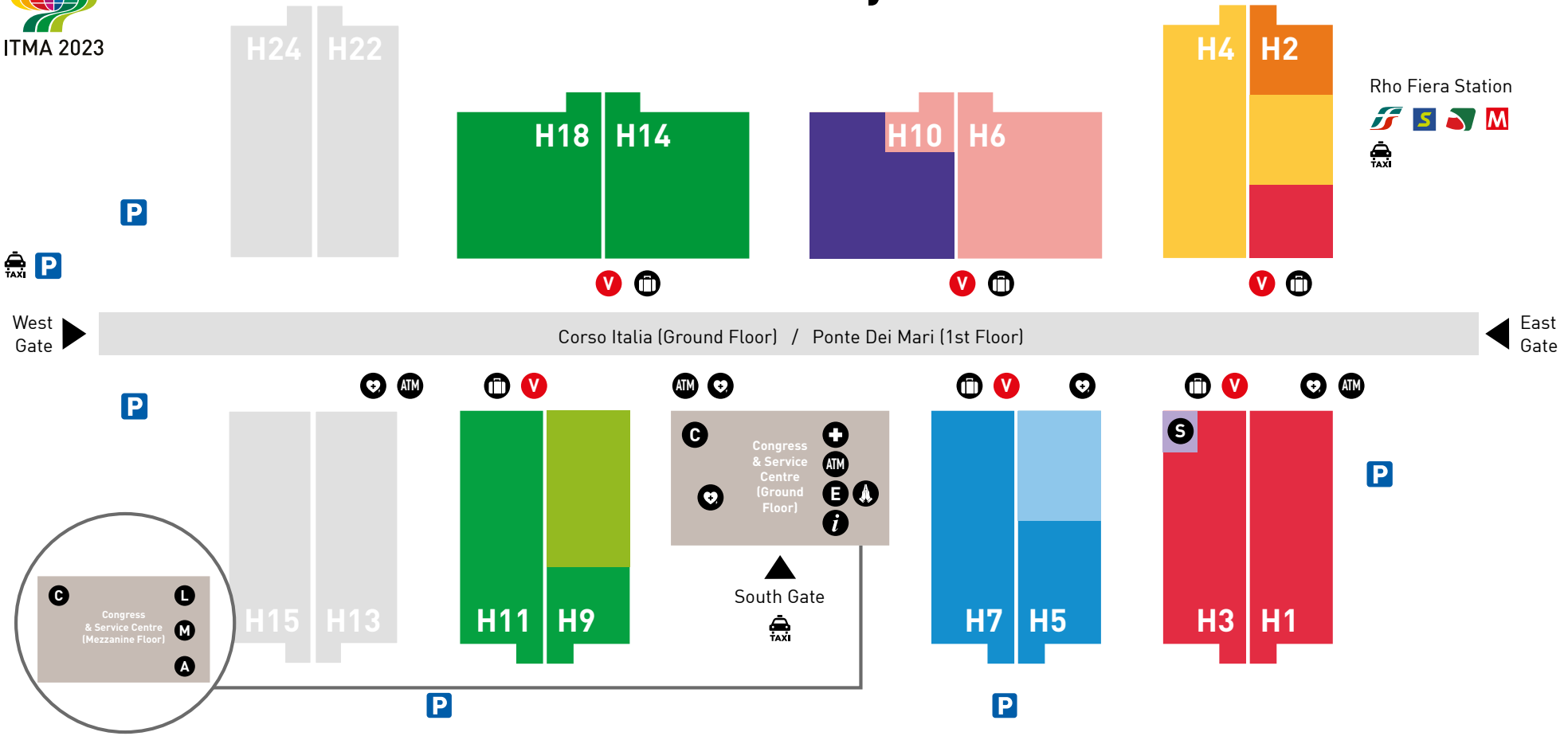
The two largest sectors, finishing (West) and spinning (East), form the two ends of the exhibition. Opposite the spinning mill is the knitting mill on the other side of the way. And between the ends are the halls for weaving, nonwovens production and digital printing. Fibres and yarns are in the knitting hall, research is in the spinning hall and many smaller chapters are in the finishing section in Hall 9.

ITMA CONNECT

For ITMA 2023, ITMA Services has expanded the exhibitor directory into a platform called ITMA Connect. Participants of the fair can make contacts here and prepare meetings at ITMA. It is also planned that visitors will find technologies and solutions here. However, the content posted by exhibitors does not necessarily reflect the new products on show at ITMA, which are usually the focus of interest.

ITMA 2023

Sector & Facility Plan



Sector Plan

- Chapter 1 Spinning
- Chapter 2 Winding
- Chapter 19 Research & Innovation
- Chapter 5 Knitting
- Chapter 12 Testing
- Chapter 20 Fibres, Yarns & Fabrics
- Chapter 9 Printing & Inks
- Chapter 16 Colourants & Chemicals
- Chapter 4 Weaving
- Chapter 7 Braiding
- Chapter 3 Nonwovens
- Chapter 8 Finishing
- Chapter 6 Embroidery
- Chapter 10 Garment Making
- Chapter 11 Composites
- Chapter 13 Logistics
- Chapter 14 Recycling
- Chapter 15 Software & Automation
- Chapter 17 Plant Ops Equipment
- Chapter 18 Services

Legend

Ground Floor

- ATM / Bank
- Automated External Defibrillator (AED)
- C Conference Rooms
- E Exhibitor Liaison Office
- First Aid
- Information Counter / ITMAconnect Help Desk / Lost & Found
- Left Luggage
- Prayer Room
- S Start-Up Valley
- V Visitor Registration

Mezzanine Floor

- A CEMATEX & Rest of the World Association Offices
- L ITMA Club & Group Hospitality Lounge
- M Media Centre

ITMA APP

As in 2019, ITMA 2023 will once again feature an ITMA App, available for download from the Apple and Google Store (search term: ITMA). It can be used both personalised with the Connect login and in guest mode. The integrated maps for the grounds, the halls and the congress centre make a very good impression. Here you can search for individual exhibitors and the map will show them. The congress rooms, which are often difficult to find, are also marked. Exhibitors can also be found via the exhibitor list. However, the focus here is on the exhibitor's presentation. The connection to the stand is missing. Overall, the app is highly recommended for quick orientation.

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"TRANSFORMING THE WORLD OF TEXTILES" - **TRENDS AND MEGATRENDS**

ITMA is first and foremost an innovation fair, the showcase for the entire textile industry for the latest technological developments. These usually follow the major trends that will determine the future of the industry or are the latest solutions to current challenges facing the industry. "Transforming the World of Textiles" is the motto of this year's show and under this slogan ITMA aims to showcase innovations that help textile and apparel manufacturers transform and grow their business.

Of course, such a transformation has many different facets and these run through many different parts of the textile chain from fibre selection for spinning and nonwoven production to finishing of the finished garment and, with the drive for a circular economy, even beyond. In a more general context, many new solutions and ideas can be grouped and further subdivided into the well-known megatrends of sustainability, digitalisation and automation. ITMA itself identifies four broad areas for transformation and expansion: Advanced Materials, Automation and Digital Futures, Innovative Technologies, and Sustainability and the Circular Economy, where the circular economy could also be seen as a sub-area of sustainability. Its explicit mention shows its importance. In some cases, the transition between these groupings is also fluid, or certain innovations can fall into several groups. For example, the use of new fibres can fall into both the advanced materials and the sustainability categories. On the other hand, the categories are very high level and abstract and the innovations are more likely to be in very specific sub-areas.

Sustainability, for example, offers on the one hand topics that are more concerned with raw materials and materials, such as new raw materials and fibres, biodegradability and recycling, which includes both the use of recycled materials and their subsequent recyclability. On the other hand, sustainability is about processes that can be further optimised, for example in terms of raw material use and quantity optimisation in combination with waste avoidance, energy saving and chemical use. Part of these improved or changed processes are then new and improved machines with all facets from design to control and integration into production and software to optimal adjustment, operation and maintenance. Every gram of CO2 saved, every drop of water saved, every millilitre of chemical saved ultimately serves to improve sustainability and, at best, also goes hand in hand with a reduction in costs and an increase in productivity. The economics of sustainability will continue to play an important role in bringing consumers on board with the transformation.

Let's take a look at some of the highlights that do an excellent job of underpinning these trends.

LABOUR SHORTAGE & AUTOMATION

If you ask about the five most pressing problems currently facing textiles, the shortage of skilled workers is almost always mentioned. This is equally true for many countries in the world, not only for the industrialised countries, where birth rates declined due to the pill-popping after the "baby boomer" generation (ca. 1946-1970), more and more of whom have reached and will soon reach retirement age. However, it is not only the total number of workers that is decreasing in many countries, it is also cut-throat competition between industries. Some industries benefit from hype and pay higher wages in some cases. The industry is having a hard

time in the battle for talent and the shortage of skilled workers is hitting it twice: on the one hand, there is a lack of workers and, on the other hand, the know-how acquired over years and decades on the machines often goes with the experienced workers. Automation and digitalisation are the main solutions to this problem. One replaces manual work with machine work and the other replaces human process know-how with electronic data processing. This includes data collection through intensive measurement processes, data storage, optimisation software, partly with AI components, and computer-assisted control. In this way, the know-how of the employees is made transparent and passed on to an "artificial memory and brain" from which it can be compared, optimised and retrieved. Manual labour is replaced by sophisticated new machines, design changes to machinery and robots.

Many of the solutions that were subsumed under the keyword "Industry 4.0" at ITMA four years ago, and which got their start at that time, will be presented in improved form at the current ITMA as solutions that are now ready for the market.

One such solution comes from the finishing sector of the company Brückner. Brückner CTO Axel Pieper reported at a VDMA webinar before ITMA that they will present their "digital twin" at the fair. Using a modular construction system, this digital representation of a real drying machine can be easily created and fed with all real production data provided by the dryer. The latest generations of Brückner machines can be supplied with many additional measuring systems so that all parameters important for the production process can be recorded. Old machines should also be expandable with these possibilities. The "digital twin" can be used on the one hand to store and retrieve all optimal settings, and on the other hand to run simulations for various process parameters and thus optimise the processes. This saves time in any case. In addition, at best energy is saved through process optimisation and thus costs, as well as the material that may have been incorrectly treated in real trials. Such solutions will certainly not be an isolated case, nor will they be limited to finishing. For the production of nonwovens, for example, Trützschler Nonwovens, Autefa Solutions and Dilo offer solutions that go this way.

For dyeing, Thies Textilmaschinen recently mentioned some advantages for an automated storage, weighing and dispensing system for dyestuffs and / or auxiliary chemicals. Employees no longer routinely come into contact with chemicals and dyes during weighing, transporting, dispensing and dosing. Non-value-added activities are eliminated and the workplace becomes safer. The risk of chemicals and dyes falling or spilling is minimised, protecting employees and the environment from harm. A higher-level production planning system, centrally hosted, controls the process organisation of the entire dyeing plant through bidirectional communication. The MPS systems (Multi Product Supply Systems) monitor the delivery targets (tanks). The synchronisation ensures an optimal process and production flow. MPS systems fit seamlessly into the concept of a future-oriented, efficient dyeing plant and ensure great increases in productivity and quality. At the same time, the automatic weighing, dissolving and provisioning of dyestuffs and chemicals leads to increased dyeing quality, maximum reproducibility, savings in personnel resources, significantly increased work and environmental safety as well as optimised product consumption.

For the "digital twin", Oerlikon Barmag has another special treat in store for its customers and will present a complete WINGS POY winding head as a kinematic model of a digital twin. For this purpose, all essential machine components were modelled as rigid bodies and connected to each other via joints and contact bodies. With this kinematic model, it is now possible to map all the processes that occur during the operation of a winding head in virtual space. Customers can thus be offered faster and more cost-effective production solutions.

RECYCLING

Recycling is perhaps the best way to see why the theme of ITMA is "TRANSFORMING THE WORLD OF TEXTILES". Even before the last ITMA, on 4 November 2016, the Paris Agreement had entered into force. Here, at least 55 countries, which together account for at least 55% of global greenhouse gas emissions, have committed to limit the increase in the global average temperature to well below 2 °C above pre-industrial levels and to aim for an increase of less than 1.5 °C. The signatories include all EU countries.

To implement the agreement, in December 2019, around six months after ITMA, EU leaders meeting in the European Council agreed that the EU should achieve climate neutrality by 2050.

Achieving this first carbon-neutral economy and society means that EU countries must drastically reduce their greenhouse gas emissions by 2050 and find ways to offset the remaining and unavoidable emissions to achieve a net emissions reduction to zero. As an intermediate step, exactly one year later, it was agreed to more than halve EU greenhouse gas emissions by 2030 (compared to 1990). In implementation, numerous other individual targets, strategies and projects emerged, including the European Green Deal, Europe's new agenda for sustainable growth. Even before that, on 11 March 2020, a new action plan on the circular economy had been adopted by the European Commission. On 30 March 2022, the Strategy for Sustainable and Recyclable Textiles (EU Textile Strategy) was adopted by the European Commission. Among other things, it stipulates that by 2030 textile products placed on the market in the EU should be durable and recyclable. In addition, they are largely made of recycled fibres, are free of hazardous substances and are produced with respect for social rights and environmental protection.

By following the guidelines of this strategy, the production landscape for textiles will change enormously by 2030. The world of textiles is indeed to be transformed. In the time between two ITMA fairs, completely new conditions have emerged. Textile production for goods to be sold in the EU market will thus have to be both recyclable and made of recycled material in a few years. This means that at this ITMA the subject of recycling will already be of vital interest to companies along the textile chain and it will be important for every visitor to find out about the state and possibilities of the technology or, at best, to have it demonstrated.

One of the biggest challenges in textile fibre-to-fibre recycling is the spinning of recycled cotton fibres, as these are shortened to 30-40% of their length by the tearing of the old textiles and can therefore no longer achieve their required strength in the spinning process. As a rule, these "old fibres" are therefore blended with new fibres and can thus still be used without negative effects.

The process of blending is not new and has been used in the industry for industrial fibre waste for a long time. The preferred process has always been rotor spinning. Else Tekstil, for example, is one of the largest recycling producers in Turkey and uses cuttings from all over the world first to produce fibres and then, on Saurer BD 7 machines and the Autocoro 9, to produce yarns with different cotton and polyester contents and yarn counts from Nm 4 to Nm 36.

In order to achieve complete fibre-to-fibre recycling, however, further criteria have to be met. On the one hand, the shorter fibres of the used textiles have to be mastered and, on the other hand, finer and high-quality yarns with other characteristics have to be made producible. This includes improving the ring spinning process for recycled yarns. For spinning mills, it will certainly be of utmost interest to have a look at the solutions of the technology leaders for spinning machines.

In the field of research, the Institute for Textile Technology of RWTH Aachen University (ITA) has already announced a solution from research in the pre-show report. ITA will be showing a jumper made of CO regenerated fibres (65%) and PES virgin fibres (35%) with ring-spun yarn from post-consumer textile waste on its stand.

In anticipation of the need for a circular economy, Saurer has already optimised its spinning machines for processing recycled or regenerated fibres. Under the heading Recycling Xtreme, Saurer has dedicated itself to the processing of a high proportion of the shortest fibres and will present corresponding solutions here. In addition, Saurer twisting machines can support the strengthening of yarns.

With the TC19i card, Trützschler has been offering a special spinning preparation machine designed specifically for processing recycled materials for several years. In addition, Trützschler will present its new TRUECYCLED brand for textile recycling at the ITMA. TRUECYCLED stands for state-of-the-art recycling systems from Trützschler that enable manufacturers to produce a high-quality end product from textile waste (hard waste). Trützschler's machine expertise and technological know-how enable customers to produce tape with the highest possible quality and thus turn waste into value. In this regard, Trützschler announced that with TRUECYCLED, manufacturers can be sure that they are using the best technology and a reliable and reproducible manufacturing process - the prerequisite for high-quality yarn from textile waste.

In the run-up to ITMA, Uster also pointed out the special features and challenges for spinning recycled yarn. In particular, the fact that even if the processes can be demonstrated in principle, consistent quality can become a problem. For the market-leading supplier of test systems for quality control of yarns, this is certainly an obvious hint, but also a logically comprehensible one. As an example, USTER compares a Ne 20 rotor yarn made of 75% CO and 25% CO-R with a 100% CO yarn. The values for flatness, imperfections and hairiness were measured and resulted in a CVm% of 22% in the Uster statistics, which could indicate an excellent quality of the recycled yarn if relying only on the numerical values. However, a more detailed analysis with the Uster Tester spectrograms showed a distortion error at the draw frame. In this case, the problem was detected before it led to an uneven structure in the later fabric from the yarn. USTER calls it an unavoidable fact that mixing pure and recycled cotton deteriorates some quality parameters. In order to manage the risks, USTER sees a need for better communication and a common understanding throughout the textile value chain and would like to use a new Uster statistic

to once again arrive at a common quality language. The new edition, which will be launched at ITMA 2023, contains for the first time a section for recycled yarn with the corresponding necessary information.

Of course, the use of recycled fibres also has an impact on downstream processes.

The KARL MAYER GROUP will be presenting an innovative concept for the circular economy in warp knitting. The concept is about intra-industry recycling: processing recycled yarns into high-quality textiles that can be recycled back into yarns.

THIES, with its expertise in the industrial production of pressure vessels and automated material handling equipment, supports solutions for both the de-dyeing and re-dyeing of recycled fibres and yarns.

A recycling solution for the production of nonwovens from recycled textiles and nonwovens that can match a fabric made from virgin materials, even for lower grammages per area, has been announced by DILO. Through partnerships, DILO has integrated a "controlled tearing" of the old textile fibres into its own production line and sees itself in a position to achieve a grade and quality equivalent to the use of virgin materials for many applications with these suitable fibre lengths of the old fibres. In addition, this process can also be repeated several times in the case of pure needling, so that the idea of a circular economy can be served with this kind of production.

Recycled yarns on a fibre-to-fibre basis are also a big change for the man-made fibre industry. Up to now, PET bottles have primarily been recycled into chips, which are then processed into R-polyester. Here, OERLIKON BARMAG offers a homogeniser recycling system for manufacturers who want to agglomerate, extrude, homogenise and melt bottle flakes and film waste to produce polymer melt or chips. The recycling of yarns from polyester or blended fabrics is carried out by a chemical or biological conversion process at the molecular level, so that the recycled materials are roughly equivalent to new materials. The challenge here is to reduce the cost of the conversion process and to establish economically viable separation processes of blended fabrics on an industrial scale.

Potential problems in the spinning process itself do not seem to exist, if one follows the words of Oerlikon CEO Polymer Processing Solutions Division Georg Stausberg. He commented: "One thing is certain, however: with today's technologies from Oerlikon and future innovations, we will be able to turn virtually any raw material into an ecologically attractive end product. The economic questions will ultimately be answered by consumers. So technology is once again enabling us to create a better world". Oerlikon itself is heavily involved with Worn Again Technologies. The UK partnership focuses on a solvent-based recycling technology that can convert both polyester and polycotton blend waste textiles and PET plas-

tics into circular raw materials and fibres (polyester and cellulose). To this end, a large demonstration plant for upcycling 1,000 tonnes of textiles per year is being built in Switzerland.

Georg Stausberg also sees ITMA as a place to set the course for the future and says: "The time for circular strategies and the corresponding sustainable technologies is now - let's talk about it at ITMA."

In the run-up to ITMA, the VDMA has created an overview listing VDMA companies that offer solutions for the entire processing and production chain in the spirit of the circular economy as a whole. The production programme and services include plants and technologies for the recycling of textile production waste, textiles, textile auxiliaries or waste heat and for the processing of recyclates to textiles.

Looking ahead to ITMA 2023. Now is the time.

SUSTAINABILITY

Sustainability is a topic that the textile industry, and with it the textile machinery industry, has been addressing for many years. It was already a central theme at ITMA 2011 in Barcelona. At that time, for example, the Italian textile machinery association ACIMIT launched its "Green Label" for particularly energy-efficient and environmentally friendly machines. Participants of the press conference will remember the answer "It's just the beginning!" to the question about the sense and purpose of such an initiative by former President Sandro Salmoiraghi.

What began in 2011 is expected to reach its first peak in 2023. Sustainability has gone from being a trade fair motto and buzzword to a serious and necessary component of textile production in the last 12 years, and meanwhile comprehensive sustainable solutions are expected along the textile value chain. This leads to the expectation that corresponding solutions developed by textile machinery manufacturers for less chemical and water use and with better energy efficiency will also be purchased.

The carbon footprint of textile products will play a role in being able to sell them in the future. The time of "capsule collections" to demonstrate sustainability is coming to an end. In Italy, there is already a proprietary solution for the collection and disclosure of machine data.

The "Green Label" introduced by ACIMIT in 2011 (www.green-label.it) introduced by ACIMIT in 2011 has also accompanied this development. In the absence of internationally recognised standards for classifying the energy and/or environmental performance of textile machinery, Italian manufacturers promote the Green Label as a tool to show some performance data of the machines. This information can also be compared with that of competitors. Ten years after its introduction, the Green Label has been renewed to promote awareness in the textile industry of the ongoing commitment of Italian manufacturers to supply machinery and equipment that is sustainable in both economic and environmental terms.

ACIMIT President Alessandro Zucchi says: "In the future, the ACIMIT Green Label will become more and more a tool to differentiate certified Italian manufacturers in the textile machinery sector and a major advantage for global players in the industry and textile customers worldwide."

All in all there are many, many sustainable solutions from many companies and certainly new ones will be added at ITMA and existing ones, perhaps further improved, will once again be in the spotlight. Sometimes even an excellent solution takes time until the market rewards it accordingly and it is at the top of buyers' lists. There are also many of these solutions and we would like to present an example of a product that appears to be very "smart", not only in name.

A sustainable solution for indigo denim dyeing, for example, comes from Sedo Engineering in Switzerland. Their Smart-IndigoTM technology makes a difference to the denim world by using an electrochemical process that consumes far fewer resources than other traditional methods. Using only indigo pigment, caustic soda, water and electricity, the Smart-IndigoTM solution is a highly sustainable method of dyeing denim that is fully automated. Such solutions can of course be "game changers", but often need to break down traditions, habits, scepticism and supplier relationships.

ENERGY EFFICIENCY

In Europe, energy in the form of oil, gas and electricity has become more expensive since Russia's war against Ukraine. Energy efficiency is also a crucial production cost issue here. This is not necessarily true for the whole world and thus for the whole world of textile production.

Energy prices are very different in many countries. In the USA, for example, electricity prices often fluctuate from county to county. With regard to costs, there is therefore not necessarily and everywhere the pressure to also orientate oneself on energy efficiency when selecting a machine. Rather, like other parameters, it is included in the calculations of the total cost of ownership (TCO).

With the sustainability efforts of many countries, including those of the EU, energy efficiency has taken on a new dimension.

Textile products should be produced as sustainably as possible and be oriented towards the best available technologies. In the foreseeable future, consumers will be able to see how sustainably a textile has been produced. In all likelihood, this will also include the CO2 footprint. Furthermore, it is to be expected that textile products that do not meet certain minimum requirements will not be placed on the European market. This new package of regulations thus also puts the energy efficiency of machines in a new light.

An example of the impact energy efficiency can now have comes from nonwovens production. The German Dilo Group has developed a process to penetrate the growth market of care wipes, i.e. "disposables" with a light basis weight, with the help of needling technology. The further developed and modified process of intensive needling with 45,000 needles per metre of nail board, known as micro-punch technology, has energy savings of 70-80% compared to water jet technology, which was previously used solely for the production of these applications. This in turn leads to a cost saving of 25%, for some applications even 50%. In this example, the new machine certainly arouses interest because the high energy efficiency of the process can also reduce production costs. However, this could change in the future to the extent that the energy savings alone would make the process a preferred one.

Examples of improved energy efficiency come from many areas of textile production. Saurer, for example, has reduced the energy consumption of its Autocoro rotor spinning machine by 40% over the years. With regard to the group's sustainability efforts, Trützschler points out that energy efficiency is one of the most important requirements in all their innovations and can report as a result that they have reduced the energy consumption of their cards per kilogram of material produced by about 70% in the last twenty years. Trützschler also points again to energy as a competitive advantage of energy efficiency and states that compared to a current high-performance competitor model, their intelligent card uses 40 % less energy for air technology. And the development in the machine is also made clear by the fact that the new Trützschler precleaner CL-X saves up to 30 % energy compared to its predecessor model thanks to an improved air flow.

There is a similar willingness to save and success in saving energy in the spinning mill for Rieter, SSM or indeed Savio. As a rule, every new machine here also contains indications of energy savings compared to the predecessor model and competitor machines.

A pioneer in energy saving was certainly Oerlikon, which made this a lived philosophy for the company as early as 2004 with the label e-save and also underlined this with a corresponding signet.

NEW MATERIALS

Materials have developed in leaps and bounds in recent years, with more and more new materials pushing out of the laboratories and into the textile markets. Many of these new fibres have a biological origin or are biodegradable or fulfil both criteria. Many new materials also have their origins in recycling and are produced chemically from cotton from used textiles. Recycling can certainly be mentioned as an initial spark for increased research into new materials. Another would be the lack of sustainability of the cotton and polyester materials that predominate in the textile industry. Cotton has had to put up with a lot of criticism in recent years for its use of water and pesticides, and the more sustainable organic cotton has only a tiny market share. Polyester has it doubly hard. By far the most prevalent material in the textile industry, it is derived from petroleum and thus from a fossil fuel. And as if that is not enough, the microfibre problem was added on top of that, so that many new developments in fibres are above all also trying to be an alternative to polyester.

However, and this is the clear flip side of the coin, it must be said that petroleum that is converted into polyester is at least not blown into the air in the form of petrol, diesel and heating oil. As a material that will probably become increasingly recyclable in the future, a certain base of polyester articles may also be needed for this recycling. A complete substitution by biological materials in the form of the worldwide annual demand of about 60 million tonnes seems impossible. Especially since it might also make more sense to first replace disposable PET-based articles with biologically produced and biodegradable materials. The global consumption of petroleum in 2021 was a good 4.2 billion tonnes (source: statista.com). Approximately 1.9 tonnes of crude oil are required to produce 1 tonne of PET, i.e. more than 50% of the fossil raw material is retained during the conversion. In 2021, global polyester fibre production was 60.53 million tonnes (source: statista.com). This means that around 114 million tonnes of crude oil are needed annually for polyester production. That is just 2.7% of the annual petroleum consumption for polyester. The leverage to use less fossil raw materials therefore lies in other areas of application. This is not to minimise the problem, but until other solutions are available on an industrial scale that do not have a negative impact on the environment and climate, and provided that the microfibre problem can also be solved technically, as the H&M Foundation recently announced for its pioneering technology Acousweep, which separates microplastics from wastewater with the help of sound waves, polyester should definitely still have its place.

The biological recycling of polyester by bacteria and enzymes, as practised by the French company Carbios, appears very promising in the wider outlook. Carbios is currently building a pilot plant with Indorama to recycle 40,000 tonnes of polyester per year, which should be operational by 2025. Assuming the industrial scaling of the process succeeds and a future capacity per plant could be 100,000 tonnes and 10 plants could be built per year, just 5 million tonnes of polyester would be recyclable in this way by 2030. That would be about 6%. However, with further exponential development, it would be possible that by 2040-2050 the annual demand for polyester could be fully produced in a closed loop.

New materials are also driven by partnerships to process them optimally on textile machines, thus forcing their acceptance in the market. Just before ITMA, the KARL MAYER GROUP and the Lenzing Group announced a strategic partnership with the aim of creating a more environmentally friendly textile value chain. The aim is to increase the proportion of plant-based, biodegradable and fossil-free materials used in the production of textiles on both warp knitting and flat knitting machines. In the warp knitting mill, the use of up to 100 % vegetable and biodegradable fibers and filament yarns - specifically TENCEL™ Lyocell fibers and TENCEL™ Lyocell filament yarn - is targeted. The sustainable products should also convince with an appealing look. Additional possibilities are expected in terms of performance and appearance of knitted fabrics.

The fiber & yarn sector will certainly show many new interesting materials at ITMA.

AI - THE UNKNOWN EXTENT

Artificial intelligence has been discussed for at least 20 years, sometimes more, sometimes less, as the technology that has the greatest potential to change all our lives and determine our future. Currently, it has received a lot of attention, not least due to the great hype surrounding the text creation software chatGPT, and has also been mentioned occasionally in textile machine construction.

It would probably be important to define exactly what AI actually is or what we are talking about, because the field of AI is very broad. In connection with ChatGPT and openAI, we are talking about a very special software core fed with huge amounts of data, in this case the language model GPT-3, which only makes machine learning possible on this scale. With such a software core, preferably in combination with corresponding super-fast processors, such as those mainly from Nvidia, it is already possible today not only to provide intelligent answers to all kinds of questions, but also to create real innovations.

State-of-the-art AI is now capable of creating something new. A standard example of this is the creation of new antibiotics against multi-resistant bacteria. Here, various researchers have achieved breakthroughs with the help of AI in recent months, for example a team from the Massachusetts Institute of Technology (MIT) and McMaster University.

INNOVATION:
IT'S IN OUR DNA

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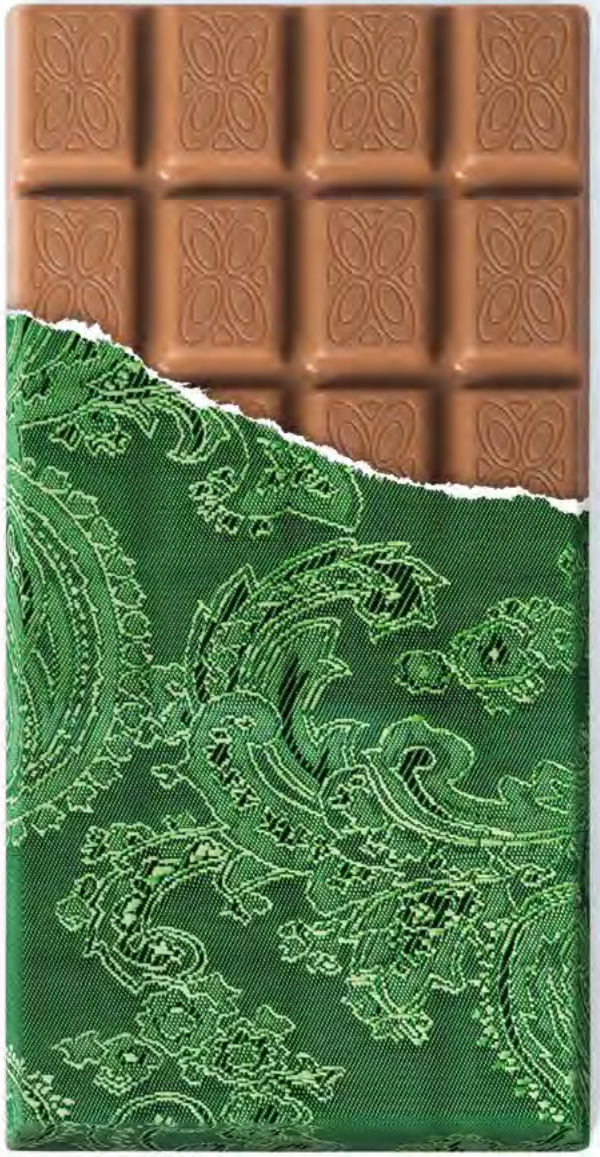

Vevey, Switzerland, 1819: François-Louis Cailler invents the now-familiar tablet format for chocolate. His simple idea makes chocolate available and affordable worldwide. Today, one billion Swiss-made chocolate bars are produced each year.

Invented in Switzerland. Where the same innovative spirit drives textile progress today.

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The researchers trained a machine learning model they had developed with the laboratory results of a series of experiments in which the Acinetobacter baumannii bacterium was exposed to around 7,500 substances. The AI selected a few 100 candidates from these, which then had to be tested again in the laboratory. The effort was significantly reduced and the results, which are currently in animal testing, appear promising.

In textile engineering, these possibilities are probably still a long way off. Known solutions referred to as AI do not refer to the use of supercomputers or report a special AI kernel. An AI in the form described above could be used, for example, to discover new fibres, improve recycling or find new applications for textiles and composites. Or it would also be able to suggest the essential production parameters for the production of unknown materials. Such software, which enables creative solutions and which we perhaps equate with the term AI, does not yet seem to exist in textile production.

Nevertheless, solutions that do not create new knowledge, but just store and optimally use existing knowledge, are also very useful. In this area, there will also be many applications to examine along the process chain at ITMA. Brückner, for example, has announced a digital twin with which certain productions can be digitally run through in advance and thus optimised.

Oerlikon Barmag will present a digital twin, a complete WINGS POY winding head as a kinematic model. With it, it is possible to map all processes that occur during the operation of a winding head in virtual space. Customers can thus be offered faster and more cost-effective production solutions.

Karl Mayer, with its own IT subsidiary KM.ON, has already launched many developments to optimise and control production. In order to maximise productivity, the KARL MAYER GROUP is specifically developing smart machine functions that exploit the potential of digitalisation or artificial intelligence, for example, to revolutionise pattern changing in warp knitting through cloud-based patterning. High-performance warp knitting machines of the digital generation such as the HKS 3-M ON work with pattern data from the cloud instead of pattern discs and thus offer unique flexibility.

Other digital solutions focus on the analysis of production data. For example, warp knitting customers will in future be able to use real-time information on the energy consumption of their machines with a new energy monitoring system. A first prototype will be on display at ITMA. In addition, KM.ON offers DPM (Digital Production Management), a software solution that facilitates and improves the management of a warp knitting mill.

With its ESSENTIAL digital platform, Rieter offers software for spinning mill management that, for example, makes it possible to detect and eliminate deviations at an early stage in the process. According to Rieter, this "artificial intelligence" also contributes to minimising energy and raw material consumption. The example of the Autoconer X6 winding machines clearly illustrates the benefits of this AI. With the help of the connection of the winding machine to ESSENTIAL, it will not only be possible to detect quality deviations even better during production, but also to trace the causes back to the upstream process stages and eliminate them. ESSENTIAL thus opens up potential for enhanced transparency and optimisation across all process stages.

AI thus definitely has its place among machine builders and at ITMA. Especially in the area of transparency and optimisation in the context of digitalisation. And with the further development of AI, further steps will certainly follow with these good prerequisites for data acquisition and storage.

CONCLUSION

In this short introduction to ITMA 2023, we have touched on the urgency of change in the textile industry against the background of changing legal regulations and constantly changing consumer behaviour. And with the individual trend themes we have shown the tremendous range in which this change will take place. This is made even clearer by the fact that we were only able to show and announce a few exemplary solutions and developments. Everything else will now be shown at ITMA.

NUMEROUS ANNOUNCEMENTS BY EXHIBITORS

And that brings us to the essentials: the exhibitors and their machines. As was the case four years ago, many exhibitors are already giving a preview of the innovations that visitors can expect on their stands.

Therefore, we can already tell you in the ITMA preview for many exhibitors which exhibits will be shown or at least which machine or in which subcluster we can expect innovations. As usual, we have structured our preview along the textile value chain and give you the halls for each sector and the exact stand for each exhibitor.

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SSM
WITH SEVERAL WORLD PREMIERES

SSM, recognized as innovative leader in yarn processing and winding and subsidiary of the Rieter Group, will put its special focus on sustainability at ITMA. For SSM, this includes the reduction of waste and the associated maximization of yield, energy-efficient solutions, longer service life of machines and spare parts, a longevity concept for upgrades and retrofits of products, and flexible machine concepts serving maximum amount of applications. Visitors can expect several world premieres at ITMA. SSM will showcase two new machines and its new NEMA digital suite.

SSM NEO-FW PRECISION WINDER

The new SSM NEO-FW precision winder offers outstanding advantages. It offers a 25% increase in speed, automatic doffer and guarantees a quick take-up change. It also features Digitens yarn tension control, the fastflex electronic yarn laying unit and the advanced winding algorithm DIGICONE 2. In addition, it has the new "Nema ready" feature, which means that it can be optimally connected to the new NEMA digital suite.

SSM NEO-FD PRECISION ASSEMBLY WINDER

The second new machine, the SSM NEO-FD precision assembly winder, offers the same features as the new SSM NEO-FW and has an integrated 2-or 3-ply creel. It is also "Nema ready".

SSM NEMA DIGITAL SUITE

Nema, the Greek word for thread, in addition to its use in textiles, is used to indicate the connection between two or more points. Now Nema is also the word for SSM's Digital Suite, helping SSM customers navigate complexity, uncover hidden problems and find the path to manufacturing excellence. Nema provides real-time insights that provide visibility into process performance. This ensures optimized machine operation with machine health indicators. With Nema, SMM customers enjoy secure connectivity and safe data storage with state-of-the-art technology and easily maintain control by navigating from global overview to local insights in seconds.

www.ssm.ch

SSM NEO-FW precision winder © 2023 SSM

TRÜTZSCHLER WILL INTRODUCE THE LATEST MACHINES AND TECHNOLOGIES **SPINNING, CARD CLOTHING, NONWOVENS AND MAN-MADE FIBERS**

Trützschler offers proven solutions for textile recycling – such as the intelligent card TC 19Ri for Recycling © 2023 Truetzschler

At a 1320-square-meter stand Trützschler will introduce the latest machines and technologies from the entire Trützschler Group – including Spinning, Card Clothing, Nonwovens and Man-Made Fibers.

TRÜTZSCHLER SPINNING AND TRÜTZSCHLER CARD CLOTHING

Trützschler Spinning will showcase innovations for carding, draw frame and combing which meet the most important customer requirements in fiber processing: higher efficiency, more sustainable raw material utilization and intelligent automation – while also displaying the potential of digital technologies for spinning mills. Visitors can also look forward to the introduction of our new brand TRUECYCLED for textile recycling.

truecycled®

The machinery expertise and technological know-how of Trützschler enables the customers to produce sliver with the highest possible level of quality and make it possible to turn waste into value.

Trützschler Card Clothing (TCC) will present a wide range of technologies from its clothing portfolio, which covers the complete spectrum of applications in the spinning and nonwoven markets. This includes all of the service features and machinery equipment that are supported, which will be demonstrated live at the booth as part of an "Action Point" presentation. TCC is also focusing on recycling applications and will showcase its contribution to sustainability in the textile industry. These features and functions are all supplemented by "My Wires", our digital wire performance solution that is integrated into the Trützschler digital platform.

TRÜTZSCHLER NONWOVENS AND TRÜTZSCHLER MAN-MADE FIBERS

Trützschler Nonwovens will focus on solutions that take nonwoven production processes to a new level. The story of innovations for needle-punching will be told at two booths: Trützschler is going to concentrate on the holistic T-SUPREMA package of excellent machinery, tailor-made production lines, integrated digital support and global service.

Trützschler's cooperation partner in needle-punching, the Italian company **Texnology S.r.l.**, will offer details about machinery and applications at booth A101 in Hall 10, and will also provide a chance to check out a running needle-punching line featuring some of the T-SUPREMA machinery.

A first T-SUPREMA needle-punching line © 2023 Truetzschler

Trützschler Nonwovens will also showcase solutions for new and environmentally friendly wipe materials, as well as an innovative drying concept. Unlocking the potential of digitalization is the key topic at our T-ONE corner, where our experts will demonstrate every aspect of our digital environment – from quality control and recipe management through to real-time process monitoring and AI-based line optimization.

A carded-pulp line © 2023 Truetzschler

Last but not least, **Trützschler Man-Made Fibers** will demonstrate the power of OPTIMA, Trützschler Man-Made Fiber's flexible platform for all types of Bulk Continuous Filament (BCF) carpet and Industrial Yarn (IDY).

The ITMA offers a great opportunity for people from across the textiles industry around the world to talk to the Trützschler experts from every business unit. The team is excited to finally meet its new and existing customers in Milan.

www.truetzschler.com

THE BLUE THREAD MOVES ON!

RETECH WILL PRESENT VARIOUS INTERESTING INNOVATIONS

Retech, as expert in 'drawing your fibres to perfection', will present various interesting innovations under the blue thread theme and related to sustainability for heated godets.

IOT IN A MODERN HEATED GODET

Retech godet rolls have revolutionized synthetic fibre processing by providing unique designs that allow for greater control over temperature, fibre treatment and sustainability. In addition to its innovative designs, Retech also focuses on energy efficiency when it comes to motors and heating equipment. This means all Retech products use less energy than traditional systems.

Retech's heated godet rolls are designed with two challenging requirements in mind: applying exactly the correct temperature for the material being produced; and maintaining this level continuously throughout the process. To do this, their designs incorporate energy saving technology, using single-zone or multi-zone heating via induction, infrared or resistance. This ensures accuracy and precision when it comes to surface temperature profiles - guaranteeing consistent yarn quality every time. In addition, a very important part of the Retech godet concept is the long service life and the associated permanent availability, thus reducing machine downtimes and the production of rejects. Retech has equipped its godets with additional measuring elements in order to be able to react preventively to possible damage and subsequent failure.

Thanks to the sophisticated, innovative and proven temperature measuring transmission system - UTR-6A, which measures the temperatures in the rotating godet and transmits the data to the temperature controller UCR-6 for processing without contact, it is possible to take further measurements, collect data and evaluate them. To protect the godet, the ongoing production and ultimately the sustainability of the entire process and the godet itself. There is a monitoring for the induction temperature, for the bearing temperature and for the viibrition. all this additional information and measurements are only really helpful if the operator then also takes measures and eliminates the causes. Depending on the process, the customer and his wishes, Retech offers different levels of measures.

IoTs in a modern heated godet
© 2023 Retech

NEW DRIVE SYSTEM – FOR (SUPER) SLOW SPEEDS

Today's demands on godets are not only faster, bigger, longer. "Slow" can also be a challenge. To ensure that such slow speeds with a ratio of 1 : 100 can also be implemented in a stable manner, Retech has developed a new drive system. A central point is the elimination of the coupling that has been common in the industry up to now, which connected the bearing, gear and motor. With the godet generation presented at ITMA, the bearing, the gearbox and the motor are one unit. Depending on the requirements for speed, torque and gearbox angular, a modular system is available, which can be assembled according to the customer's needs. A highly interesting new product line that Retech can present.

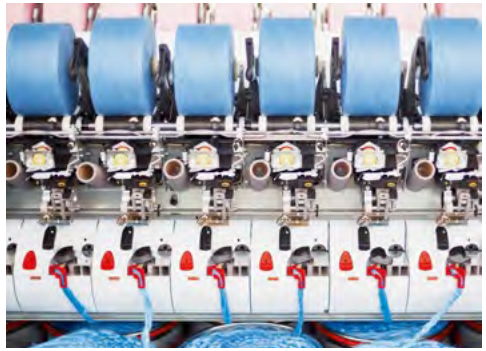
LIVE DEMONSTRATION

As a highlight, Retech shows the making of the blue thread. By means of a demonstration object, the mentioned news and products can be seen live in action. Other innovative products are the yarn tension sensors and the proved air-bearing separator rolls.

www.retech.ch

SAURER. **SHAPING THE FUTURE OF TEXTILES**

Saurer supports the textile industry in the areas of sustainability, digitalisation and automation and looks forward to welcoming many customers and interested visitors to stand B101 in Hall 2. Saurer has been driving change in the textile industry for more than 170 years and, as a highly innovative company, is constantly on the lookout for suitable solutions for future trends.



BD 8 semi-automatic rotor-spinning machine for producing yarns from recycled fibres © 2023 Saurer

Autocoro 11 rotor-spinning machine for producing yarns from recycled fibres © 2023 Saurer

SAURER SUPPORTS ITS CUSTOMERS TOWARDS A CIRCULAR ECONOMY

Saurer offers many new features to optimise the processing of recycled fibres. Starting with the new Autocard SC7, for example: all drafting systems are driven independently and can be adjusted easily online to facilitate processing of recycled fibres. Increasing the carding area to over 4m2 makes it possible to gently process all fibre types and results in increased productivity.
The integrated chute feeder ensures continuous, even feeding and sliver quality; Each drafting unit is driven independently which means online process adjustment is easy and the card can easily cope with recycled fibres. Dropping detection and automatic settings improve the utilization rate of fibre material and increase profitability for Saurer customers.

The rotor-spinning machines are ideal for processing recycled fibres with a high short-fibre content. Visitors can see the BD 8 semi-automatic rotor-spinning machine live at the booth.

The new Twinsuction system at both ends of the BD 8 results in energy savings and higher quality consistency. Automatic package removal makes it possible to change a package by simply pushing a button.

This ergonomic solution allows operators to change packages easily. With the LED operator guiding system, machine efficiency can be increased. The machine is flexible and can spin 2 lots simultaneously (Multilot) and slub yarns (Fancynation).

NEW AUTOCORO 11

The new, fully automatic Autocoro 11 rotor-spinning machine is the 4th generation of Autocoro with individual drive technology, which is already operating reliably with more than 1 million positions worldwide. Equipped with the Recycling Xtreme rX edition, the new Autocoro generation is tailor-made for recycled fibres. In addition, the Autocoro 11 shines with more powerful automation and with a new LED-supported operator guidance system, which further enhances the high productivity of the Autocoro 11.

AUTOAIRO CONVINCES CUSTOMERS

The Autoairo sets new benchmarks for producing high-quality air spun yarns, named Belairo. These yarns have high pilling resistance and are very durable. The spinning process itself also sets new benchmarks. Compared to combed ring spun yarn, production of Belairo yarns uses less energy and production space, which means less building and air conditioning costs. Saurer has combined this resource-saving spinning technology with the most advanced automation solutions in this segment. Thanks to digital control of the autonomous spinning positions and new smart features, yarn quality is guaranteed and not dependent on staff availability. Saurer's Autoairo air-spinning machine offers flexibility in processing different fibres: cotton, polyester, viscose as well as new chemically regenerated fibres.

HIGHEST AUTOMATION WITH AUTOSPEED

The energy-efficient Autospeed roving frame with automatic doffer allows spinning mills to be less dependent on the availability of skilled personnel and at the same time increases the quality of the roving. The Autospeed roving frame with up to 240 spindles saves up to 20% of energy compared with the previous model, while

Autoairo air-spinning machine with autonomous spinning positions © 2023 Saurer

doffing takes less than 2 minutes. At the ITMA exhibition, the Autospeed will be combined with the bobbin transport system, with Roweclean, the automatic tube cleaner and the Rowestore empty tube magazine.

Saurer is the pioneer for sustainable and economical solutions in ring-spinning and will present machines for the short and long staple sector in Milan.
The highly productive ZI 72XL compact-spinning machine offers a high degree of flexibility for almost all applications and is suitable for recycling fibres. Featuring the new self-cleaning compact yarn system Impact FX pro with multi-hole aprons, the ZI 72XL delivers excellent yarn values for standard and recycled yarns, especially for fine yarns.

The ZI 451 worsted compact-spinning machine for woollen and acrylic yarns will be on show at the Saurer booth and will delight worsted spinners with its high flexibility and profitability.

ZI 72XL compact-spinning machine processes recycled yarn © 2023 Saurer

TechnoCorder TC2 Plus- the high-performance machine for twisting single and multiple yarns © 2023 Saurer

Most of the finest woollen suits use yarns spun on ZI 451, because the machine is market leader in Italy and around the globe.

Fibrevision yarn monitoring and grading systems minimise waste from the start by detecting yarn faults and optimising production. This is vital for both virgin and chemically recycled fabricated fibres, which present many manufacturing challenges.

The Texparts product line supplies high-quality components for ring and rotor-spinning that ensure excellent yarn quality and maximum productivity. The newly designed PK 1580 drafting system for roving frames is designed ergonomically and easy to handle. Fast and precise adjustment of the load with narrow load tolerances is important for processing a wide range of fibres and is also advantageous for recycled fibres.

The CompactTwister can twist recycled yarns, thus increasing the strength for the downstream process.

The TechnoCorder TC2 Plus can process sustainable fibres such as bio-based Eco-PET and Dyneema-PE, flax and natural fibres and offers a yarn lubrication device to ease further process steps. The latest feature, PreciWinding, (TC2 Plus) features a newly developed take-up area for producing twist packages of outstanding quality.

SUN-Service Unlimited offers solutions for a long and sustainable service life for machines. Customers make their existing machines fit for processing recycled fibres - either with updates or upgrade kits. The Saurer customer support experts in the booth will be happy to inform people about solutions available to increase the quality, performance, and profitability of their production plant.

Sustainability involves more than just processing recycled fibres. Low energy consumption is essential to reducing our carbon footprint. The energy consumption of the Autocoro rotor-spinning machine, for example, has been reduced by 38% over the last 15 years. Rising energy costs drive us all to take action. The new Texparts spindle Eshape has a reduced wharve diameter of 17.5mm, enabling remarkable energy savings of up to 6%.

AUTOMATION FOR SPINNING AND TWISTING

Automation plays an important role in the transformation of the textile industry, and Saurer will be showcasing several automation solutions at the booth. Textile mills are facing increasingly complex challenges: rising labour costs and employee turnover, not to mention the need to optimise material flows, shorten lead times and increase productivity. The innovative automated guided vehicles (AGVs) for spinning and twisting improve mill productivity and reduce dependence on staff availability. Saurer offers tailor-made solutions that can be integrated into customers' processes and meet the growing demand for cost-effective automation.

www.saurer.com

The ZI 451 worsted compact-spinning machine processes long staple fibres, such as wool © 2023 Saurer

OERLIKON WITH WORLD PREMIERES AT ITMA MILAN 2023

"TECHNOLOGY IS ONCE AGAIN ENABLING US TO CREATE A BETTER WORLD"

Oerlikon Group will focus on current challenges that the entire textile industry has to deal with: creating a circular economy within the textile value chain, providing energy-efficient technologies, using digital solutions to support a sustainable production, processing new materials, and finally the traceability of all products and the recycling of raw materials used. And there are certainly many more subject areas that the visitors of the ITMA will have questions about. Oerlikon therefore invites all trade fair visitors to engage in a dialog with all its experts at its booth in hall 1, B211.

"At Oerlikon, we contribute with our innovative technologies for resource-saving use in almost all manmade fiber spinning mills in the world. Our promise for the future is to continue to expand the zero-waste production approach and thus take care of achieving our customers' and our own sustainability goals", says Georg Stausberg, CEO of the Polymer Processing Solutions Division and Chief Sustainability Officer of the Oerlikon Group. This sets out the claim of one of the world's leading suppliers of machinery and plant solutions for manmade fiber production not only for this show: In the future, it will be solely a matter of sustainable innovations.

Oerlikon Barmag Continuous Polycondensation © 2023 Oerlikon

CIRCULAR ECONOMY AND RECYCLING? ENABLING CUSTOMERS TO ACHIEVE MORE WITH LESS

To tackle the growing mountains of used clothing, it is above all European politicians who are developing a comprehensive strategy for a regulating circular economy. And the textiles industry is also making its mark with innovative technologies for recycling manmade fibers. However, there is still a long way to go before we have a sustainable textile world.

Oerlikon is intensively involved in Worn Again Technologies. The British partnership is focusing on a solvent-based recycling technology, with which both end-of-life textiles comprising polyester and polycotton blends and PET plastics can be converted into circular raw materials and fibers (polyester and cellulose). For this, a large demonstration system for upcycling 1,000 tons of textiles per annum is being created in Switzerland. "We are supporting technological innovators such as Worn Again Technologies because we believe their solution is extremely promising and because they are driving cooperation between the individual producers within the value chain. Recycling only works when all players cooperate in a circular system", emphasizes Stausberg. He

Georg Stausberg, CEO of Oerlikon Polymer Processing Solutions Division © 2023 Oerlikon

is already looking to the future: "The time for closed-loop strategies and the corresponding sustainable technologies is now – let's talk about it at ITMA."

In terms of sustainability, however, Oerlikon also sets itself high goals. Stausberg: "It is no surprise that we have applied high standards of innovation to our own operations and practices. For several years, Oerlikon has been creating pilot initiatives that we intend to implement company-wide to the greatest extent possible. For example, we are committed to achieving CO2 neutrality in all our locations by 2030 as we have already done at our site in Liechtenstein that provides our blueprint for meeting this commitment. Our goals also include obtaining 100% of our electrical energy from renewable sources and achieving the standard of ‚Zero Harm to People'".

Oerlikon Barmag is offering technological solutions for rPET that enable customers to save million tons of CO2 per year. In 2022, Oerlikon Barmag introduced, a homogenizer recycling line specifically for customers in China and Asia where bottle flakes and film waste can be agglomerated, extruded, homogenized and melted to produce polymer melt or chips. It enables the polymer quality of recycled bottles or film waste to be precisely adjusted to the requirements of different downstream extrusion or injection molding processes.

Another rPET solution is the VacuFil system from the Oerlikon Barmag joint venture, BB Engineering. VacuFil is a unique and innovative PET recycling line, uniting gentle large-scale filtration and targeted intrinsic viscoscity (IV) regulation for consistently outstanding rPET melt quality. In 2022, BB Engineering launched a patented key component of the VacuFil system, the Visco+ filter as a separate and easily integrable upgrade component that enables precise IV setting and pure melt with the help of vacuum.

IV is the central quality characteristic in PET recycling and rPET processing. It determines the melting performance in the production process and the properties of the end products and is thus essential in the recycling process. The Visco+ process is reliable, verifiable and 50% faster than conventional liquid-state polycondensation systems.

ENERGY EFFICIENCY? EVOSTEAM PROCESS REVOLUTIONIZES POLYESTER STAPLE FIBER PRODUCTION

In view of noticeable climate change and its impact on people and the economy, resource- and environment-friendly manufacturing methods are absolutely crucial for the future. High production costs are currently eating into the margins of fiber producers. Noteworthy here are above all massively increased energy and polymer prices, but water is also an important resource today – very frequently scarce and consequently expensive.

Oerlikon Neumag will be unveiling its new EvoSteam process to interested trade visitors, viewed by many process experts as an enabler for more sustainable staple fiber production in the future. The objective of the new development is to lower both operating expenses (OPEX) and the carbon footprint with minimal consumption of energy, water and polymer – simultaneously with the excellent fiber qualities demanded by downstream processes and high production volumes.

World premieres at ITMA 2023: the revolutionary new Oerlikon Neumag EvoSteam staple fiber process © 2023 Oerlikon

NEW MATERIALS?

Looking back at the regulations of the European Union, among others, there are also major challenges for new materials. In that regard the Green Deal can only be realized if new European Union policy frameworks create certainty for future investments.

"In the polymer processing industry, we have to come to a sustainable, closed circular economy for packaging materials and textiles, for example, while simultaneously intensively expanding the recycling of the materials used. Here, new materials also offer opportunities – opportunities that we as a machine manufacturer and plant engineering company will exploit. However, compared to non-biodegradable, petrochemical-based polymers such as PE, PET and PP, the prices for bio-based polymers like PA 5.6. and biodegradable polymers like PLA, PBAT and PBS are not yet competitive. In contrast, the properties of bio-based materials used for consumer products, especially those used in the packaging industry, are already competitive. It appears compostable textiles will remain a niche market", explains Stausberg.

"But one thing is certain: utilizing current Oerlikon technologies and future innovations, we will be able to transform virtually any raw material into an ecologically attractive end product. The economic questions will ultimately be answered by consumers. Technology is once again enabling us to create a better world", says Stausberg.

DIGITALIZATION AND TRACEABILITY?

By 2030, textile products marketed within the EU are to become more durable and recyclable, predominantly comprise recycled fibers, contain no hazardous substances and be manufactured in compliance with social rights and in a manner that protects the environmental. This also includes the introduction of a digital product passport and the amendment of the European Textile Labeling Act: Players along the value chain must fulfill new information obligations about the composition of textiles. At the show, Oerlikon will present own digital technology solutions and those that have been tested in collaboration with various partners for the use in Oerlikon technologies.

LOOKING INTO THE FUTURE WITH THE OERLIKON BARMAG DIGITAL TWIN

Oerlikon Barmag will present a complete WINGS POY winding head as a kinematic model as a digital twin. For this purpose, all essential machine components were modeled as rigid bodies and connected to each other via joints and contact bodies. The actuators present in the real world were simulated by forces and moments. Analogously, the sensors are simulated by contact bodies and corresponding collision bodies. With this kinematic model, it is now possible to map all the processes that occur during the operation of a winding head in virtual space. Customers can thus be offered faster and more cost-effective production solutions.

MARKET LAUNCH OF THE DIGITAL ACADEMY – ITS JUST THE BEGINNING

Interactive and customized, modular and flexible in terms of time – all features of a modern training concept. Adapted to the needs and general conditions of the respective student, training sessions should be independent of time and place and the contents should be tailored. This concept is being implemented within the Digital Academy at Oerlikon. The digital online training center, available through the myOerlikon.com e-commerce platform, comprises a collection of role-based e-learning modules on such topics as operation, maintenance and repairs – currently for the Oerlikon Neumag BCF S+ and S8 machines. Training is targeted at operating staff, process engineers and technicians, and quality assurance officers. The Digital Academy learning contents will be available for the Oerlikon Neumag BCF S+ and BCF S8 systems from ITMA onwards. Further contents will be continually expanded and made available to all customers.

OERLIKON BARMAG ACW WINGS

How can an upgrade increase Oerlikon Barmag POY yarn manufacturing process quality while simultaneously cutting energy consumption, waste, time and personnel? At ITMA, Oerlikon will show its long-awaited upgrade: ACW WINGS drawing fields. Established technologies can always be made better. When the Advanced Craft Winder (ACW) was launched in 1998, it was truly convincing with its sophisticated modifications for initial string-up and yarn transfer. WINGS replaced it as the new benchmark in 2007. However, because Oerlikon Barmag technology last for decades, many ACW and WINGS winders are being operated practically side-by-side in some places. Customers asked Oerlikon: please build a WINGS drawing fields over our ACW winders! At ITMA it will be shown for the first time at an exhibition in hybrid way – a WINGS drawing field in combination with virtual ACW Winder.

OERLIKON BARMAG WIPING ROBOT

Regular wiping of the spin packs is important for process stability and yarn quality. Automating the process with Oerlikon Barmag's wiping robots, which can be retrofitted to numerous spinning plants, delivers considerable benefits, as it reduces the yarn break rate by up to 30%, improves process stability and reduces downtime. In addition, wiping robots help to indirectly reduce waste as a result of a 90% decrease in the use of silicone oil spray cans and a 15% to 20% decrease in total silicone oil consumption.

World premieres at ITMA 2023: The Oerlikon Barmag ACW WINGS upgrade © 2023 Oerlikon

NEW AIR-TEXTURIZING LINE FOR POY AND FDY

The new JeTex by BB Engineering is a production line for high-quality air-textured yarn (ATY). It combines an innovative texturing system developed by BB Engineering as key component with state-of-the-art components by Oerlikon Barmag to ensure fast production speed, the desired effects, and the quality of the product.

Oerlikon Barmag WINGS FDY © 2023 Oerlikon

OERLIKON BARMAG PUMPS

Gear metering pumps in textile manufacturing are extremely popular. This is above all due to the fact that numerous systems are being modernized in terms of their efficiency and specialization. And it is precisely here that Oerlikon Barmag pumps are deployed, as those are the perfect solution for nearly every application. The Oerlikon Barmag spinning pumps are high-precision gear metering pumps in round or square shape for the production of continuous filaments. Possible applications are the prestage production of carbon fibers for reinforced composite materials with low weight and high resilience or the production of aramid fibers. The different fibers are used in quite different areas such as aviation, sports equipment or safety products. Two large 3D models for spandex and aramid will be on display at ITMA.

Oerlikon Barmag Spandex Pumps
© 2023 Oerlikon

OERLIKON NONWOVEN HYCUTEC

Oerlikon Nonwoven's HycuTEC inline charging technology is used to create high-end charged meltblown filtration media. Introduced in March, it went on to win the 2022 FILTREX™ Innovation Award. One of the reasons HycuTEC won the award was that the meltblown media treated with the technology requires 40% less polymer (fabric weight) to achieve the same filter efficiency than the nonwoven material that was not treated. In other words, filter specification is easier to achieve while reducing waste in production. Compared with other hydro-charging concepts, the unit significantly reduces water and energy consumption due to the elimination of an additional drying process and the lower pressure drop in the filter material. HycuTEC is the first industrially manufactured hydro-charging solution that can be easily retrofitted to existing systems as a plug-and-produce component.

www.oerlikon.com/polymer-processing

SAVIO WINDING AND AIR-JET SPINNING INNOVATIONS

Savio is launching two new machines for winding and air-jet spinning: Proxima Smartconer® and Lybra Smartspinner®. These two machines are the result of the commitment of Savio R&D team in the last 4 years. It testifies Savio's dedication to innovation technology and strong partnerships across the industry.

NEXT DESTINATION: PROXIMA SMARTCONER®

The new winding machine Proxima Smartconer® is setting the benchmark in Savio automatic winding.

Savio has combined the name Proxima with Smartconer®: it stands for a high-tech winding machine, capable of perfectly adapting to demands of Connectivity, Industry 4.0 and Industrial Internet of Things. Thanks to the innovations, spinners will get a machine featuring high-tech capabilities, thanks to a design with a strong focus on the main benefits for customer's competitive advantage: high productivity, low energy consumption, premium yarn quality, automation, and data connectivity.

Proxima Smartconer® has been designed with the foremost attention to the customer's needs in the optimal utilization of a winding machine. Investing in equipment that enables to work faster and reduces manual and repetitive tasks, can increase both efficiencies and overall productivity. The same applies to a new equipment that does more of what is needed, faster, safer, with better quality but with less waste, less maintenance and less resource usage. The team at Savio is steadfast to provide textile solutions for spinning business growth with unsurpassed customer service, response time, and technical expertise.

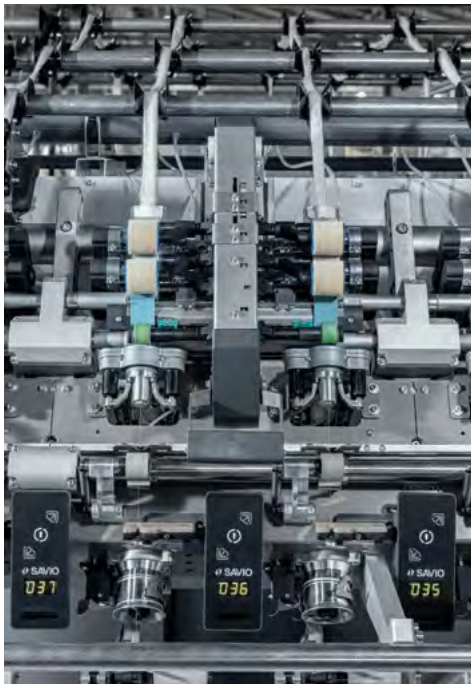
PROXIMA Smartconer® © 2023 Savio

"WE SPIN DIFFERENT": LYBRA SMARTSPINNER®

Savio's message is: "We spin different with a versatile and smart machine". The company's new air-jet spinning machine Lybra Smartspinner® has been developed with an original spinning technology to serve the customers in specific applications of textile production: knitting, home textiles, sunshades.

Air-jet spun yarn has a soft and smooth character, perfectly adapting to creating functional & fashionable fabrics. With LYBRA Smartspinner®, Savio wants to offer its customer a versatile, flexible, cost saving and easy-to-use machine. Air-jet spinning offers to yarn manufacturers the opportunity to produce yarn at high production rates and low processing costs.

One important technology of LYBRA Smartspinner® is the MULTI BLEND SYSTEM.This onboarding system allows to use two separate slivers, instead of a pre-blended one, directly fed into the spinning unit; inside the spinning chamber, the fibres are mixed together producing a final yarn of same aspect and features as the standard one. Moreover, the system can modify the composition of the blend directly from the machine PC, without changing the feeding slivers.



LYBRA Smartspinner® © 2023 Savio

This allows a reduction in production costs and an optimization of the preparation lines. Savio can obtain different material blends but also different colour mixtures. This application will be highly appreciated especially for knitting and home textile applications, producing melange knits and fabrics.

www.saviotechnologies.com

USTER TECHNOLOGIES COMES UP WITH TWO BOOTHS

NEW USTER STATISTICS 2023 & ARTIFICIAL INTELLIGENCE IN FABRIC INSPECTION

It is an unavoidable fact that blending virgin and recycled cotton will make some quality parameters worse. Using recycled fiber is often desirable, but it creates a new reality for the industry. To cope with the risks, better communication and a common understanding are needed throughout the textile value chain.

Uster's common language of quality will be – once more – vital in improving communication throughout the textile industry. For 66 years, Uster Statistics have been the only globally-accepted quality benchmark and the foundation for industry-wide quality improvement. The new edition, to be launched at ITMA 2023, includes for the first time a section for recycled yarn.

The new Uster statistics include a section for recycled yarn © 2023 Uster

The Uster Statistics 2023 edition features an extended range of fiber data, supporting sustainability goals. An ideal fiber mix – with or without recycled content – also ensures meeting quality requirements for least waste. Fiber graphs will be newly available for every process step.

The new reality of the need for closer communication and cooperation will include all players from fiber to fabric. It's an essential debate for everyone – and Uster say they are ready to take the lead.

NEW USTER FABRIQ ASSISTANT AUTOMATES DATA PREPARATION TO GUIDE KEY DECISION-MAKING

Furthermore, Uster will introduce the latest product for fabric inspection at ITMA 2023. The Uster Fabriq Assistant is a central platform for automated processing, analyzing, and visualizing quality data from Uster fabric inspection systems. Comprehensive data, interpreted reliably, let fabric producers focus on their core tasks to drive operational excellence.

Experts at Uster want users to experience the full power of the data being gathered. That's why they developed Fabriq Assistant – one data platform, as a central quality hub for all stakeholders in the mill.

The new Uster Fabriq Assistant eliminates manual data processing and speeds up decision processes significantly. Fabric manufacturers can release their product for delivery automatically.

AUTOMATED COLLECTION, ANALYSIS AND VISUALIZATION

The application is a web-based tool with individual user accounts and specific dashboards. Fabriq Assistant shows a summary of quality performance from all the fabric rolls ever inspected in the mill. Information is presented – and easy to be shared with other users – as a variety of statistical analysis tools, with results in different charts, histograms or evolution trends.

DECISIONS WITH IMPACT

Using the Uster central platform enables managers to focus on their main task of making key decisions. Fabriq Assistant removes the unwanted workload of manual data preparation and analysis. It also provides the basis for maximum decision-making accuracy, using advanced technologies such as Artificial Intelligence (AI).

AI CLASSIFICATION

The core value module introduced with Uster Fabriq Assistant is AI Classification, which extends the application scope of data generated by Uster automated fabric inspection systems. Specific codes can be automatically assigned to every image generated by Uster Fabriq Vision and Uster Fabriq Vision N. Without AI Classification staff members have to laboriously add defect image codes at the PC to perform a data review. By introducing machine learning capabilities, data classification is fully automated and fabric producers can save more than 80% of their manual review time. The real difference AI Classification makes will be demonstrated at the Uster booth.

www.uster.com

The new Uster Fabriq Assistant provides the important data © 2023 Uster

DORNIER PRESENTS
DIGITAL AND TECHNICAL INNOVATIONS

The German machine manufacturer DORNIER has given a small insight into its ITMA activities in a VDMA Way2ITMA Webtalk. In addition to numerous innovations at the machine level, on which there were no statements yet, the German machine builder for weaving machines and composite systems will present new digital solutions which were further expanded during the Corona pandemic. This includes the myDoX® customer portal, where customers can obtain extensive information on all questions concerning DORNIER and the weaving mill.

RAPIER WEAVING MACHINE: SUCCESSFUL PRODUCT PHASE-OUT FROM P1 TO P2

During the pandemic, DORNIER pushed ahead with the product replacement of the proven P1 rapier weaving machine with the new P2. In June 2022, the last P1 rolled off the production line. "Since its introduction almost 20 years ago, the P1 has been considered the most flexible and particularly robust weaving machine, reliably producing home textiles, clothing and technical textiles around the world", says Wolfgang Schöffl, Head of Product Line Weaving Machines. In addition, the well-tried DORNIER filling insertion with positive controlled center transfer, which the P2 also has in a further developed version, has been the international industry standard for the production of high-performance fabrics made of carbon, glass and aramid fibres for over 50 years.

The successor P2 has been very well received since its market launch in 2019. "Demand for the P2 is consistently high," says Schöffl. The concern that Corona would slow down sales has proven to be completely unfounded in view of full order books. This is because the P2 not only inherits all the strengths of its predecessor, but also offers many new features to increase productivity. For example, the frame rigidity has been increased by 75% and the shed geometry has been further improved in terms of flexibility. "This means that special customer requests can now be realized "on demand" in order to achieve very specific fabric properties and geometries," adds the sales manager, as demonstrated by variants for 3D, tape, heavy and wire fabrics."

www.lindauerdornier.com

Since June 2022, the P2 rapier weaving machine has been available on the market as the successor to the P1 in three versions (23 kN, 37 kN and 50 kN reed beat-up force) © 2023 DORNIER

STÄUBLI

INNOVATION AHEAD, SUSTAINABILITY INSIDE

Transforming the world of textiles: Under this slogan, ITMA will be returning this year. Stäubli Textile will be there, exhibiting some impressive innovations. With core competencies in shedding (cam motions, dobbies, and Jacquard machines) and weaving preparation (drawing-in, leasing, and warp-tying machines), Stäubli plays an important role in the design and quality of woven end-products.

For over 130 years, Stäubli has been a leading provider of premium quality products and services for sustainable improvements in industry and society. Stäubli's reliability and stability are based on uninterrupted family ownership, and the company's technical excellence is the result of a continuous focus on industrial customers. This is all part of one strategic goal: to develop solutions for safer, more efficient, and more economical industrial processes. Stäubli constantly offers new and improved high-performance systems and solutions for processing fabrics for fashionwear, home fabrics, carpeting and automotive, protection, and medical applications, as well as highly complex technical textiles for future applications.

LXXL PRO electronic Jacquard machine
Available in formats up to 25,600 hooks
© 2023 STÄUBLI

Visitors to Booth will learn how Stäubli solutions can boost their weaving mills' performance and overall efficiency. Besides offering a wide range of decisive functional advantages, Stäubli machines promise unsurpassed service life. Some of the Stäubli products being exhibited in the weaving hall are the following.

SAFIR S60 AUTOMATIC DRAWING-IN SYSTEM – NEW WITH ACTIVE WARP CONTROL 2.0 (AWC 2.0)

The SAFIR series of drawing-in systems offers unique advantages for efficient style changes. With its Active Warp Control technology, Stäubli has been setting standards in yarn recognition and management for many years. At ITMA 2023, Stäubli will present the next generation of this technology: Active Warp Control 2.0. Visitors to the booth can observe an automatic drawing-in system in operation with this impressive technology.

SHED FORMATION SOLUTIONS FOR FRAME WEAVING - ROBUSTNESS, REDUCED MAINTENANCE & OIL SAVINGS

Visitors who need a high-speed weaving solution that offers top reliability and adaptability should definitely take a look at the 1600/1700 series cam drives and the S3000/S3200 series electronic rotary dobbies.

Stäubli's broad product range answers the latest market demands and customer requirements and wishes, included reduced maintenance. The design of Stäubli machinery increasingly takes environmental performance into account. For instance, the latest machines offer reduced oil volumes and fewer oil changes. ITMA visitors will learn more about this and other innovations featured in Stäubli's electronic rotary dobbies and cam motions.

LX PRO, LXL PRO, LXXL PRO JACQUARD MACHINES - FEATURING ENERGY SAVINGS

The PRO series of Jacquard machines was launched at the end of 2022. These machines have already convinced Jacquard weavers around the world who seek top energy efficiency in the production of flat, terry, or OPW (one-piece woven) fabrics.

Available in formats ranging from 4,608 hooks (LX PRO) to 25,600 hooks (LXXL PRO), these Jacquard machines feature Stäubli's exclusive NOEMI electronics architecture and the state-of-the-art MX PRO module. This combination perfectly integrates the constraints of high-speed weaving, temperature, and the significant number of hooks to be lifted.

ITMA visitors will see three complete Jacquard installations in operation producing trendy fabrics and learn all about the advantages and benefits these machines provide.

NEW ALPHA CARPET WEAVING SYSTEM

Stäubli will be introducing a new carpet weaving system at ITMA. Certain to be a highlight of the booth, the new ALPHA carpet weaving system will be in operation every hour producing rugs. It features numerous newly developed components never before exhibited. Visitors can walk across the weavers' stand and observe the double carpet production.

SAFIR S60 automatic drawing-in machine – zoom on machine without drawing-in truck
Featuring Active Warp Control 2.0 technology
© 2023 STÄUBLI

NEW MYSTAUBLI PORTAL

Stäubli will present its new customer portal at ITMA 2023: MyStaubli. As a new key to machinery solutions, this platform offers personal access to online information about Stäubli's range of solutions and services. Visitors will learn about the many benefits the new portal offers.

The Stäubli booth will provide a comprehensive overview of the company's range of solutions for future-oriented weaving mills. That's because Stäubli is committed to remain in close contact with its customers and meet market requirements as a partner. The Stäubli team looks forward to presenting their latest solutions & innovations and discussing visitors' individual needs and wishes for cost-effective and highly-productive textile manufacturing.

www.staubli.com

GREEN WEAVING **WITH SMIT**

SMIT is a renowned producer of weaving machines and its booth B108 in hall 10 is a must-stop. SMIT's flagship, the 2FAST High-Speed Weaving Machine will be exhibited featuring 2SAVE, the world's first and only weft tension control that saves selvedge at both left and right sides of the woven fabric, realizing pick-by-pick sustainability through fabric waste reduction. In practice, 2SAVE saves between 50 mm and 80 mm of yarn at each pick.

Imagine the total savings, when it already results in over one meter after only twenty single picks… Eliminating selvedge waste leads to a significant decrease in raw material waste, with tangible benefits in terms of water saving at the very beginning of the value chain of fabric making – for any cotton fabric, including denim.

2FAST as a standalone solution shows an impressively green record too. The developers could eliminate auxiliary cooling systems, engineering a high-efficiency brushless motor with permanent magnets, for lowest heat generation with highest power.

A further sustainability benefit came with the new short mechanical transmission for highest regularity while guaranteeing lowest energy consumption – also used in combination with Jacquard systems.

The SMIT R&D team leaves no detail untouched when investigating technical solutions to be tested and proven. That's why 2FAST earned the ACIMIT Green Label for machines developed with the methodology of 'Product Design for the Environment', from the Italian textile machinery association.

www.santexrimar.com

The FAST name stands for Flexible Advanced Shuttleless Technology – and 2FAST is the pride of SMIT. © 2023 Santex Rimar Groupavio

ITEMA GROUP WILL PRESENT

THE NEW EVO RANGE AND A COMPLETE OFFERING FOR THE WEAVING INDUSTRY

Itema Group, the Italian global leading provider of advanced weaving solutions, participates at ITMA 2023 with tangible and significant innovations for the weaving industry. With a total of 12 Itema EVO weaving machines on show (7 in the Itema booth and 5 in the partners' booth – Stäubli, Van De Wiele, MEI, and Julibao), Itema confirms its attitude in exhibiting weaving machines running innovative, complex, and challenging fabrics to demonstrate its superior textile mastery. At ITMA 2023, Itema brings on stage sophisticated, diversified styles, designed in cooperation with leading textile companies – all Itema customers - such as ISKO, Mantero Seta, Drago Lanificio in Biella, Tessitura Marinoni, Frau Pérez Textiles, and Finsa Textil.

NEW EVO WEAVING RANGE

ITMA 2023 comes back in Milan, and Itema takes advantage of this prestigious stage to introduce its new EVO Weaving Range for the first time. The new EVO weaving range features significant innovations designed to raise the bar in terms of textile mastery, eco-efficiency, performance, and easy weaving.

Ugo Ghilardi, Itema Group CEO comments: "The new Itema EVO Weaving Range answers to concrete weavers' needs. Our vision is to offer to our worldwide customers tangible innovations that, based on the most advanced engineering principles, can improve their productivity, competitiveness on the market, and user experience."

In fact, the new Itema EVO Weaving Range includes:

- advanced solutions for the weft transfer to enhance versatility and machine performance
- the new iSAVER® range which, following its undisputed market success in denim weaving, is now available in up to 6 colors and for many more fabrics, thus significantly increasing the applications of sustainable weaving
- innovative digital software to enhance user experience and optimize textile production, such as iKNOW™ - the innovative tool that contains all the Itema textile experts' know-how collected on the field over the years - and MyWeave™ the new, advanced mill monitoring system
- optimization of key machine components to further improve machine performance, ensure the best possible machine accessibility, and reach unbeatable reliability while preserving the renowned compactness of the Itema weaving machines, which provides weavers with valuable additional space in the weaving floor to install more looms

R9500 EVOdenim
© 2023 Itema Group

New digital solutions, such as the brand-new Itema Customer Portal HelloItema, further enriches the visitors' experience. Moreover, besides the unmissable weaving innovations on stage, the Itema Group booth hosts all the Group companies and solutions. In fact, the Itema Group companies Lamiflex® and Schoch® with their advanced accessories for weaving machinery have dedicated corners in the Itema Group booth, and Itema and previous brands' OEM spare parts are exhibited, including upgrade kits to optimize machine performance and retrofit latest Itema innovations on existing looms. Itemalab®, the Itema advanced innovation hub, has a special environment inside the booth to boost the innovation mission of Itema.

In addition, the booth hosts the range of nylon and polyester yarns from RadiciGroup, a leading group in the production of textile solutions for numerous markets such as apparel, furnishings, and automotive. In particular, RadiciGroup presents products with a reduced environmental impact, both from recycling and made with raw materials of bio origin.

iSAVERfancy - the new iSAVER up to 6 colors
© 2023 Itema Group

Itema Group will welcome visitors with a product line-up designed to confirm and demonstrate its dedication to innovation and the Made in Italy excellence in the weaving sector.

www.itemagroup.com

KARL MAYER GROUP

www.karlmayer.com

KARL MAYER STOLL KM.ON

GROZ-BECKERT PRESENTS
A MULTITUDE OF INNOVATIONS IN ALL 6 PRODUCT SECTORS

Groz-Beckert will be represented at ITMA with its six product sectors and will have various innovations in its luggage. The presentations at the booth will be supported by augmented reality applications. This allows visitors to discover the products both live and virtually.

The **Knitting product sector** will be represented at the Groz-Beckert stand with its four product groups circular knitting, flat knitting, legwear and warp knitting. In the **circular knitting segment**, for example, two newly developed knitting systems will be on show which have been realized in collaboration with machine manufacturers. The developments focus on energy savings, extended cleaning intervals and increased process reliability.

The **flat knitting group** will be presenting a newly developed high-performance needle, which is particularly suitable for the production of technical or medical textiles. For customers in the legwear industry, Groz-Beckert has both further developed sock and fine hosiery needles and system parts in the bag. Thanks to their high resistance, these products help to reduce knitting process costs.

The **warp knitting product group** will be presenting new needle modules at its booth, as well as the newly developed hole punching needle for piezo jacquard machines.

In addition to the machines for weaving preparation, the **Weaving product sector** will present its recently expanded portfolio of technical weaving reeds. The new weaving reeds make it possible to supply customers who produce fabrics with high densities. The weaving reeds are used in the production of special fabrics, for example, in technical filtration, membrane technology, solar cells or touch screens.

Products and services for classic needling and hydroentanglement will be presented by the **Felting (Nonwovens) product area.** In the field of felting needles, visitors can look forward to two world firsts: a new notch shape and the Groz-Beckert felting needle module. In the felting needle module, the needles are embedded as a module in a plastic mold for the first time. The needle modules are characterized by very high deformation resistance and offer new dimensions in needle density.

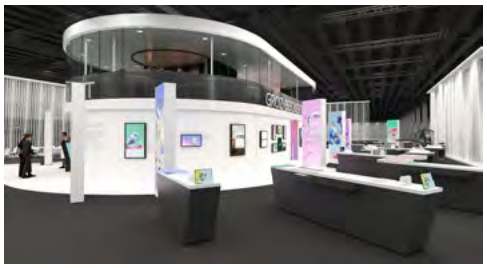
For the production of tufted floor coverings such as carpets, bath mats or artificial turf, the **Tufting product sector** will be presenting its proven Gauge Part system.

The coordinated combination of the various materials of the individual parts and the functional interaction ensure a convincing result in the production process.

Various new and further developments will also be shown by the **Carding product area**. For those interested in the nonwovens industry, for example, the world's finest Interlocking wire for reduced risk of crashis included.

For customers of the spinning industry, the division will be presenting further developed stationary flats and revolving tops. The new revolving tops have been adapted to the processing of fine yarns, while the stationary flats have been provided with a new, resistant aluminum profile.

The **Sewing product sector** is focusing on the presentation of its special application needles, SAN™. The sewing machine needles of the SAN™ series have been specially developed for demanding sewing operations – e.g. for sewing technical or finest textiles.



Groz-Beckert booth at ITMA 2023 © 2023 Groz-Beckert

The division will also be presenting its new Needle Finder. The Needle Finder is an interactive tool in the online customer portal that helps customers select the right needle.

www.groz-beckert.com

Sewing needle SAN™ 5.2 © 2023 2023 Groz-Beckert

FEEL

THE ADDED VALUE of ITEMA TECHNOLOGY

It's the technology that produced your fabric that makes your product so special.

The Itema weaving machines guarantee to worldwide weavers the most innovative technology tailored on the latest market trends: superior performances, eco-efficiency and textile mastery are the features you immediately feel when relying on Itema.

DISCOVER MORE

Visit us

ITMA 2023

Milan, 8-14 June

Hall 6 – B105

itema feel the future

itemagroup.com

Textile Machinery
itema® itematech®

Industrial
LAMIFLEX® SCHOCH®

Innovation and Solutions
itemalab®

MASTER THE CHANGE

USING HEADWIND AS TAILWIND, WITH THE KARL MAYER GROUP'S SOLUTIONS

"Master the Change – profitable, flexible, sustainable" is the motto for a successful future, also for the KARL MAYER GROUP and its customers.

In light of the upheavals in the wake of current events, the industry leader spoke with its customers from all sectors and branches about their concerns, priorities and goals. During the discussions, five questions emerged as strategically essential and urgent. At ITMA 2023 in Milan, the KARL MAYER GROUP will be presenting solutions and innovations in response to these customer questions.

HOW TO MANAGE THE INCREASING PRESSURE TO BE MORE SUSTAINABLE?

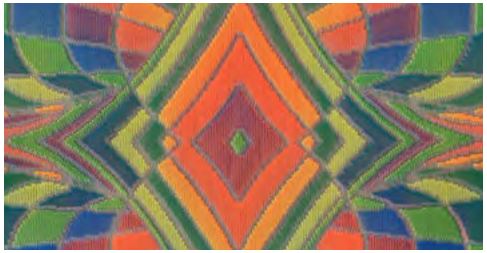
Sustainability will be the overarching theme shaping the KARL MAYER GROUP's presentation. A compact sustainability gallery will feature elements including an example of the circular economy of material from the warp knitting sector, a 3D-knitted garment with extremely low-waste production, and a technical warp knitted grid fabric that offers two environmental benefits in one: not only is it made from natural fibres, but it is also used as a carrier material for CO2-effective vertical urban greening.

KARL MAYER STOLL HKS 3 M ON
© 2023 KARL MAYER

Environmental protection and resource saving are important success factors for customers today. One potential way forward for warp knitting is shown by a **new fall plate raschel machine**, which – thanks to specific modifications – is suitable for processing staple fibres. The resulting warp knitted textiles are not only chic but also sustainable, meeting the growing demand for clothing with a low ecological impact.

A **high-performance tricot machine** operates using an energy-efficient direct drive. The energy consumption can be checked through newly developed monitoring. In addition, the machine uses pattern data from the cloud rather than pattern discs, thereby reducing its material and transport intensity. A warp knitting machine with weft insertion demonstrates how an optimised weft carrier can save waste in the weft yarn, and **STOLL's ADF** model requires less energy thanks to a range of targeted design changes.

The **denim** industry is benefiting from an innovation that makes indigo dyeing twice cleaner and at the same time three times more efficient than conventional processes. This is based on the use of nitrogen (NOX) technology to control the chemical dyeing process.



Spacer designs with an unprecedented play of colors
© 2023 KARL MAYER

Textile solutions, such as a composite made of natural fibers for boat building, will also ensure greater sustainability. More sustainability and at the same time economy can also be achieved through CREATE DESIGN. The new innovative **design software** for flat-knitted textiles offers an interface to any 3D software and thus the possibility to create realistic 3D renders that enormously reduce the need for physical patterns and thus material consumption.

HOW TO BE PROFITABLE WITH INCREASING COST PRESSURE?

The costs for materials, energy and transport services are exploding and are significantly reducing profits. What can I do for my profitability?, many customers are asking themselves, and they have found what they are looking for at the KARL MAYER GROUP. The answers for **warp preparation** are provided above all by a compact warp sampling machine with an even smaller

space requirement and, for warp knitting, by the fastest three-bar tricot machine on the market with new functionalities. A warp knitting machine with magazine weft insertion for the production of technical textiles offers more efficiency by reducing weft yarn waste at high working width and speed.

In addition, **digital solutions** open up new ways to increase profitability. One example is KM.ON's Digital Production Management System for the digitization of processes, which, among other things, creates more transparency on the shop floor for the analysis and optimization of production with production-specific key figures available on a dashboard. More added value in the flat knitting sector without additional process steps is made possible by a special robotic function STOLL-knitrobotic® by integrating for example electronic components directly into the knitted textile on the ADF machine of the knitelligence® generation.

High-performance warp knitting machine with energy-efficient direct drive
© 2023 KARL MAYER

Weft Carrier on a warp knitting machine with weft insertion
© 2023 KARL MAYER

Production of the warp knitted fabric for the circular economy example
© 2023 KARL MAYER

NOX reactor for sustainable indigo dyeing
© 2023 KARL MAYER

HOW CAN I KEEP MY BUSINESS RUNNING DESPITE A SKILLS SHORTAGE?

A glance at the KM.ON dashboard also saves a tour of the machine park and thus personnel capacities - an important plus point in view of the global shortage of skilled workers. The KARL MAYER GROUP's Care Solutions division also has fewer personnel requirements in mind. The Care X-Tend Package, for example, provides an annual machine health check and remote service to ensure high machine availability without the need for the customer's personnel.

Constructive optimizations of the machine also ensure operation without the need for trained personnel. For example, the Spring Motion Assistant makes changing bars on HKS models child's play, and patterns can be changed via the ON pattern drive by touch screen swipe, without the need to handle pattern discs. On the **warp knitting** machine with magazine weft insertion, a new electronic function ensures pattern changes without mechanical handling. Optimizations on the ADF models from STOLL also accelerate the machine-setting for pattern changes in flat knitting and facilitate the handling during maintenance.

In **warp preparation**, batch changes on indigo and sizing machines can be considerably simplified with an innovative automation solution. In addition to less operating effort, customers benefit from less waste and potential for errors.

HOW DO I FIND NEW BUSINESS OPPORTUNITIES (E.G. APPLICATIONS) WITH THE EXISTING COST PRESSURE?

The KARL MAYER GROUP also offers customers support in this respect, for example with a **double bar raschel machine** that uses perfected jacquard technology to implement spacer designs with an unprecedented play of colors. The colorful 3D warp knitted fabrics offer particular potential for further applications in the apparel, furniture and automotive sectors. A **warp knitted** net made of biobased materials for vertical greening shows how technical textiles can be used to master our environmental challenges and at the same time open up new fields of application. The warp knitted grid structure lowers the temperature, produces oxygen and binds CO2. Sophisticated features for ADF models, which, among other things, enable the use of different STOLL technologies on one machine and thus more design variety, ensure new business in the flat knitting sector.

In addition, an innovative machine will be presented that combines various fabric technologies and thus completely new textile constructions.

HOW TO REACT TO MARKET REQUIREMENTS FAST AND FLEXIBLE?

Data transfer from the cloud and ON pattern drive not only make **tricot machines** more productive and sustainable, but above all more flexible. Never before have pattern changes been faster, customers been able to respond more quickly to changing demand trends, and process small order quantities more efficiently.

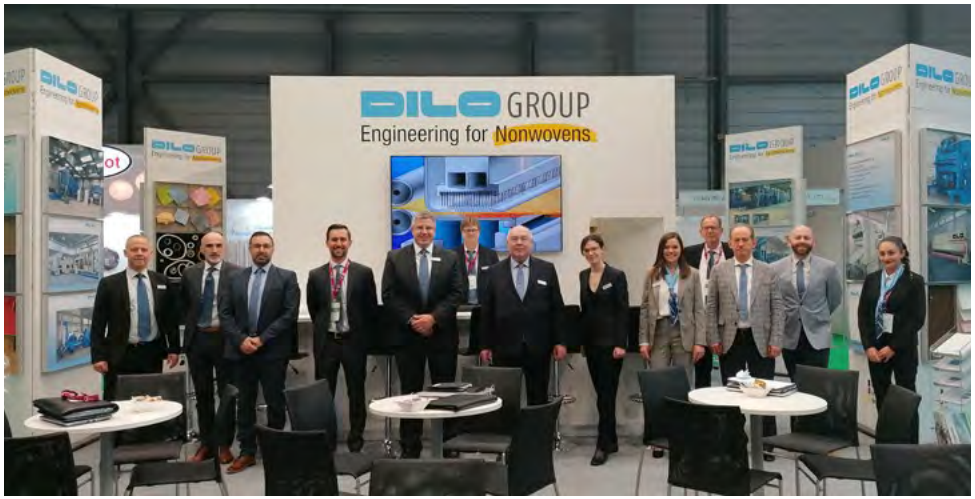
STOLL's fully fashion production also promises multiple benefits: Fewer additional fabrication steps mean less waste and more speed in the implementation of new products. In addition, the setup time on ADF models for pattern changes can be reduced with well thought-out constructive solutions and the design-to-market workflow in the flat knitting sector can be significantly shortened with **CREATE DESIGN** von KM.ON. Designers are able to simulate their designed textiles with the software at any time and become independent of the time- and resource-intensive development of physical samples. With the various STOLL technologies such as knit and wear®, weave-in® or intarsia, the ADF machines are also true all-rounders. According to the motto "all articles on one machine", various garments will be created on one and the same ADF model in front of the eyes of ITMA visitors in Milan.

www.karlmayer.com

Energy-saving ADF model from STOLL
© 2023 KARL MAYER

DILO GROUP COMES UP WITH TWO ABSOLUTE GEMS

NEW OPTIONS THROUGH RESEARCH AND COOPERATIONS CAN CHANGE THE INDUSTRY



Dilo team at last INDEX © 2023 Dilo

Dilo Group from Germany will present its latest developments in needling technology already mentioned at the INDEX trade fair. The research work of DiloGroup traditionally focuses on production lines for the webforming and needling of staple fibre material. The presentation at ITMA basically refers to this main business. Dilo will highlight innovations in the textile production process which meet the latest ecological demands for sustainability, recycling and reduction in energy consumption. Among other things, the group will present two developments that represent a decisive breakthrough in meeting the increasing demands of the future.

"MICROPUNCH" INTENSE NEEDLING

After years of gradual advancements in the intense needling technology, Dilo has succeeded in achieving the industrial scale of "MicroPunch" intense needling technology. Good abrasion resistance of this intensely needled material allows the production of apparel, artificial leather, battery separators and filter media as well as medical and hygiene nonwovens.

The production of comfort tissues with a weight range of 30 to approx. 60 g/m² made from fine fibre blends using polyester and viscose has been a domain of the water-entangling technology so far.

This product being a typical disposable is in the crossfire regarding sustainability and recyclability. Therefore biodegradable or decomposable fibre material is the target for more environmental sustainability. In addition, for the evaluation of a web consolidation process, low carbon emission and low energy consumption are important criteria.

The classical needling technology and its qualification for the production of lightweight nonwovens at low cost/kg has been technologically and economically proved in the meantime after many years of research work. It has become possible by an intense concentration of needles in the board and very fine barbs on these specialty needles which allow an economic mounting and quick exchange due to a new module design. Compared to water-entangling lines, the "MicroPunch" needling line provides a drastic reduction in energy consumption (electricity and gas). In view of heavily increased costs for electricity and gas, this reduced consumption has a great impact on the total cost for a kilogram of finished product in many countries. This will be joined by the glaring advantages of the finished products in terms of their carbon footprint.

COMPLETE LINE FOR "GENTLE" RECYCLING

In view of the current and upcoming requirements to strengthen and promote the recycling of garment waste in order to secure valuable textile fibres in the European, but also worldwide textile industry, the Dilo Group has developed with partners a complete line including the "gentle tearing" of used textiles, which allows the re-needling of used textile waste also into high quality products. To this end, it recently announced the close cooperation between Dilo and the Italian companies Dell'Orco & Villani and TechnoPlants. This cooperation forms a strong group of professionals that will offer complete textile recycling projects with Dilo-Systems as general contractor. There will be further insights on this at the fair.

The Dilo people look forward to welcoming all interested people at their booth.

www.dilo.de

The "3D-Lofter" was one of the Dilo highlights at ITMA 2019 in Barcelona © 2023 Dilo

GROZ-BECKERT

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EXACT IS EPIC

ITMA 2023

08 – 14 JUNE 2023
FIERA MILANO RHO
HALL 2, BOOTH D101

KNITTING | WEAVING | FELTING | TUFTING | CARDING | SEWING

AUTEFA OFFERS WIDE RANGE OF MACHINES FOR SUSTAINABLE NONWOVENS

PARTICULAR FOCUS ON ADVANCED MATERIALS, AUTOMATION / DIGITAL FUTURE, INNOVATIVE TECHNOLOGIES AND SUSTAINABILITY / CIRCULARITY

Autefa Solutions Hydroentanglement Machine V-Jet Futura © 2023 Autefa Solutions

ITMA 2023 is set to be a transformative event in the world of textilesa and will explore the latest advances and trends in the industry, with a particular focus on four key sub-themes: advanced materials, automation and the digital future, innovative technologies, and sustainability and circularity. At the heart of ITMA 2023 is the promise of cutting-edge solutions to industry challenges. With its state-of-the-art machines and technologies, Autefa is well positioned to address each of the four sub-themes in a meaningful way.

INNOVATIVE FIBER RECYCLING - SOLUTIONS FOR SUSTAINABLE TEXTILE CIRCULARITY

As sustainability becomes an increasingly important consideration in the fashion industry, we are witnessing a significant increase in the demand for textile circularity, with consumers and companies alike seeking solutions to recycle fast fashion; in response to this trend, AUTEFA Solutions offers a range of innovative solutions designed to process and reuse various types of fibers, including reclaimed, natural, and man-made materials.

The Airlay V12/R aerodynamic web forming machine in combination with Stylus Needle Loom or HiPerTherm Oven meets all customer requirements for maximum productivity and consistent high quality.

RE-NEEDLING OF NEEDLEBOARDS - SIMPLE, SAFE AND EFFICIENT

Re-needling of needleboards in needlepunch nonwovens production must be easy, safe and efficient to avoid long downtimes and to extend the life of the needleboards. AUTEFA Solutions offers the Needle Exchanger, which replaces the manual process of inserting, changing and removing needles with an automated process.

NONWOVEN NEEDLING LINES WITH RELIABLE QUALITY AND REDUCED OPERATING COSTS

AUTEFA Solutions' turnkey nonwoven needlepunching production lines are designed to meet specific customer needs and offer exceptional performance, reliability and quality.

WETLAID - SPUNLACE TECHNOLOGY FOR SUSTAINABLE AND COST-EFFECTIVE NONWOVEN

The cooperation between AUTEFA Solutions and PAMA Paper Machinery offers the best of two worlds - the nonwovens world based on fiber-based web forming, consolidation and drying technology combined with the Wetlaid technology commonly used in the paper industry. Wetlaid - Spunlace is the technology of choice to produce sustainable and cost-effective nonwovens from 100% cellulosic raw material such as cellulose pulp, viscose or Lyocell fibers. With the enormous challenge of rising raw material and energy costs, producing sustainable products with energy saving and innovative Wetlaid/Spunlace technology is the answer.

FIBER BALERS- HIGH PERFORMANCE IN FIBER PRODUCTION

AUTEFA's product range is designed to take the production process from start to finish, including fiber transport, baling press, bale transport, and storage in the specialized bale warehouses. The bale handling solutions go above and beyond, with additional features such as strapping, automated labeling, and sorting to ensure the fiber production process is as efficient as possible.

For customers looking for a key supplier for their nonwoven technology needs, AUTEFA's state-of-the-art technology includes carded crosslapped needle punch lines, aerodynamic web forming technology, thermobonding lines, and spunlace lines.

www.autefa.com

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MONFORTS WILL PRESENT INNOVATIONS
FOR CURRENT AND FUTURE CHALLENGES

Monforts, the German manufacturer of machinery for textile finishing, will present the latest developments in various machine segments at ITMA and will also offer seminars and discussions on current and future challenges.

THERMEX SYSTEM

Experts from Monforts will be on hand to outline the latest significant advances that have been made in sustainable continuous dyeing for woven fabrics and yarns with its industry-leading Thermex system configured for the Econtrol® process.

Over 900 Monforts Thermex hotflue dyeing systems are now operational in the main textile producing countries like Bangladesh, Brazil, China, India, Mexico, Pakistan and Turkey, with around 150 of them already reaping the benefits of the Econtrol® and Econtrol®T-CA processes.

"The current focus of the industry is very much on cleaner processes to meet the commitments on sustainability," says Monforts Textile Technologies Engineer Jonas Beisel. "This is calling for new investments that enable a significant reduction in resource consumption to be achieved, but that are easy to integrate into existing production systems. Econtrol® lines fit the bill perfectly."

A recent Thermex installation in Italy © 2023 Monforts

DENIM DIFFERENTIATION

The Econtrol® process is suitable for pale to dark shades with very good fastness properties and has proved a particularly versatile route for denim manufacturers.

"Differentiation is the key in the highly-competitive denim fabrics industry, whether that is through the successful incorporation of new fibres, accommodating new fabric constructions or exploring the many options for how to treat them at the finishing stage, to gain a market advantage," says Monforts Head of Denim, Hans Wroblowski.

MONTEX®COAT COATING UNIT

Monforts will be displaying its Montex®-Coat coating unit. Over 30 of these machines have now been sold worldwide, with the majority integrated into some of the thousands of full Monforts Montex stentering lines already in full service.

The Montex®Coat serves a very diverse number of markets and enables full PVC coatings, pigment dyeing or minimal application surface and low penetration treatments as well as solvent coatings.

Monforts will be displaying its Montex®Coat coating
© 2023 Monforts

Knife coating, roller coating or screen printing can also all be carried out with this system.

ROBUSTNESS

The Montex stenter meanwhile remains unmatched in terms of its robustness and long service life, as well as resource-efficient productivity – overall energy savings of 40% can now be achieved compared to conventional stenters with its heat recovery and energy optimisation options.

"Exhaust air treatment on stenter frames has posed particular challenges over the years, since the air can contain significant amounts of oil, fibre and even wax particles that may see emissions limits being reached in the processing of certain fabrics," explains Monforts Managing Director Gunnar Meyer.

"In addressing this issue, we are incorporating the MonforClean module directly into the stenter frame. With this addition, the waste heat from the drying process is used to pre-heat the drying air, resulting in a radical reduction in the conventional heat supply required compared to gas and thermal oil heating."

NONWOVENS

Albarrie – a major player in North America's industrial nonwovens industry – is now benefiting from one of the first Monforts Montex stenter installations equipped with the full range of MonforClean heat recovery and exhaust air purification technologies. With the new three-chamber Montex stenter at its plant in Barrie, Ontario, the Canadian company is treating specialised needlepunched nonwovens up to 4mm thick. These have applications in a wide range of filter media and performance fabrics.

"The new Montex is enabling Albarrie to heat set and dry its materials to produce denser, higher quality fabrics which can also be finished and delivered to customers more rapidly," says Meyer.

Canada's Albarrie is now benefiting from one of the first Monforts Montex stenter installations equipped with the full range of MonforClean heat recovery and exhaust air purification technologies. © 2023 Monforts

"We can also offer a series of retrofits for Montex machines in operation, including the Monforts universal Energy Tower– a flexible, free-standing air/air heat exchanger for recovering the heat from the exhaust air flow of thermal processes."

The Monforts Eco Booster, which completely can be integrated into the chamber design of the Montex stenter, is another retrofitting option. As a single state-of-the-art heat recovery system with automatic cleaning, it can be added to existing ranges. For ranges of up to eight chambers only one module is necessary to achieve significant energy savings.

INTUITIVE

With the highly intuitive Qualitex 800 visualization software, all article-specific settings can be stored and the formulations for thousands of treatment processes called up again at any time. Individual operators can also personalise their dashboards with the most important machine functions and process parameters. The Qualitex 800 system is available for the automatic and continuous operation of the company's Montex stenters, as well as its Thermex continuous dyeing ranges, Monfortex shrinking systems and Montex-®Coat coating units.

BE READY FOR THE FUTURE

With the Q-soft database, a central process control software, production planning and documentation can be easily carried via the central interface where all setpoints and actual values are filed with read and write access for setpoints.

The Monforts team at ITMA 2023 in Milan (left to right): Sales Manager Manfred Havenith, Head of Spare Parts Achim Gesser, Textile Technologies Engineer Jonas Beisel, Sales Manager Thomas Päffgen, Marketing Manager Nicole Croonenbroek and Alexander Fitz, Engineer For Textile Technologies and Co-ordinator of the Monforts Advanced Technology Centre (ATC). © 2023 Monforts

Several machines can be connected at the same time and no additional hardware is necessary. Three levels of network interfacing are possible – Interface to the network, output to a PC with graphic presentation (Monforlogic) and interfacing with a process control system to which can include machines from other manufacturers. As a supplement, the Monforlogic can be used for display, analysis and administration of machine data via a single interface with management of machine parameters amd recipes.

"At ITMA 2023 in Milan, we'll be happy to explain the range of modifications and modernisations that can be made to your line, as well as all of the benefits of our latest technologies," says Monforts Marketing Manager Nicole Croonenbroek. "Compared to a new machine, upgrades are a low-cost investment that deliver clearly defined benefits. Do come and meet the team in Milan."

DISCUSS THE NEW GREEN POWER WITH MONFORTS AT ITMA 2023

Monforts is organising two free-to-attend seminars and discussions on the potential of green hydrogen as a new energy source for textile finishing, drying and related processes. The seminars will take place at the company's stand B106 in Hall 18 on Friday June 9 at 11am, and Monday June 12, also at 11am, and all are welcome.

Monforts is currently leading a consortium of industrial partners and universities in the three-year WasserSTOFF project, launched in November 2022, that is exploring all aspects of this exciting and fast-rising new industrial energy option.

The target of the government-funded project is to establish to what extent hydrogen can be used in the future as an alternative heating source for textile finishing processes. This will first involve tests on laboratory equipment together with associated partners and the results will then be transferred to a stenter frame at the Monforts Advanced Technology Center (ATC).

"Everybody knows that textile finishing is a high energy consuming process," says Monforts Managing Director Gunnar Meyer. "To make this process more efficient, Monforts already offers several solutions, but as a technology leader we are also rising to the challenge of exploring alternative heating options to be ready for the future."

www.monforts.com

SANTEX RIMAR GROUP PROVES ITS GREEN AMBITIONS **WITH ENVIRONMENTAL-FRIENDLY MACHINERY**

Santex Rimar Group looks forward to ITMA 2023 in Milan, Italy what could be considered as a home game. The Group's different brands will be present at two booths. The machines on display and many showcases will leave visitors with the firm conviction that they can make their textile production more environmental-friendly.

Santex Rimar Group is one of the world-leading players in textile machinery manufacturing for weaving, textile finishing, technical textiles, and green technologies for sludge drying processes.

The Group unites six brands with unique standings that are represented at upcoming ITMA 2023.

All portfolios have in common that the machinery is made with competence, passion, commitment, a high level of research – and all machines are eco-friendly in their own way. Santex Rimar Group is dedicated to contributing technological excellence, process know-how and all possible efforts to maintaining a healthy environment for future generations. The Group is proud to present in Milan, Italy its innovations along the textile value chain and to show how this industry can become more sustainable.

THE ECO EXHIBITS

Sperotto Rimar, Santex, Cavitec, Isotex and Solwa are represented on a 400 square meter booth in the middle of hall 18 along the main alley.

Compas – the compacting revolution © 2023 Santex Rimar Group

One highlight will be the Isotex coating machine that guarantees high precision results, what goes hand in hand with waste reduction and environmental friendliness. The great flexibility of Isotex machines allows for experimenting and/or using sustainable compounds.

With Santaframe and Santacompact RDA, Santex Rimar Group presents its well-known stenter frame in combination with the felt belt compacting machine for the finishing of high-quality open-width knitted fabrics as well as applicable for woven fabrics.

The outstanding performance and production of the Santaframe is based on continual development using the latest advances in thermodynamics, allied to the changing need of customers.

The heating system is located above the fabric web in the upper part of the 2 m treatment zone. An air circulation fan draws the air from the nozzles and the treatment zone through the filter panels and guides it along a short path to the heat exchanger, from where it is fed into the nozzles.

The arrangement of the heat source on the pressure side of the air circulation fan enables a high air circulation speed and uniform heat distribution over the entire fabric width, thus achieving an unrich drying performance. This technology results in high energy savings and cost reductions in the drying and heat-setting process of textile fabrics.

Santashrink, the tensionless shrinking and relax drying machine for tubular and open-width knitted fabrics, simply a Santex bestseller, is on show too. Compas embodies the compacting revolution with its unique system which exploits the use of a special belt with specific elasticity values. As water isn't directly sprayed on the compacting belt there's no water absorption by the processed fabric. The second plus regarding the use of water is the indirect rubber belt cooling with a totally unpolluted water recycling system.

Santex Rimar Group invests every year 4% of their annual global turnover in research and development to provide continuous technical innovation in order to have the best improvements available for customers and for the environment. Machines use to show an economically future-oriented design and perform with the lowest possible use of energy, water, waste and chemicals.

Cavimelt Pro for multi-functional coating © 2023 Santex Rimar Group

Solwa is the Group's brand with the focus to produce green innovative technologies for water treatment and drying processes. It's pride is Drywa, the only low-temperature belt dryer equipped with a CO2 heat pump developed to make sludge management efficient and cost-effective, respecting the environment and climate.

PROUD TO PRESENT

The Cavimelt Pro multi-functional coating machine by Cavitec will be presented for the first time at an international exhibition. The two-in-one machine featuring rapid switching between rotogravure and full-surface coating will amaze the visitors as its technological superiority – based on hotmelt adhesive application – delivers bonding performance which meets the highest expectations for quality.

Cavimelt Pro shows reliable results also for sensitive materials and innovative applications. It offers flexibility from using membranes of 5 micrometers (one tenth of the diameter of a single human hair) and foam of 20 millimeters of thickness. And regarding sustainability: its hotmelt technology is an environmentally-friendly process, free of solvents and water. Furthermore, as no drying or sintering is necessary Cavimelt Pro also scores in energy-saving aspects.

Santex Rimar Group looks forward to welcoming visitors for first-hand information – and invites everyone to experience its eco attitude on even sustainably built booths!

www.santexrimar.com

KORNIT
UNVEILS NEW APOLLO

Kornit unveils its Apollo direct-to-garment platform alongside an expanded end-to-end fulfillment ecosystem at ITMA 2023 (Hall 7, Stand A303). Built on the company's proven MAX technology, Kornit Apollo delivers the highest retail quality with full automation control and integrated smart curing processes. It's the most comprehensive digital solution for both nearshore short- and medium-run mass production, delivering optimal total cost of ownership and 400 prints per hour, per operator.

Ms Moran Levy-Finklshtein, Product Marketing Manager Kornit Digital, will give a presentation on the new kornit Apollo in Hall 3 at 15:00 on 11 June as part of the ITMA conference support programme "Innovator Xchange".

In addition to Apollo, an adjustable pallet that quickly adapts to disparate application requirements, and a smart curing solution that minimizes energy consumption for DTG production, Kornit presents three innovative systems for sustainable, on-demand fulfillment: Kornit Atlas MAX is the gold standard for industrial-scale mass customization, enabling new efficiencies and reducing operating costs – combined with never-before-seen XDi technology emulating screens, vinyl, 3D, and threadless embroidery effects in one cost-effective, automated production system. Kornit Atlas MAX POLY revolutionizes the recreational and professional sports apparel markets by extending these capabilities to polyester and poly-blends. Kornit Presto MAX is the most capable, sustainable, single-step digital solution for direct-to-fabric decoration, and the only digital solution for white printing on colored fabrics to transform concepts into brilliant custom fabrics for fashion, home décor, and other applications.

www.kornit.com/lp2/hq/itma/

The new kornit Apollo © 2023 Kornit Digital

BRÜCKNER AT ITMA 2023

SUSTAINABLE, DIGITAL AND ON THE WAY TO CLIMATE-NEUTRAL FINISHING

Electrically heated DUO-THERM oven for nonwoven finishing © 2023 Brückner

BRÜCKNER, leading supplier of customized machinery and lines, presents innovative and trend-setting highlights for textile finishing and coating at ITMA in Milan. BRÜCKNER will show the next stenter generation POWER-FRAME SFP-4 with many new features: new electric / hydrogen-powered heating systems, intelligent software solutions for optimizing formulas, systems for heat-recovery and exhaust air purification, innovative application systems for chemicals, and newly developed machine concepts.

CO2 -FREE HEATING SYSTEMS

The most important innovation of the BRÜCKNER dryer are without doubt the innovative heating systems. Driven by the energy crisis and the constant focus on energy-efficient solutions, new possibilities to combine different heating media like gas, steam, oil or electricity have been developed. In addition, BRÜCKNER also offers burners which can be operated with hydrogen in the future. These combination possibilities allow the textile finisher maximum flexibility in the choice of the energy carrier.

Another exciting development are solutions for the purely electric heating of industrial ovens by means of heat pumps, which BRÜCKNER offers together with a partner. In the present situation and with a view to the future, these new types of heating offer decisive advantages: Green hydrogen and/or electricity reduce the dependence on fossil raw materials and contribute considerably to minimize the CO2 footprint.

SMART PRODUCTION SYSTEMS

Digital products and services are another highlight. On request, new lines are equipped with various intelligent assistance systems that support the machine operator in finding the optimum machine setting for each process. A special innovation is the new simulation tool ExperTex: with the help of artificial intelligence, the desired production process of drying or heat-setting is simulated on the computer. Different scenarios can then be compared with each other: Throughput times, energy consumption, CO2 footprint and production costs. This innovative system offers customers considerable added value, as it allows accurate pre-calculation of orders, opens up productivity gains and/or energy savings, and permits "right-first-time production" by means of pre-optimized formulas. Expert knowledge and years of experience in textile finishing are thus available at the push of a button. This tool and much more will be available to customers in the new my-Brückner customer portal in the future. All important machine information, access to digital services, and a service system will be bundled there and can be accessed at any time.

HEAT-RECOVERY AND EXHAUST AIR PURIFICATION SYSTEMS

The new generation of ECO-HEAT heat-recovery and ECO-AIR exhaust air purification systems features a new type of intelligent control. Both types of lines can also be retrofitted at any time to older lines from various manufacturers in order to realize the best possible energy savings and solve existing exhaust air problems. All exhaust air treatment systems can be tested in advance at customers' sites by means of laboratory systems in order to better assess utilization rate and efficiency.

New POWER-FRAME SFP-4 stenter generation
© 2023 Brückner

INNOVATIVE SYSTEMS FOR THE APPLICATION OF CHEMICALS

Of course, customers can inform themselves on the BRÜCKNER booth also about numerous further possibilities to save primary resources such as energy, water, chemicals and waste water. Here, for example, the minimum application unit ECO-COAT should be mentioned, a new type of padder with minimum preparation quantity or residual liquor, and a further developed coating unit OPTI-COAT 2in1, which combines the use of floating knife and knife-over-cylinder application in one system. With a high-precision coating cylinder and a perfectly ground coating knife, excellent results can be achieved for paste and foam coatings. In addition, the special design of the unit ensures optimum accessibility for cleaning and maintenance purposes.

NEW FINISHING MACHINES

Another highlight is a completely new designed high-performance relaxation dryer POWER-DRY which can be heated CO2-free by means of a high-temperature heat pump. In order to show the variety of BRÜCKNER's product portfolio and to illustrate technologies in a realistic and "tangible" way, many machine models will also be exhibited. The total cost of ownership (TCO) is lower for BRÜCKNER's lines than for other suppliers. This applies to all presented machines in the field of finishing of carpets, nonwovens and denim, migration- and crease-free continuous dyeing as well as in the versatile field of technical textiles and is supported by the technological advice of experienced experts.

MODERNIZATION / UPGRADING OF EXISTING LINES

With regard to sustainability and resource conservation, BRÜCKNER's After Sales team and the technology team offer numerous possibilities for modernization and technological e on site. It is not always necessary to invest in a new line, often the potential of older machines can be exploited quickly and efficiently by modifications and also by technological consulting. Noticeable improvements in productivity and energy efficiency can be achieved without longer downtimes.

The BRÜCKNER team is looking forward to meet visitors and to talk about further innovations.

www.brueckner-textile.com

ROAD TO NET ZERO WITH BENNINGER

LEADER IN CONTINUOUS WET PROCESSING AND JET DYEING TECHNOLOGY

Benninger aims to become the complete system supplier with leading technology for continuous wet processing, discontinuous dyeing and remain the leader for solutions for the tire cord industry.

"We take seriously our responsibility towards sustainable textile production and have always stood for textile finishing plants that are particularly resource efficient", says Mr. Rolf Erik Schoeler, CSO Benninger Group.

Benninger supplies overall solutions for all important textile wet finishing processes, and they specialize in the continuous open-width treatment of woven and knitted fabrics, technical textiles as well as jet dyeing machines, jiggers, along with the complete and integrated dye house supply systems such as liquid dispensing, salt and soda ash distributing systems as well as dye staff distribution systems. The portfolio also includes caustic soda recovery plants and waste-water heat recovery systems.

"Thanks to our comprehensive process know-how and deep engineering understanding we offer high quality installations with excellent customer service. With our solutions, producers will make a huge contribution to decarbonizing Textile", Mr. Schoeler adds.

BENNINGER WILL BE PRESENTING ITS LATEST DEVELOPMENTS:

- The new Benninger jet dyeing machine Fabricmaster, with unmatched water consumption figures. It is the most sustainable way of discontinuous dyeing today. Fast, cost effective and on the road to zero footprints.
- The chemical dispensing system, CDS, serves all kind of discontinuous and continuous machines in an accurate, unbeatable, and fast way.
- The new Benninger-Küsters CPB dyeing station for knitwear, the only salt-free cold dyeing process.
- The new Benninger singeing machine, SingeRay, ensures perfect singeing effects, cost efficiency and uniform quality.

THE SUSTAINABLE WAY OF DISCONTINUOUS DYEING WITH THE NEW FABRICMASTER - FAST, COST EFFECTIVE AND ZERO FOOTPRINTS.

Benninger has produced the fastest, most versatile, and economic Jet dyeing machine of the industry and which ensures dramatically shorter process times. "The Fabricmaster is not only a robust and reliable system, but the benchmark of the industry in future. Its harmonic versatility is the beacon to conquer new markets. Our passion for perfect fabric quality makes sure that you produce the widest range of fabrics at lowest cost and unmatched water consumption levels", Mr. Schoeler says.

Benninger Fabricmaster © 2023 Benninger

Benninger SingeRay © 2023 Benninger

SALT-FREE DYEING OF WOVEN FABRICS AND KNITWEAR

Salt-free dyeing without the use of energy is only possible using the cold pad batch (CPB) dyeing process. This process is also becoming increasingly popular in tropical and subtropical regions, which is reason enough for Benninger-Küsters to adapt the CPB systems even more effectively to the climatic conditions. "The heart of our CPB system is the BENNINGER KÜSTERS DYPAD, which we will also be presenting again this year at the ITMA Milano", Mr. Schoeler says.

Benninger Küsters DyePad © 2023 Benninger

BENNINGER is the only textile machine manufacturer with the know-how of the original S-roller technology, which is synonymous with an even dyeing result across the entire fabric width.

BRAND NEW SINGEING MACHINE "SINGERAY" – THE FIRST CHOICE TO UPGRADE A FABRIC, WHILST SAVING GAS.

The "100% made in Germany" singeing machine is equipped with 2 burners and a double nozzle strip. The silicium carbide burning chambers ensure complete combustion, and a constant burner temperature thanks to 4 cooling channels. Low gas consumption and a perfect flame will increase the scope of fibres and blends.

"Come and visit the leader in continuous wet processing and jet dyeing", Mr. Schoeler invites all interested visitors. "We look forward to welcoming you at our booth A201 in Hall 18".

www.benninger.com

SEDO TREEPOINT
OFFERS SMART FACTORY SOLUTIONS

Sedo Treepoint leads the market with the Sedomat 6000/8000 controller series, which has been available in four different sizes since last year. In addition to the proven benefits of Sedomat controllers, the new series is even more flexible and offers various interface options such as CANopen, Profibus DP and MODBUS RTU. To improve communication between different systems, OPC UA and MQTT interfaces will enhance data communication. At ITMA, Sedo Treepoint will showcase the latest developments for the Sedomat 6000/8000 control series.

Sedo Treepoint's systems provide customers with many forward-looking features for the smart factory, and together with smart software solutions, the entire textile value chain is integrated through smart production. Sedo Treepoint products help to improve sustainability and reduce costs while increasing productivity and efficiency.

Another product to be seen at ITMA is the SedoMaster, heart of production for Intelligent Centralized Production Planning, Control, Monitoring and Reporting. Connecting all dyeing and finishing machines, SedoMaster is a useful tool for all key personnel and management. ColorMaster is the most competent system for recipe management and color measurement.

Textile Manufacturing Simulation System (TMS) is designed to create the most efficient production schedule for all active production orders (SFOs). Morapex provides reliable, non-destructive testing in minutes. Its main functions are pH and residue analysis, washing process control, detergent and water testing, and sweat fastness. Tests with the systems are possible at any stage of production and in the laboratory.

SEDO ENGINEERING SMART INDIGO

Sister company SEDO ENGINEERING will present its Smart-Indigo™ system at the booth. Smart-Indigo™ makes the difference for the denim world by using electricity instead of chemicals. The most sustainable way to dye denim offers a liquid-indigo production where the only waste product is oxygen! The use of electricity instead of chemicals results in a chemical-free process emitting 90% less CO2, consuming 70% less energy and 30% less water. A revolutionary technology that protects the environment, creates safer and healthier workplaces, and offers economical production.

www.sedo-treepoint.com
www.smartindigo.com

INTERSPARE TEXTILMASCHINEN
PUTS QUALITY AT THE CENTRE OF SUSTAINABLE FINISHING

Under the motto "Innovation is the beginning of a new tradition", the German company iNTERSPARE Textilmaschinen will continue the tradition of its ARTOS, BABCOCK (BTM) and Krantz product lines at ITMA 2023 in Milan and present the latest developments. The presentation will once again focus on the latest version of the Tumble Relax dryer Krantz Syncro, iNTERSPARE's most successful machine in recent years.

"When we started building completely new lines a few years ago, we deliberately chose the Krantz Syncro, as it has always been considered the best available technology in its field. Today, due to the many installations sold and the still very high interest in the Syncro, we see that it was a good decision," says Dirk Polchow, Managing Partner of iNTERSPARE. "With the Syncro, we have successfully taken up the tradition of the big names in textile machinery finishing, Artos, Babcock and Krantz, for which we have stood for almost 30 years, and advanced it with our own innovations."

"To this end, we have used the knowledge of our predecessors and supplemented it with our own experience to enable developments that help our customers to manufacture products of the highest quality and thus to consolidate and expand their business. Quality is a decisive factor - also for sustainability. The essential requirement of the EU textile strategy is to produce durable textiles. Textiles that are characterised by colour fastness and form stability even after years of use. Textiles that do not end up on waste after a few months. Textiles that are still worn with pleasure even after many washes and years of use. The Syncro stands for the finishing of such durable premium textiles like no other finishing machine."

iNTERSPARE Textilmaschinen has once again raised the energy efficiency of the Syncro to a higher level with a number of innovations. This relates in particular to the use of the latest generation of motors and Lenze inverters. Components from other brand manufacturers, such as the padder used, have been integrated into the control and operation of the Syncro, measuring systems have been expanded and the preparation and storage of data has been optimised by means of a latest-generation router and an expansion of the software. The visualisation software was also upgraded accordingly and the data is available via an interface. Data can be integrated in a variety of ways or also retrieved via app. All other electrical components are state-of-the-art as well. The automatic filter belt cleaning system with traversing fluff extraction device, which was presented at the last ITMA 2019, was successfully introduced to the market. This eliminates manual operating errors and the resulting blockages, so that the Syncro is continuously operated within the optimum performance range and avoids unnecessary energy consumption.

"The Syncro enables our customers to meet the demands of today and tomorrow far better than their competitors. Better quality fabrics are more sustainable fabrics. That is our message for ITMA in Milan," says Dirk Polchow.

KRANTZ SYNCRO

The Krantz Syncro Tumbler-Relax dryer exhibited at ITMA stands for optimal, variable drying and thermal processes as well as shrink drying processes. The Syncro unfolds its full potential particularly in the drying of knitted fabrics, as tubular goods or in cut open form, as well as for light and heavy articles. However, outstanding results are also achieved when drying woven goods. Thanks to the diversity of the Syncro, it is possible to run several narrow or wide strands (single or side by side) without any problems. And several processes, such as drying, shrinking, intermediate drying and effect drying can be done here on just one unit.

Thanks to its superior machine design and the use of the latest technologies, the Syncro can meet the highest demands on modern finishing at all levels. This applies to both the absolute premium quality of the finished product in conjunction with the high production output as well as today's immensely important requirements for sustainability and connectivity and data exchange. The design enables outstanding results in the processes with first-class energy efficiency.

FIRST-CLASS ENERGY EFFICIENCY THANKS TO ECON-AIR

The Econ-Air airflow system (Babcock patent) ensures optimum energy utilisation and avoids energy waste. The air supplied from the infeed slot is heated, directed to the fabric and travels with it through the bays until it is extracted by the exhaust fan at maximum absorbed humidity and replaced by fresh air via the fabric infeed slot. Since fresh air is supplied to the entry compartment and only the optimally moistened air is extract-

iNTERSPARE Textilmaschinen Managing Director Dirk Polchow presents the Tumble Relax dryer Syncro, which is ready for transport and will be exhibited at ITMA 2023 in Milan © 2023 iNTERSPARE Textilmaschinen

ed, all the energy required goes directly into the drying process. The permanent humidity level generated by Econ-Air in the dryer replaces an additional, external steam spraying device. Energy loss to the outside is minimised by design. 3-layer insulation panels and doors prevent heat bridges from the inside to the outside of the insulation. A synthetic connecting strip interrupts the heat transfer from the inner sheet to the outer sheet of the insulation panel. Between these is a high-quality, pressed Rockwool insulation mat that is not subject to shrinkage and prevents warping by fixing evenly. "The Syncro already has an excellent energy efficiency by design, because it uses the energy optimally for shrinking and drying the fabric," says textile finishing veteran Hartmut Büchner, who is still a technical consultant at iNTERSPARE Textilmaschinen. "I maintain that there is no shrink dryer in the world that gives the fabric a better carbon footprint. This is due to the durability of the textiles, the use of energy in the precisely coordinated shrinking process with a high degree of moisture and also the special property of the Syncro to be able to compensate for even severe distortion of pre-treated goods of any kind, so that instead of waste there is a quality product at the end. Often, with the Syncro, one pass is enough where others need two and thus twice the amount of energy."

The Krantz Syncro Tumble Relax dryer allows long dwell times and high phase leads of up to 200% on the conveyor belt. The result is an even and gentle drying process with optimal release of tension in the material. In addition, the ventilation intensity and therefore the material dynamic can be steplessly adjusted. By selecting these many different parameters, the drying can be precisely optimised for the particular requirements of the materials.

MODIFICATIONS AND SERVICE

More than 15,000 pieces of equipment for textile finishing from the Artos, Babcock (BTM) and Krantz product lines were installed in the last 50 years and a lot of these machines are still used for textile applications. However, many of them will no longer be able to optimally meet future requirements for energy use and carbon footprint, as many components are not state of the art. With the implementation of the EU textile strategy at the latest, this will become a problem for export-oriented companies. iNTERSPARE Textilmaschinen is offering its customers the opportunity to continue operating these machines for many more years, by adapting them to the increasing demands using various retrofitting and modernisation modules from the assembly kits. Precisely coordinated modernisation packages with customisable individual modules out-of-the-box make all retrofits and modernisations cost-efficient, calculable and quickly feasible. At ITMA, the iNTERSPARE experts will be happy to demonstrate the advantages of a retrofit and how it can be carried out.

A significant improvement in energy efficiency not only saves costs, but also improves the eco-balance and the CO2 footprint of the goods. Very important for the sustainability strategies of textile companies, brands and retailers. The latest generation of controls and operating elements, in combination with enhanced software, also ensure that all relevant parameters of the machines are made available not only to the operators but also to the data processing and analysis systems in the network.

Dirk Polchow says: "With our retrofits, we can optimally support our customers in meeting the requirements of the future. However, customers should inform themselves early and plan for the long term, as the supply chain for components is still difficult and as volatile as some prices."

iNTERSPARE Textilmaschinen will be exhibiting in Hall 14 / Stand A102 and looks forward to welcoming all visitors.

www.interspare.com

FOR THIES, ITMA IS CHARACTERIZED BY TODAY'S MEGA TRENDS

TRANSITION NOW, TRANSPARENCY, DIGITALIZATION, AUTOMATION AND CIRCULAR ECONOMY

Thies Signature © 2023 Thies

TRANSITION NOW

For the first time, Thies will exhibit the Signature Series, opening a new chapter in fabric coloration. The Thies people are confident the Signature Series will prove to be both disruptive and seamless. After years of research and development, Thies says Signature technology is changing dyeing as we know it, but is ready for existing dye houses to use immediately.

With its novel ability to precisely dose concentrated chemistries and flexibly use less water to transport fabric, the Signature Series is capable of delivering highly consistent results with liquor ratios starting at 1:2.3 liter of water per 1 kg of fabric. Proven in bulk production, water consumption is tremendously reduced, dyeing uniformity is improved and batch times are shorter.

Signature's ultra-low liquor ratio has further multiple cost and environmental benefits. Dye consumption is reduced up to 20 % while achieving the same shade, less energy is required for heating water, and the treatment of water is less costly because the total dissolved solids (TDS) is reduced up to 50 %.

Unlike pad or spray dyeing, with Signature there is no need to have separate machines for washing, bleaching and dyeing because nearly all wet treatments can be carried out on this single machine. There is no intermediate handling and drying, and there is no end-to-end variation associated with wet-on-wet pad-bath dilution. Color uniformity is improved over pad dyeing because fabric passes through the nozzle 60+ times versus a single nip, and there is no side-center-side variation caused by pad roll wear or crowning.

A wide array of fiber types and fabric structures can be successfully processed, including woven fabrics, warp knits, spacers, and circular knits.

In short, the Signature Series has the proven advantages of batch dyeing while competing with the low liquor ratio of single-pass applications. The ease with which Signature technology fits into existing production lines means payback on investment starts on day one.

TRANSPARENCY AND DIGITALIZATION

The first steps toward making dyeing a more comprehendible science are measurement and analysis. Thies offers several tools for digitalization, reporting, and process control. Energy Control, pH-control, conductivity measurement, and DyeControl are tools for optimizing recipes and process settings. Visual representations of the process curves enable both a control of the turbidity and a determination of the dye extract from the liquor. By measuring the process and providing intuitive reports that aid decision-making, Thies makes dyeing less art and more science.

AUTOMATION

The need for automation is ever-growing, and its advantages are diverse. Automation offers (1) increased productivity through reduction of wait times, (2) stable quality, (3) improved occupational safety, (4) a more inviting workplace, and (5) freedom from constraints caused by labor shortages.

An automated storage, weighing and dispensing system for dyestuffs and / or auxiliary chemicals comes with many advantages: Workers no longer have routine contact with chemicals and dyes during weighing, transportation, dispensing, and dosing. Tasks that do not add value are eliminated, and the workplace is safer. The dangers of falling or spilling chemicals and dyes are minimized, protecting workers and the environment from harm.

The digital storage system manages the exact stock levels and generates order proposals if the stock falls below the defined safety level. A supervisory production planning system, centrally hosted, controls the process organization of the complete dye house by bidirectional communication. The MPS systems (Multi Product Supply systems) monitor the delivery destinations (tanks). The synchronization ensures an optimal process and production sequence. MPS systems integrate themselves seamlessly into the concept of a future-oriented, efficient dye house, delivering large increases in productivity and quality.

At the same time, the automatic weighing, dissolving and provision of dyes and chemicals leads to increased dyeing quality results, maximum reproducibility, savings of human resources, significantly increased occupational and environmental safety, as well as optimized consumption of products.

Today, there are solutions for smaller dye houses that work self-sufficiently, and modularity offers a manageable, affordable, step-wise improvement for larger dye houses.

As a system provider, Thies also offers holistic solution concepts. An example is the automated loading and unloading of package carriers. The package carriers are prepared automatically using intelligent robot technology, so that there are no waiting times and the time-consuming and physically strenuous manual work is no longer necessary. In addition, the yarn packages and locking devices are loaded and unloaded or locked much more gently.

Thies heat recovery system © 2023 Thies

Thies automation solutions are no longer limited to the dyehouse. They offer custom solutions for fabric finisher and the coating industry.

CIRCULAR ECONOMY

Wastewater and its thermal energy are valuable resources. Thies has an ozone system in its portfolio that can be used to decolorize colored waste water. The use of active oxygen splits the organic and inorganic impurities. The oxidized dye molecules become colorless. The result is a colorless solution which can be recycled for reuse in the process.

Heated waste water is a regenerative energy source. Transferring its energy to cold water reduces primary energy consumption as well as CO2 emissions. The use of Thies' intelligent heat recovery systems enables a significant reduction in production costs and makes a major contribution to efficient, clean and energy-saving production.

In addition to global market forces, the European Green Deal demands that, by 2030, textile products placed on the EU market are long-lived and recyclable, to a great extent are made of recycled fibers, are free of hazardous substances, and are produced in respect of social rights and the environment. With expertise in industrial-scale production of pressure vessels and automated material handling equipment, Thies supports solutions for both removal and re-dyeing of recycled fibers and yarns.

www.thiestextilmaschinen.com

ITM DRESDEN SHOWS A WIDE RANGE OF INNOVATIONS

LATEST RESEARCH FOR NUMEROUS APPLICATIONS

The ITM will provide a comprehensive overview of its current research in the field of machine and product development along the entire textile process chain.

The provision of near-net-shape, cut-free fabrics is demanded for numerous applications. However, there is a limitation to fixed fabric widths within the fabric production. This limitation has been solved by the innovative development of a width-variable, elastomer-based weaving reed that can be used for wide weaving machines. This makes it possible to adjust the fabric width and thus the warp thread density individually to the required contour during the weaving process. The development significantly reduces the amount of waste due to substituted cutting processes and enables the production of new types of fabric structures. This weaving reed and its functionality will be presented.

MACHINE DEVELOPMENT AT ITM

As an essential part of textile technology research activities, there will be insights into machine development at ITM at ITMA 2023. Process and product innovations go hand in hand with the development of new machine concepts. The basis of the development competences at the ITM is the multitude of analysis methods for processes and products that can be carried out at the ITM.

Based on this, the ITM uses various CAD tools, FEM and calculation software as well as various additive manufacturing methods in the design development process. They gain detailed design-technological knowledge by quickly implementing the developments in the institute's own large machine park.

STRUCTURE AND PROCESS SIMULATION

The diverse possibilities offered by the structure and process simulation of textile high-performance materials and textile manufacturing processes will also be presented. By means of multi-scale modelling and simulation, a profound understanding of materials and processes is achieved at the ITM. Finite element models on the micro, meso and macro scale have been developed and validated for this purpose. Examples from current ITM research projects demonstrate the various possibilities and areas of application of modern simulation methods in the field of textile technology. At the ITM, textile production processes are characterised by means of commercially available and specially developed measuring systems and correlations between yarn, process and product parameters are determined. The aim here is to enable the already highly productive textile processes even further in terms of increased quality and productivity.

Width-variable, elastomer-based weaving reed © ITM

Depending on the complexity, these correlations are described using classical analytical mathematics or machine learning methods / artificial intelligence.

E-TEXTILES

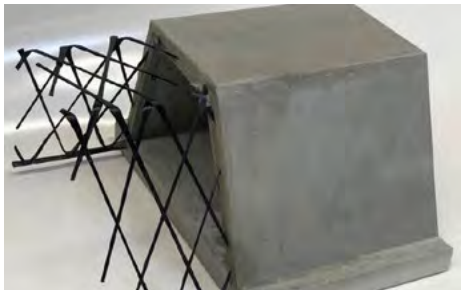
The ITM presents novel functional solutions in the field of e-textiles. Examples include specifically controllable force feedback gloves, which in VR environments or in medical/surgical application scenarios make the action to be performed much more intuitive and thus more precise. Another exhibit focuses on an innovative functional leggins that makes it possible, among other things, to provide multiple sclerosis patients with supportive muscle stimulation appropriate to the situation.

TEXTILE CONSTRUCTION

Exhibits from the field of textile construction include a partially embedded textile mesh girder, which was developed using an innovative textile manufacturing technology based on the multiaxial warp knitting technology available at the ITM. Furthermore, a new type of carbon reinforcement structure, is presented, whose fibre course is based on biological models.

Moreover, the development and implementation of innovative yarn constructions based on recycled high-performance fibres (e.g. rCF, rGF, rAR) for sustainable FRPs is successfully promoted at ITM. By use of a special carding machine, recycled fibres are opened up, separated and joined to form a wide, uniform ribbon. Subsequently, innovative hybrid yarn constructions made of evenly mixed recycled high-performance and thermoplastic fibres with variable fibre volume fractions can be manufactured by means of various spinning technologies.

tu-dresden.de/ing/maschinenwesen/itm



Embedded textile mesh girder © ITM/TU Dresden

BENNINGER

SingeRay – The first choice to upgrade your fabric!

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ITA WILL BE SHOWCASING CURRENT DEVELOPMENTS
IN TEXTILE MACHINERY MANUFACTURING AND SUSTAINABILITY

The Institut für Textiltechnik of RWTH Aachen University (ITA) will be showcasing current developments in textile machinery manufacturing and sustainability.

DIGITAL RING SPINNING TESTER FOR RECYCLED FIBRES

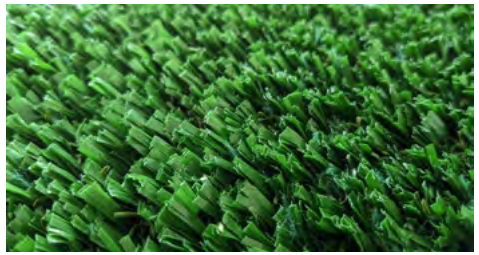
ITA will be exhibiting a digital ring spinning tester, which spins recycled fibres directly and conventionally with a particularly high content of 60-70 percent. Up to now, recycled yarns have mainly been rotor-spun in this blend ratio. This results in rather coarse yarns and is not suitable for finer textiles such as outerwear. Ring spinning of recycled yarns now enables the spinning of finer yarns and thus a higher application level for recycled materials. A unique selling point of the ITA ring spinning tester is the simultaneous spinning in the direct spinning process from the sliver and in the classic ring spinning process. For this purpose, the strength and elongation of the spun yarn are determined online and digitally for the first time. The ring spinning tester is also able to produce fine ring spun yarns. These yarns made from recycled material opens up a multitude of further fields of application for woven and knitted goods. Now, for example, clothing and technical textiles can be made from recycled material, the production of which was not possible before - such as outerwear made from recycled material.

ITA AUGSBURG - RECYCLING ATELIER: WALK4RECYCLING

The recycling route from fibre to product („Walk4Recycling") presents the textile recycling from used textiles into new products via the various process steps. It has been developed by ITA GmbH and ITA Augsburg (H3-A207) with the partners of the Recycling Atelier and opens up solution paths for industrial implementation. The materials from the different processing steps are shown: torn fibres, drawing sliver, cops and package with ring spun yarn, sweater.

SMART GLOVE - DETECTION OF HARMFUL SUBSTANCES

At ITA, a glove system based on polymer optical fibres and silicon quantum dots was developed together with AQM (Canada) and ITP (Germany). The quantum dots can be programmed to detect certain hazardous substances (TNT in this case), which deactivates the fluorescent property of the quantum dot when it comes into contact with this material. This results in a colour change of the illuminated polymeric fibreglass fabric, which has been integrated into a glove demonstrator ready for use by security personnel. In the future, several substances will be detected when the optical fibres are doped with different quantum dots.



Artificial turf made of bio-polyethylene © 2023 ITA

AI-BASED QUALITY OPTIMISATION

ITA's model factory has used an AI-based optimisation technology to improve the coating and heat-setting processes by accelerating the throughput, increasing the yield and reducing the energy consumption through the optimisation of the machine settings. Through the use of machine learning algorithms, AI models analysed vast amounts of data and identified the most effective combination of parameters to achieve the desired outcome, such as shrinkage and texture.

CO2 SOCK

The CO2 sock contains elastic TPU fibres partly made from carbon dioxide filaments. Currently, elastic fibres are mostly solution spun. ITA has developed a melt spinning process for this special TPU polymer allowing an increase in production speed and at the same time a reduction in the solvents used as none are required. The usage of CO2 in the polymer also reduces the carbon footprint.

BIOBASED MONOMATERIAL SUSTAINABLE ARTIFICIAL TURF

The aim is to develop an artificial turf structure made of bio-polyethylene (PE) as a polymer raw material. Bio-PE represents the ideal raw material for this purpose, as it differs only little chemically from crude oil-based PE. However, Bio-PE has the same key characteristics such as cushioning, elasticity, stiffness, abrasion behavior and, above all, UV and environmental resistance in artificial turf applications.

SMARTNEEDLE

The exhibit shows the proof-of-concept of a sensor on the tip of a knitting needle during warp knitting. This is how we check the pattern of tension applied to the needle for a homogeneous and a non-homogeneous textile.

www.ita.rwth-aachen.de

Recyceld sweater © 2023 ITA

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VDMA SUPPORTS MEMBERS

DIFFERENT FORMATS DISPLAY THE LATEST SOLUTIONS

The VDMA uses various formats with its members to show what solutions the mechanical engineering sector has to offer for the challenges facing the textile industry. These include the webtalks already launched under the name "Way2ITMA", in which members were able to present their solutions to current challenges digitally in video conferences. The videos and further information on members' solutions at ITMA can be found in the VDMA Customer Portal of the IndustryArena.

At the fair itself, there will be video messages directly from the exhibition stands and a directory of all exhibiting members with references to their recycling technologies to highlight the important topic of recycling in particular.

UMATI DEMONSTRATOR

VDMA is a partner of umati. umati stands for universal machine technology interface and wants to connect the world of machinery. umati is a global community to bring a common interface concept based on OPC UA into the market, fostering the acceptance and implementation of these standards. umati started as an alliance of companies from the machine building industries. umati live demonstration proves that connectivity across different machine technology is a promise come true.

WAY2ITMA: RECYCLING TECHNOLOGIES OFFERED BY VDMA MEMBERS

VDMA is presenting an overview of the textile recycling technologies offered by member companies exhibiting at ITMA. VDMA and its members are committed to a responsible use of all resources used in textile production. VDMA members create the technical prerequisites for the efficient reuse and recycling of textile raw materials. In the spirit of the circular economy, VDMA companies offer solutions for the entire processing and production chain. The production programme and services include equipment and technologies for recycling textile production waste, textiles, textile auxiliaries or waste heat and for processing recycled materials into textiles.

The short descriptions of the solutions offered by the member companies are structured according to the following headings:

- Recycling of textile production waste and textiles
- Recycling of caustic soda and waste heat
- Processing of recycled materials

www.vdma.org

WAY2ITMA-RECYCLING

vdma.org/itma

SHAPING THE FUTURE

ACIMIT IS DRIVING VARIOUS PROJECTS FORWARD

The concept that distinguishes ACIMIT communication activities towards ITMA 2023 is SHAPING THE FUTURE. "Shaping the future is a concept that aims to show how Italian manufacturers are key players in the development of the entire textile supply chain, able to outline virtuous paths that testify to the proactive nature of the entire sector and that enable the future of the sector to be shaped through the three pillars, technology, digitalization, and sustainability, which are also the key themes of ITMA 2023".

ACIMIT's top themes at ITMA are sustainability and digitalisation, which are also underlined and brought to life by numerous members.

ACIMIT has been pursuing various projects in the field of sustainability and digitalisation for several years, namely the Sustainable Technologies project, with the Green Label as the core of the initiative, and the digital certification called ACIMIT Digital Ready. Both projects testify to the commitment of Italian manufacturers in two areas of strategic importance to consolidate the leadership of Italian textile technology in the future.

With the Green Label, which certifies the environmental and economic performance of textile machinery, member companies commit to reducing the CO2 emissions of their machines through continuous technological improvements. Digital Ready, on the other hand, aims to standardise the production and management data of Italian textile machines and their ability to be digitally integrated at the customer's site.

DIGITAL READY

Digital Ready constitutes a strategic certification conceived by ACIMIT and designed specifically for Italian textile machinery. DIGITAL READY certification is geared towards attesting to the correct implementation of the conceptual data model that ACIMIT has developedin partnership with the Manufacturing Group at the Politecnico of Milano. An international certification body and a long-standing ACIMIT partner, RINA, issues the certification to associated member companies. The certification is designed to simplify the production process, by adopting a standard language and unique data reading system that allows different types of machinery to communicate with their related production systems.

www.acimit.it

www.green-label.it

SWISS TEXTILE MACHINERY AND MEMBERS

FOCUS ON WIDE-RANGING ENVIRONMENTAL PRIORITIES

Visitors to ITMA 2023 will see significant innovations from members of the Swiss Textile Machinery Association – with a special focus on solutions for a more sustainable future in the textile industry. Switzerland will be well represented: 52 exhibitors in total, including 36 members of the Swiss Textile Machinery Association. They will show their latest innovations on around 6'000 square metres of booths. That's 4% more exhibit space than at the previous event, ITMA 2019 in Barcelona (Spain).

SWISS TEXTILE MACHINERY COMPANIES FOCUS ON WIDE-RANGING ENVIRONMENTAL PRIORITIES

Some of these actions go beyond products and applications to take in 'behind-the-scenes' measures such as improving internal ecosystems and streamlining manufacturing. Activities covered by the Swiss firms' technology embrace the concept of safeguarding a 'livable planet' for future generations, and this policy starts within the companies themselves, as they commit to careful management of their businesses to protect the environment and conserve global resources. Real outcomes are already being proudly presented as visible progress for the benefit of customers.

SUSTAINABLE PRODUCTION

Swiss textile machinery manufacturers apply their innovative power to make production as sustainable as possible – tackling issues such as saving water, chemicals, raw material waste and energy, as well as improving hardware life-cycles. Machine developments empowering more environmental production are continually growing in importance, as producers invest in them enthusiastically.

Sustainable solutions for cotton spinners include mechanical compacting systems by **Swinsol** (H3/D311). These units need no electricity and are therefore CO2 neutral in operation. The company also offers recycling of used components. **Loepfe** (H3/B205d) provides yarn clearers with latest technologies enabling settings to balance the required yarn quality against contingent productivity losses. The results avoid waste of both yarn and energy. **Jakob Müller** (H6/A102) provides technologies in narrow weaving to enable the processing of sustainable yarns – and therefore the manufacture of closed-loop products.

Swiss Textile Machinery offers a brochure on its website with an overview of all association companies and further info.

www.swisstextilemachinery.ch

Of course, now is exactly the right time to present our new MicroPunch technology at ITMA

Interview

Johann Philipp Dilo
CEO DILO GROUP

by Oliver Schmidt

You have just been to the INDEX nonwovens trade fair in Geneva. How did you find it? Good mood, good business, or is the general challenging situation clouding things a bit?

We found there were fewer visitors at INDEX and we had fewer discussions, but those we had were deeper, so we cannot say that the mood was bad. We were generally pleased that trade fairs are continuing and that there were so many new things to see. For me as a mechanical engineer, for example, the developments in fibres – or more precisely man-made fibres – were interesting, specifically in terms of compostability and biodegradability.

How do you think the nonwovens industry will progress up to the next INDEX in three years' time? What new trends are emerging and where is the technology going?

I think that we are experiencing a breakthrough in the perception of our "Zeitenwende", the word coined by our Chancellor for the historic shift that is taking place. I think it is true and most are now facing up to the challenges that are emerging and recognising them as serious and relevant. So, the trends are the issues that come under the heading of sustainability. It is very evident in energy savings and material savings, which are now fortunately making a breakthrough, as was evident on the stands at INDEX.

You create numerous trends yourself through inventions and corresponding new technologies. For example, the new possibilities of needling with the help of your „MicroPunch" technology of intensive needling, which you were able to bring onto the path for industrial scale after gradual further development. Now - we have the impression - you are setting your sights on products that are classically manufactured with hydroentanglement technology. Among others,

care wipes with a weight range between 30 and approx. 60 g/m², made of fine fibres with blends of e.g. polyester and viscose or also light nonwovens made of fine fibres for the medical and hygiene sector with a weight per unit area of 30 - 100 g/m2 were mentioned. What can „MicroPunch" technology do here and what can it do better than hydroentanglement?

I would like to take a brief look at the past, because I have been working on this topic for a very, very long time. It became visible to the public in 2007 when we presented intensive needling at the ITMA in Munich. Here the idea became apparent of how we wanted to compete with hydroentanglement technology, especially in the higher basis weight range above 100g. Hydroentanglement was already evidently becoming successful in the areas of hygiene and medical applications. To compete, we increased the number of needles in the board from 8,000 – still the usual number of needles in the classic production area – to 20,000. In addition, we reduced the notch depth of the needles so that no fibre damage would occur, and we targeted a high stroke frequency of around 2,000 as another important element.

This worked, but it became clear these parameters were not yet sufficient to challenge waterjet technology. Waterjet technology's advantage is in its very high throughput speeds, at least for the lightweights. In terms of the quality of the nonwovens produced, our process could certainly keep up, but not in terms of costs.

Thus, hydroentanglement technology was able to capture the enormous growth market for disposables and wipes with light basis weights for itself and has continued to grow strongly. These products are also increasingly in demand in emerging countries.

However, as a mechanical engineer, I was never convinced by the basic idea of using a lot of energy to form a needle from water that completely dissipates its kinetic energy and then has to be reshaped. The idea of being able to solve this more economically and ecologically with needling kept bothering me, and we continued to work on our process. There were ups and downs and it took years to organise the supplies and also to come to the realisation that we have to think very extremely and can only be economically successful by an excessive increase in needle density.

So, after these insights were gained, we went this extreme way 3-4 years ago with the „MicroPunch" technology further developed and intensive needling modified. We now have 45,000 needles per meter on a container needle board that can accommodate the modules. Another two-and-a-half times and a total of six times the number of needles. Such extremes are the hallmark of this breakthrough. With the parameters of the fine notches, the very high needle density and the high stroke frequencies, we can produce the desired products qualitatively and produce them 25% cheaper in comparison of the costs per kilogram of material to hydroentanglement technology for numerous applications – for some applications even 50%. In addition, we have energy savings of 70-80%. That is an immense breakthrough. In addition, there is the saving of the increasingly scarce commodity water and I was surprised during my research that despite all the innovations and ideas to save water, the consumption of newly added water – the so-called make-up-water – is up to 15 m3 per hour per unit with a working width of approx. 3.6 metres. This is a considerable consumption of water and electrical energy for the high pump capacity, the extraction of the water, heating and drying. Such a system has a connected load of 6-6.5 megawatts, while needling technology is content with 1 megawatt.

Of course, now is exactly the right time to present our new „MicroPunch" technology at ITMA, to go public with exhibits. At INDEX we were able to raise awareness and interest was broadly aroused,. Interestingly, there was no criticism or negative remarks, but rather a positive reception to the details of the technology.

Of course, as a mechanical engineer, you also have to anticipate possible technical objections. There were questions about the loading of the needle board, which could be a potential bottleneck, for example. However, the 45,000 needles per metre per board can be loaded in 15 minutes. That's next to nothing and can be done in parallel, because each needle machine has an extra set of container boards that can be easily changed at the machine after loading as usual.

The almost archaic way in which the needle boards were fitted with needles around 50 years ago led to an urgent need to do something and this is how the inventors came up with the idea of using water jets for web bonding. From the point of view of that time, this was absolutely understandable, but according to today's knowledge and possibilities, it can be associated with a number of disadvantages.

Low energy consumption and energy efficiency are particularly important today. There is the classic cost issue, but also now CO2 footprint which must be drastically reduced. What about needling technology? Does it always offer advantages over other processes?

Yes, needlepunching technology offers a high degree of energy utilisation and thus a high level of energy efficiency in principle, which gives it advantages over other technologies. The previously mentioned example of the comparison of connected loads illustrates this. For numerous applications, energy savings of up to 50% can be achieved and for individual applications sometimes as high as 90%. This high energy efficiency also results in considerable cost advantages of 25% for the lower basis weights, for example 45g/sqm for a damp wipe, despite lower throughput speeds. With higher weights such as 80-100g even more.

On the subject of energy efficiency, you pointed out to us in another conversation that it is also important to optimise the process settings during the operation

of a system. The ket is that it doesn't always have to be a full load. As an example, you mentioned the adjustment of the flow velocity in the pipes to the fibre throughput. This can be optimised for every application without any loss of quality. On the other hand, energy can also be saved with a well-planned design. You offer the Di-LOWATT product here. Can you explain all this in detail, please?

In a fully automatic nonwovens line, the first path from the bale opening to the carding machine – the transport of the fibre flocks in large quantities – is carried out with proven pneumatic technology for good reasons. Here, for example, it is important that the fans have aerodynamically shaped impellers. This brings enormous advantages and Temafa was involved with the technology very early on and has developed special impellers with the highest efficiency.

The next important thing is to avoid drastic direction changes on the transport path in order to have the lowest possible losses in the flow velocity. This is also improved by making the surface of the pipes as smooth as possible. It is important to avoid folds in which fibres can accumulate, which become longer and longer tufts, partly spinning and thus becoming fibre braids, which leads to high losses in the flow velocity. Fibre transport accounts for about 50% of the energy consumed by a plant.

The fluff flight is an important parameter, and we can measure and visualise it with an infrared scanner. This gives us immediate feedback from changed settings on the blower. Between these poles of flow velocity –the one that triggers a blockage and the one that triggers a full load – we have to find the optimal setting for the speed of the blower in order to achieve a good flake flight and to save as much energy as possible. This is the essence of a control technology that we have named Di-LoWatt in reference to the famous James Watt and as a pun on low wattage. The technology is not yet in great demand and currently limited to individual interested parties, but that will change very soon, and the product is ready to be used industrially.

Saving energy and reducing the carbon footprint is also a big topic for the sporting goods company NIKE, which started a pilot project last year and launched a sports jacket made of needled nonwoven fabric, the so-called Nike Forward line. Nike is celebrating the products as a revolution, as the carbon footprint is significantly reduced - on average by 75% compared to conventional knitted fleece. Do you see needled nonwoven fashion moving into the mainstream and onto the catwalk?

I think there is a lot of potential. My father developed clothing made of needlefelt, as they called it back then, for trade fairs and demonstrations on an experimental basis at the beginning of the 1970s. At that time, the nonwoven was still thick and heavy and was therefore also suitable for applications for upholstery fabrics.

As a mechanical engineering company, we are always developing possible applications and I remember specifically an upholstery fabric that we developed at the beginning of the 1980s. It was looked at with interest but woven or knitted fabrics covered everything and energy use was not yet an issue at all.

That is changing now and nonwovens may gain in importance as a consequence, because of course they offer high energy savings compared to woven and knitted fabrics.

Spinning yarns already has a high energy consumption, which is not needed with nonwovens and I see a lot of potential for us, especially with „MicroPunch" technology. Besides energy savings, there is another advantage that is gaining in importance – the recyclability of such needlepunched nonwovens is very high if no additional reinforcements such as bonding are used. It is quite easy to preserve and reuse the staple fibre. This is an immense advantage for a future circular economy.

Now ITMA is coming and technologies are needed to master many new challenges. Recycling and the circular economy are at the forefront of this, which, taken to its logical conclusion, also requires permanent recycling. For you as a machine manufacturer, this means processing recycled fibres in such a way that they remain recyclable. Is this possible despite shorter fibres and do you have any approaches here?

Here, too, I would like to take a brief look back in history to the invention of needlepunch technology in the 19th century in England. Initially, needling was used for so-called grey spun wool, i.e. torn spun fabrics made from clothing waste, for various applications such as insulating materials, insulation, carpet underlays and upholstery. The needling of textile waste is the original mother of the development of needling technology. That's where we actually come from. Consequently, textile recycling is very familiar to us and has always been practised by us. Although no longer on such a large scale, due to the increased and now diverse possibilities for nonwovens in other areas, we know it and understand the industry.

It quickly becomes clear that needling technology is very suitable for producing many simple products, but what about high value products? This is where obstacles come in. The tearing of the old textiles shortens the fibres extremely, so that natural fibres are only 5-15mm long afterwards. As a result, only voluminous nonwovens can be produced.

However, there are also tearing machines that maintain the staple fibre lengths or only shorten them a little through a gentle tearing process. This has been around for a long time – my father used to call it filamentous tearing and in England it is called controlled tearing. It's not my metier, but it's probably the case that around 2/3 to 3/4 of the staple length can be preserved.

This brings us back to the area of quality products with high strength and good abrasion values. With these materials we can produce products that are almost equivalent to new materials. This is a market with a lot of potential.

In anticipation of the EU regulation on the reuse of textile waste, we looked at what Dilo has in its programme and also what others have in theirs. In the process, we discovered that there may be partner companies in Italy with whom we have meanwhile concluded contracts, who have been at home in this profession for decades and have mastered controlled tearing.

There is a special tearing technique that was developed in Italy by the company Dell'Orco&Villani. We are cooperating with Dell'Orco&Villani and Technoplants and from now on Dilo will be offering complete plants for the recycling of clothing waste as a general contractor, including tearing and gentle fibre recovery. This gives us a very good starting position for our own technologies.

We can card and lay very well and have a very nice web laying to produce high quality products. Not only can we needle, but with the help of Technoplants we can also thermally bond, through-air bond, and also offer the end-of-line components such as cutting, winding and packaging. We are bringing together a team of specialists to be able to cover all facets of this technology with a lot of know-how and experience.

Material saving and efficiency is another topic that affects costs as well as the environment. Here you presented an innovation at the last ITMA, the 3D Lofter. This enables an additive production process that can produce different web thicknesses within surfaces. It is particularly suitable for automotive parts with differently distributed masses. Innovations like this sometimes need some time before they are successful on the market. Does the automotive industry see the advantages of the 3D Lofter and are there perhaps already other industries that have also addressed the process?

In the history of our company it has often been the case that we have entered the market with new developments at a time that we thought was right, but the market was still in its tracks for a while. One such project is the 3D Lofter, which offers a lot of potential and for which we are now seeing increasing concrete interest from the automotive supplier industry and also from other areas in which fibre topology plays a role. The 3D Lofter has its place in all areas where tension or distortion occur, or padding is required. It offers true additive manufacturing in the sense of adding real fibres. We have continued to work on it, but basically it is ready for the increasing demands for material savings.

In the course of environmentally friendly manufacturing, many start-ups have developed new fibres in recent years, including bio-polyester, viscose-like fibres made from cellulose and many more. Is this in each case a special challenge for needling technology, and how do you assess this predatory competition of the fibres?

This is another advantage of needling technology – it processes everything that is fibrous. So, as far as I know, there are currently no restrictions on the processability of fibres for the production of nonwovens, whether in carding, laying or even needling. Normally, all fibres that are considered for textile applications also have the prerequisites to achieve the required minimum strength during needling. The prerequisite is the length as staple fibre for processing in the card. During needling, the processing forces are so low that the materials – be they natural or synthetic fibres, organic or inorganic – fulfil the necessary conditions and are suitable for web formation. This also includes the biopolymers that I know of. My question about the properties of the degradable polypropylene fibre newly presented at INDEX was answered by saying that it is a polypropylene fibre with all its properties and the additional one of biodegradability, which, however, has no influence on the other properties.

Like no other company, DILO stands for the old ITMA spirit of showing machines or, in your case, even complete lines in operation and not - as you once said – dead steel. What can we expect at ITMA in June?

As I mentioned, we used INDEX to present our innovation to the public in theory, and now ITMA is the perfect opportunity to show it in practice. On a stand of 750 square metres, we will install a simple Temafa fibre preparation system with a bale opener, which we will feed into a universal card that we will later use in our technical centre, and we will have three „MicroPunch" needling units in a row, on which „MicroPunch" products will be run. So, we will display the full innovation on its own and give the customers a first-hand look.

It is indeed a certain affinity of mine to the physical, to real life. Today, you can really present a lot virtually with 3D and rendering technology, and we also like to use that. But it makes a big difference to convince interested parties that the whole thing is suitable for purchase, to present it as a complete line.

That's what ITMA is for. Our main business is production lines, and that's what we show. Of course, you can also present and explain individual machines, but it's not the same. I used the term 'dead steel' somewhat casually at the time, but it's something different when the power is switched on and the installation and the machines fill with life. Our goal has always been to show something for the eye at ITMA and it is my wish to continue in this way, even if it always has to be measured against economic aspects.

www.dilo.de

> „Despite all the challenges, we still have the ambition to be leaders.“

Interview

Dr. Janpeter Horn
Chairman
VDMA Textile Machinery

Dr. Horn, you are Chairman of the Textile Machinery Division of the VDMA since 31 March 2022. Is that actually a position for which you have something in mind, something specific you want to achieve, and if so, what would that be in your case?

We, i.e. the board of the association - not me - are primarily working on the development of a long-term ITMA strategy in Asia within the European association CEMATEX; on the presentation and dissemination of the possibilities and already achieved efforts of the German textile machinery industry within the VDMA with regard to sustainability and the EU's Green Deal. We see ourselves as part of the textile value chain and as a partner for discussions and enabler of more sustainability.

Dr. Weber, you are the Managing Director of the Textile Machinery Association since 1.1.2023. What are your plans?

An important topic for the industry is the integration of processes with the help of digitalisation. This includes, among other things, the development of common standards. The OPC UA interface standard should be mentioned here as a keyword. Together with my team, we would like to contribute to the textile machinery industry successfully mastering cross-manufacturer networks. Another topic worth mentioning is the digital product passport and the ongoing efforts to make this possible from our part.

The textile machinery industry works very closely together with its customers and thus develops in line with the market and demand. To what extent does this also apply to the association? How does this kind of association work shape itself, especially against the background of the changes in society, the transfor-

mation of industries, the importance and shift of the supply chain and the resulting demands on politics?

Dr. Weber: This is a very broad spectrum, and I would like to pick out one aspect. In the past, sales support meant that we as VDMA organised symposia, visits of business delegations, etc. for our member companies in existing or potential markets and organised trade fair participations - things that work well as long as there are no restrictions on travel. Today we are also digitally positioned and offer our members, for example, the chance to present their products within the framework of technology web talks.

German textile machinery manufacturers are very well positioned in general, market and technology leaders in many areas. What threats are there that this could change?

Dr. Horn: There are a couple of them:
One is the issue of the next generation. The baby boomer generation is gradually retiring. Filling vacancies is increasingly becoming a real challenge. The candidates can be much more selective today than was the case a few years ago. This applies both to academics, i.e. engineers, and to trainees in the industrial-technical sector. Both the VDMA as an association and the member companies are active in recruiting young talent through various offers and campaigns. This is worthwhile. The topic will probably be a permanent issue for the industry in the long term.

Another challenge is international relations. Textile machinery manufacturing has benefited greatly from the globalisation that started in the late 1980s and early 1990s. The trade conflict between China and the USA and the protectionist tendencies we are now facing are anything but good conditions for an export-oriented industry. These are indeed influences and factors beyond our control.

&

Dr. Harald Weber
Managing Director
VDMA Textile Machinery

by Oliver Schmidt

> „The machines of many VDMA companies offer a lot of useful features to ensure reproducible quality results."

Other general factors that not only affect the textile machinery industry are: excessive bureaucracy, regulations that suddenly impose prohibitions and requirements that have not been thought through to their logical conclusion, such as PFAS, a lack of technical openness by politicians in many fields and a fundamentally critical and patronising attitude towards business in large sections of politics and also in some parts of the administration. It is becoming difficult, especially in family businesses, to get the next generation to join the family businesses.

Despite all the challenges, we still have the ambition to be leaders and to be at the forefront in terms of quality and technologies.

Foreign trade policy is an association task. Some German textile machinery manufacturers achieve most of their turnover in China, the leading country in textile production. There were some difficulties here with the pandemic due to the „lockdowns". As a result, there is a lot of public discussion about future economic relations and dependencies - also at the European level. The future business seems a bit fragile at the moment. How can things move forward again?

Dr. Horn: A more pragmatic approach would be very helpful with regard to China. Since the gradual opening by Deng Xiaoping in the early 1980s, both the West and China itself have benefited from trade and cooperation. In the end, there will only be losers in an ideology-ridden systemic conflict. Cooperation offers opportunities, conflict is a one-way street. A world economy without China? Hardly imaginable! Of course, there are downsides. When it comes to product piracy, we will not let up in protecting our intellectual property. And there must be a level playing field.

Basically, too much dependence on one market is always risky. In this respect, it is logical for companies to reduce such dependencies. But the companies should be able to decide that for themselves. Moreover, this discussion is not entirely honest. We want to generate income in China, i.e. sell there. And consume cheap products from China. But otherwise, we don't want to have anything to do with the country. How is that supposed to work? Our ambition should be fair competition, which, by the way, keeps us competitive.

Now ITMA is coming, the biggest and most important trade fair for textile machinery manufacturing and thus actually also for the textile industry, whose business model is based on machine manufacturing. What kind of ITMA can we expect in terms of mood, innovation, interest and business?

Dr. Weber: The Covid pandemic came just a few months after the last ITMA in Barcelona. During the pandemic we got more and more used to virtual meetings. But we also learned that no virtual meeting can replace the personal exchange on site. In this respect, I expect the interest to be high and the atmosphere to be good. What the Olympic Games mean for an athlete, ITMA means for a textile machinery manufacturer. Visitors can expect innovations for more efficiency, digitalisation and the circular economy.

The motto of ITMA 2023 is „Transforming the world of textiles". That sounds dramatically about change. Where is the transformation taking place? In which areas do you think we will see significant changes?

Dr. Weber: Keywords in this context are digitalisation and automation. The machines of many VDMA companies offer a lot of useful features to ensure reproducible quality results. These include process simulation on a PC to optimise process parameters even before production starts.

During production, the exchange of live data between the machines is used for monitoring and further optimisation. Using textile testing equipment as an example, several VDMA members will demonstrate at ITMA how a standardised interface works. Digitalisation and Industry 4.0 also help to counter the increasing shortage of skilled workers.

In the context of digitalisation, VDMA member companies see themselves not only as machine suppliers, but also as competent partners for the technological aspects of digitalisation and their customers' processes. An intensive relationship between spinners, weavers, knitters or finishers, machine suppliers, chemical suppliers and other technology providers is the key to future success.

In other industries, these dramatic changes are already taking place. For example, in the automotive industry, where the change in the form of engine could lead to momentous shifts in market share and brand significance. In which areas could such changes also affect the textile machinery industry? Perhaps through the new fibres that are pushing into the markets?

Dr. Horn: Unfortunately, I don't have a crystal ball, otherwise I could answer this question precisely. I do not assume that new materials will lead to a fundamental shift. Every fibre has to be produced and processed. And you need machines to do that. I would rather focus on computer science. ChatGPT is just one very prominent example of artificial intelligence. No one can currently say how much such programmes will change economic life.

Incidentally, I personally believe that the importance of technical fibres and textiles will grow in the future due to new applications. The textile machinery industry will play a significant role here. On the one hand, because production processes are being developed, and in some cases already have been, that are extremely resour-

ce-saving. On the other hand, the textile machinery industry enables processes that would not even be possible without it. Examples: Offshore wind farms would not be possible without textile ropes, and rockets and satellites would hardly take off without fibre composites.

Does the textile machinery industry actually need someone like Elon Musk, who puts everything to the test and develops completely new approaches?

Dr. Horn: Our industry doesn't need a supposed saviour who is obviously aiming for an oligopoly, with questionable views, behaviour, fantasies of omnipotence and the urge to avoid taxes. The exact opposite of what the German medium-sized textile machinery industry in particular stands for. However, if you are suggesting that we need someone to put everything to the test and develop new approaches, then take a look at our design and development departments, our production facilities and our sales departments. That's what we and our employees do every day. However, we usually believe in a step-by-step development without wanting to completely destroy what already exists. A „succeed-or-die" approach jeopardises functioning business models.

With regard to Germany, it should be mentioned in this context that we have a research landscape that many others envy. The institutes in Aachen, Denkendorf and Dresden are exemplary for this. Combined with the R&D efforts of the companies - the German mechanical and plant engineering industry spent 7.2 billion euros on internal research and development in 2021 - this provides a good basis for developing new approaches and ideas that will result in marketable products.

An essential element of the EU textile strategy is the recycling of fibres, which affects production in two ways. On the one hand, recycled fibres are to be used, and on the other hand, the textiles produced are also to be recyclable again in order to achieve a circular economy. So traditional products no longer have a future, and with them perhaps traditional processes and production? To what extent were you able to influence or even participate in this as an association at the European Union and how can you now help to actively set the course?

Dr. Horn: It is a challenge to exert influence in the network of European institutions or even to help shape them. The European textile industry is directly affected by the outlined EU plans, the mechanical engineering industry indirectly. The European textile association EURATEX is in dialogue with the EU authorities. The companies organised in the VDMA Textile Machinery Association welcome the EU's ambitions to promote climate protection and are geared towards a functioning circular economy. With our highly efficient technologies, we are indispensable partners in this transformation process. The framework conditions must, however, be practicable. The EU must find the right balance between necessary but nevertheless minimal legal regulation. A successful transformation needs a level playing field that sets fair rules for sustainability with which European companies can nevertheless increase their international competitiveness.

Incidentally, „traditional" products in particular will have a chance. Because they are much easier to recycle and/or degrade. This is true at least if by traditional products you mean those made of non-blended fibres. Apart from that, there will always be non-recyclable products. We will not send firefighters into a fire without non-flammable clothing. Nor will you want to fasten offshore wind platforms with ecodegradable cotton.

Many processes in the textile industry are very energy intensive and saving energy is essential for two reasons. Firstly, for cost reasons, and secondly to reduce the carbon footprint. Cheaply generated green energy could solve both problems. Is it an option for the predominantly medium-sized companies to produce more energy themselves? Maybe even to jointly set up their own wind farms to secure green, cheap energy? And how interesting is such an idea for the mechanical engineering industry itself? Is this a topic that can or should be addressed through the association?

Dr. Horn: I'm afraid that we are talking about investment sums here that are far above what our industry can manage. As a background: before the pandemic, our industry produced textile machinery and accessories worth € 2.5 billion.

But, if you look around, you will see solar panels on many SME roofs, air-source heat pumps, etc. Our members have always paid a lot of attention to the energy optimisation of the processes and durability of the machines. Making durable and repairable machines is probably one of the best ways to operate sustainably.

With regard to energy, however, I would like to emphasise fundamentally: The opportunities and possibilities are there. Whether solar, hydrogen or wind energy. The opportunities have to be used. The North Sea could become the world's largest power plant by installing wind farms. And textile ropes and fibre composites will play a not insignificant role in this.

www.vdma.org/textilmaschinen

> Our Autoairo, thanks to its high take-off speed, manages to produce yarns that are in no way inferior to compact ring-spun yarns in terms of touch and feel.

Interview

Dr. Marcus Rennekamp
Managing Director
Saurer Spinning Solutions

Dr. Tai Mac
Director Product Management Open End Spinning
Saurer Spinning Solutions

by Oliver Schmidt

Saurer is a market leader and technology leader in spinning machines. The company is very innovative, always bringing out new technologies and significant improvements. What makes Saurer special for you? How does it perhaps differentiate itself from other companies?

Dr. Marcus Rennekamp: I see Saurer's particular strength above all in the fact that we are technological leaders in all spinning processes (ring, rotor, air and pre-spinning) and that we recognised the megatrends of sustainability, automation and digitalisation very early and firmly anchored them in our development strategy. For example, as part of our E3 philosophy, we have been able to reduce the energy consumption of the Autocoro by almost 40% for our customers over the last 15 years. We define ourselves not only as a manufacturer of machines, but rather as a holistic technology partner for our customers. This includes the fields of application technology, automation, consulting and after-sales solutions.

The textile industry is currently facing major changes. The ITMA motto „Transforming the world of textiles" characterises it quite well. Where and how do spinning mills want to be transformed?

Dr. Marcus Rennekamp: The textile industry is currently undergoing several changes and paradigm shifts. One of the most important is certainly the trend towards sustainability. In many countries, not only in Europe, sustainability is both supported by various initiatives and required by law. This is forcing spinning mills to rethink and expand their business models and processes in the direction of sustainable raw materials, energy efficiency, digitalisation and automation.

At Swissmem's pre-ITMA press conference in Bern, you mentioned the term Recycling Extreme, which describes the challenge of spinning yarns classified as „bad" with a short fibre content of more than 78%. Saurer offers solutions here with a patented performance kit. Does this make „extreme" „easy"?

Dr. Marcus Rennekamp: Our recycling xTreme package for Autocoro opens up possibilities for spinning fibre blends that were simply not spinnable in the past. And this plug&play in a very, very high degree of automation. So high that, under certain conditions, production in high-wage countries is also profitable. We are pushing the boundaries of what is possible. It's not easy, but it's extremely exciting. In fact, there are now the first companies in Europe spinning yarn from recycled material in the middle of Europe.

Examples come from the Netherlands or Finland. Spinning mills are usually set up where the raw material is. And the raw material from old textiles is of course in Europe.

The European Union's textile strategy will certainly pose a major challenge for yarn manufacturers. By 2030, every new textile sold in the EU should have a recycled content of used textiles from consumers. The demand is for fibre-to-fibre recycling to gradually move towards a circular economy. Is this something for which spinning mills must already set the course today and how can Saurer help here?

Dr. Marcus Rennekamp: I have discussed this issue with many spinning mill operators over the last few months. There was not one who was not very intensively involved with the topic. And not only in Europe, but also in countries outside Europe such as Turkey, India and the USA. Saurer already has the right solutions and upgrades for this, with which customers can suitably position themselves for the future. Recycling xTreme is the latest, but of course not the only one. For example, with our BD product line we have already been successfully established in the market for decades in the field of semi-automatic recycling applications.

Another strength of Saurer lies in the fact that, in addition to all spinning processes, we can also provide coordinated technology chains: from fibre preparation to the spinning process itself to twisting - naturally with the appropriate automation and digitalisation.

Many yarns require ring or even compact spinning. Can we also expect productive solutions here for spinning recycled fibres or will this not work due to the fibre length?

Dr. Tai Mac: Ring spinning with and without compacting is still the method of choice for many applications. Of course, the spinning of recycled fibres on Saurer ring spinning machines is also possible and has also been common practice with our customers for many years. However, the shorter the fibres become, rotor spinning is at some point the only alternative. Furthermore, we have to distinguish between mechanically and chemically recycled fibres. Let's think, for example, of viscose and viscose-like fibres, recycled PES and PET: there, ring spinning and air-jet spinning have clear advantages.

As fibres become shorter, could it be an approach to somehow miniaturise the production components accordingly?

Dr. Tai Mac: Unfortunately, the topic is much more complex in detail. It is clear that recycled fibres have a higher proportion of short fibres. However, this does not mean that long fibres, incompletely opened fibres or other impurities are not also present. With recycled fibres, the range of variation is simply much wider and less controllable.

Although this makes the spinning process more sophisticated, it is the customer's expectation that the yarn product itself has a comparable quality and consistency to yarn made from virgin fibres. This is exactly the field of interest where we are intensively researching together with our customers, with fibre manufacturers and also university institutions such as the Recycling Atelier of the ITA.

At the last ITMA 2019, you presented an air-jet spinning machine, the Saurer Autoairo, and thus offer machines for all four spinning processes. Where does this machine stand after four years? Technologically, in the market and in the favour of customers?

Dr. Tai Mac: In the last few years, we have managed not only to perfect the machine, but above all to gain experience in the various applications and fibre materials together with our customers: Viscose, polyester and cotton. In the process, we have built up the corresponding know-how in application technology. This enables us to support customers in the air-jet spinning process, who in the past were only involved in rotor or ring spinning.

We have installed a number of very successful reference installations in continental Europe over the last four years. Some customers were so enthusiastic that they ordered more machines shortly after commissioning. For me, this is a clear sign that we have hit the core of our customers' requirements with our Autoairo.

Why should customers who are already successful in ring and rotor spinning consider entering the air-jet segment?

Dr. Tai Mac: Air-jet spinning has obvious productivity advantages with certain yarn counts. With 100% cotton we currently draw off at up to 400 m/min, with 100% viscose at up to 550 m/min. Compared to, for example, the classic ring spinning process, this corresponds to a productivity advantage of a factor of 20 - 30. Furthermore, the footprint of the machine is of course much more compact. Not to be underestimated is the fact that air-spun yarns have a very special characteristic.

Whereas air-jet yarns used to be considered harsh and not soft enough, our Autoairo, thanks to its high take-off speed, manages to produce yarns that are in no way inferior to compact ring-spun yarns in terms of touch and feel. In some cases, they even have a much lower hairiness. This benefits our customers, for example the yarn leads to a very clean knitting process. Another example is prints on clothing. These last longer and appear more brilliant. The clothing looks like new for longer, even with intensive use, because the so-called „pilling effect" is reduced or completely absent. Durability is also a form of sustainability. It is not without reason that air-jet yarns are in great demand, especially in the luxury segment (e.g. premium polo shirts) but also for textiles that are used intensively, such as hospital clothing and underwear.

Why do customers choose Saurer as a „newcomer" in the market? What makes the machine so special?

Dr. Marcus Rennekamp: First of all, I have to revise this statement somewhat. Saurer has been active in the field of open-end spinning processes for decades and is the absolute market leader with the Autocoro. More than 1 million spinning positions are now in use with our customers worldwide.

With the Autoairo, we have transferred exactly this recipe for success to air-jet spinning. The advantage of this platform has been known and loved in the market for years. Due to the double-sided construction, the machine is the most compact in the market and yet very ergonomic for the operator. The single-drive concept with Multilot and Synchropiecing enables maximum productivity and flexibility.

Moreover, besides the classic application „viscose", the Autoairo also shows a performance in spinning 100% cotton that surprises many customers in a positive sense. In addition to the machine itself, our excellent on-site service in the various markets is of course highly appreciated by our customers.

In two weeks exactly, ITMA 2023 starts in Milan. What can we expect from Saurer?

Dr. Marcus Rennekamp: Without giving too much away, I can promise you a visit to the Saurer booth will be very worthwhile for anyone involved in spinning processes. We will be presenting world premieres across the entire product portfolio. In addition to Recycling Xtreme, we will be spinning many other and partly novel fibres and applications live with ring, rotor and air every day at the fair.

In addition to the machines themselves, we will also present some interesting innovations in the field of digitalisation and automation. Many of them not only in new machines but also as updates and upgrades. Our mission has always been to ensure that previous machines can also be equipped with the latest technology and thus continue to provide our customers with maximum benefit. We stay committed to this standard.

www.saurer.com

NEWS

#Fiber #New Materials

TEXTILE EXCHANGE'S MATERIAL CHANGE INSIGHTS REPORT HIGHLIGHTS THE NEED FOR SYSTEMS CHANGE

Textile Exchange has released its annual Material Change Insights Report, looking at the progress made by the fashion, textile, and apparel industry towards more sustainable materials sourcing. The report analyses data submitted by 424 companies – including brands, retailers, manufacturers and suppliers – through Textile Exchange's Materials Benchmark for the year 2021. It provides insights on materials uptake, as well as alignment with climate and nature goals and the transition to a circular economy. This year's results highlight the following trends: The uptake of preferred materials continues to rise, now representing 56% of materials used by participating companies. Recycled materials grew to 14% of all materials used, with 4% of recycled content coming from post-consumer textile sources. Greenhouse gas emissions rose by 5% in Tier 4 following a dip during the pandemic, marking a return to normal levels of business. The area of land covered by sustainability standards sits at 18.3% of the total estimated land footprint for three key land-based materials (cotton, wool, and manmade cellulosic fibers).

textileexchange.org

SUSTAINABILITY

#Cooperation #Project

NEW PLATFORM FOR A SUSTAINABLE TEXTILE INDUSTRY

Network partners and Minister Brandes © 2023 MKW NRW

Under the leadership of the Niederrhein University of Applied Sciences (HSNR, Krefeld), the project partners HSNR, DWI - Leibniz Institute for Interactive Materials (DWI, Aachen) and the Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT (Fraunhofer UMSICHT, Oberhausen) are launching a cooperation platform starting in May 2023: With the „KlarTEXt" project, they are working to overcome the obstacles to a sustainable and environmentally friendly textile industry. The project is being funded by the Ministry of Culture and Science of the State of North Rhine-Westphalia (MKW NRW) with around two million euros over four years.

www.hs-niederrhein.de
www.dwi.rwth-aachen.de

#NGO #Seal

ZDHC AND OEKO-TEX® STRENGTHEN COLLABORATION TO ENHANCE THE INDUSTRY'S ENVIRONMENTAL PERFORMANCE

ZDHC and OEKO-TEX® have joined forces to enhance sustainable chemical management and cleaner chemistry principles. Their aim is to empower the Textile/Apparel and Leather/Footwear industry to improve its environmental impact by optimising industry guidelines and solutions through collaborative efforts. This partnership seeks to drive sustainability while meeting the needs of Chemical Formulators/Manufacturers, Suppliers, Brands, and Retailers.The goal is to create a cohesive approach to sustainable chemical and product management across global value chains. Although OEKO-TEX® has been collaborating with ZDHC for over five years, this formal agreement will augment the benefits of both organisations to brands and their suppliers.

www.oeko-tex.com
www.roadmaptozero.com

#Trade fairs

TEXPERTISE REPORT FOR THE ACHIEVEMENT OF THE SUSTAINABLE DEVELOPMENT GOALS (SDGS)

Messe Frankfurt Texpertise Network launched its first SDG Report. The report summarizes Messe Frankfurt's global commitment to achieving the Sustainable Development Goals (SDGs) in the context of its global textile trade fairs and provides an outlook on further planned measures and goals. At the same time, the SDG Report serves as an incentive for the Texpertise Network to continue its commitment to achieving the Sustainable Development Goals by 2030.

texpertisenetwork.messefrankfurt.com

#Technology #Innovation

BREAKTHROUGH TECHNOLOGY DEVELOPED – ACOUSWEEP SEPARATES MICROPLASTICS FROM WASTEWATER USING SOUNDWAVES

The technology developed by The Hong Kong Research Institute of Textiles and Apparel (HKRITA) with the support of H&M Foundation, can separate microplastics from wastewater using soundwaves. Acousweep is a plug-and-play application. The technology can be easily transported and connected to any wastewater facility. If the technology is implemented at an industrial scale, it will have a significant impact on the fashion industry's sustainable footprint. Acousweep utilises sweeping acoustic waves in a specially shaped chamber to physically trap and separate microplastic fibres from wastewater effectively. No chemical, solvent or biological additives are needed.

hmfoundation.com

RECYCLING

#Fiber

ASAHI KASEI & MICROWAVE CHEMICAL LAUNCH PROJECT USING MICROWAVE-BASED TECHNOLOGY

Asahi Kasei and Microwave Chemical launched a joint demonstration project in April 2023 with the objective of commercializing a chemical recycling process for polyamide 661 (PA66, also called nylon 66) using microwave technology. The process utilizes microwaves to depolymerize2 PA66 and directly obtain the monomers hexamethylenediamine (HMD) and adipic acid (ADA), which is expected to be accomplished at high yield with low energy consumption.

www.asahi-kasei.com

#Fiber

NEW TEIJIN FRONTIER RECYCLING TECHNOLOGY FOR POLYURETHANE ELASTOMER FIBRE REMOVAL

Teijin Frontier announced it has developed a new foreign material removal technology to eliminate polyurethane (PU) elastomer fiber from discarded polyester apparel.The technology features a new processing agent used during the pretreatment phase of the chemical recycling process, which helps improve the quality of the recycled polyester fiber that is derived from clothing containing PU elastomer fiber. In addition to removing the PU elastomer fiber, the new technology eliminates foreign materials such as dyes, and helps to omit the decolorization process of polyester fiber. **www.teijin.com**

#Fiber

LENZING AND PARTNERS LAUNCH AUSTRIA'S LARGEST TEXTILE RECYCLING PROJECT

The Lenzing Group, a world-leading provider of specialty fibers for the textile and nonwoven industries, has taken another big step towards achieving a circular future in collaboration with several partners. Austrian companies and not-for-profit organizations, including Lenzing's logistics and sorting partner ARA (Altstoff Recycling Austria AG), the textile service provider Salesianer Miettex and Caritas, as well as the Swedish pulp producer Södra have joined forces to collect used household and clothing textiles for reprocessing to produce pulp and, ultimately, new lyocell and viscose fibers. In this pilot project, used textiles collected by Salesianer Miettex that are not suitable for reuse will be passed on to ARA, before being delivered to Caritas for sorting by hand at a recycling plant. The Caritas recycling facility provides secure employment to more than 70 people with disabilities. After the sorting process, the textiles will be delivered to Södra for recycling and processing to produce OnceMore® pulp. This method is a world first in the industrial recycling of textile waste made from blended fibers. Lenzing will then apply its innovative REFIBRA™ technology to produce new lyocell and viscose fibers.

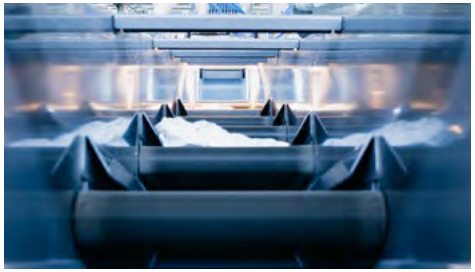
Cooperation between ARA and Lenzing AG - f.l.t.r. Ing. Jürgen Secklehner - Managing Director ARAplus, Sonja Zak - Head of Textile Sourcing & Cooperations DI Martin Prieler - Member of the Board of ARA (Altstoff Recycling Austria AG) © Lenzing AG/Sarah Koller

www.lenzing.com

#Business #Raw Material

INFINITED FIBER AND SOEX SIGN AGREEMENT ON TEXTILE WASTE FEEDSTOCK FOR FLAGSHIP FACTORY

Infinited Fiber signed a three-year agreement with SOEX, a leading German textile sorting and recycling group. SOEX is well positioned to provide the Flagship factory with an annual supply of up to 5000 tons of post-consumer textile waste. SOEX collects post-consumer textile waste mainly from Germany through municipal and commercial street collection, as well as the I:CO Take-Back System that enables fashion houses and retailers collect pre-loved clothing back from their customers in their stores or online. For used textiles unfit to for second hand sale, SOEX has a groundbreaking, fully automated sorting for recycling set-up, where artificial intelligence recognizes individual garments and sorts them by materials or colors. Infinited Fiber´s patented technology turns cotton-rich textile waste into high-quality, circular textile fiber Infinna™ for world´s leading apparel brands.



Automated Recognition Set-Up Enables Sorting For Recycling.© SOEX.

infinitedfiber.com

#Conference

ADVANCED RECYCLING CONFERENCE (ARC) 2023 – CALL FOR ABSTRACTS

Taking place on 28-29 November 2023 in Cologne, Germany, and online, the Advanced Recycling Conference will introduce the diversity of advanced recycling solutions and brings together stakeholders along the entire plastics value chain. Speakers will have a unique opportunity to present their latest developments to a broad and relevant audience. Submissions are invited on advanced recycling technologies, renewable chemicals, building blocks, monomers and recycled-based polymers. Deadline for submission: 30 August 2023.

advanced-recycling.eu

(Emmanuel Ladent, CEO, and Alain Marty, Chief Scientific Officer, representing Carbios at Choose France)
© 2023 Carbios

#Fiber #Polyester #PES

CARBIOS RECOGNIZED AS A FLAGSHIP START-UP IN FRENCH GREEN INNOVATION

Carbios has been selected among the 22,000 start-ups in the French Tech ecosystem to represent French innovation at the 6th "Choose France" Summit. "Choose France" is an international business summit dedicated to the attractiveness of France launched at the initiative of Emmanuel Macron, the President of the Republic. Only ten companies, including Carbios, have been chosen to exhibit their technologies at the Château de Versailles. On this occasion, Carbios announces that it has joined the Coq Vert community launched by Bpifrance in partnership with ADEME and the Ministry of Ecological Transition.

carbios.com

CARBIOS WILL RECEIVE GRANTS TOTALING €54 MILLION

Carbios has been selected by the French State for funding of €30 million from the French State as part of the investment plan France 2030, and €12.5 million from the Grand-Est Region. The implementation of this funding is conditional to the European Commission's approval of the corresponding state aid scheme, followed by the conclusion of national aid agreements. As part of the national call for projects on "Plastics Recycling" operated by ADEME[1], Carbios' project to finalize the industrialization of its unique PET biorecycling process has been selected. **carbios.com**

#Award

MANFRED HACKL IS PLASTICS RECYCLING AMBASSADOR OF THE YEAR

Manfred Hackl, CEO of EREMA Group GmbH, was recently awarded the accolade Plastics Recycling Ambassador of the Year at the Plastics Recycling Show Europe.

www.erema-group.com

Manfred Hackl © 2023 EREMA Group

#Textile Machines #Sewing #Welding

DÜRKOPP ADLER AND SGG GROUP ANNOUNCE STRATEGIC ACQUISITION OF SONOTRONIC NAGEL

Dürkopp Adler Group has announced the acquisition of Sonotronic Nagel GmbH, a leading company in automated ultrasonic welding technology. The purchase agreement was signed on April 28th, 2023, with the transfer of the company set to take place on July 1st, 2023. The acquisition of Sonotronic Nagel will expand Dürkopp Adler Group's portfolio in industrial sewing and welding technology by automation solutions in plastic welding technology and strengthen its presence in the global market.

www.duerkopp-adler.com

#Apparel #Brand

HUGO BOSS RECORDS EXCELLENT START TO 2023 AND RAISES FULL-YEAR OUTLOOK

"We look back on an excellent start to the year, as we further accelerated brand momentum around the globe," says Daniel Grieder, Chief Executive Officer of HUGO BOSS. Currency-adjusted Group sales in Q1 increase by 25% to EUR 968 million. There were double-digit improvements in both brands, in all regions and in all distribution channels.Q1 EBIT is EUR 65 million, up 63% year-on-year. The outlook for the 2023 financial year was raised: Sales to grow by ~10% to around EUR 4 bn; EBIT to increase to an amount between EUR 370 m and EUR 400 m (+10% to +20%).

www.hugoboss.com

#Technical Textiles

EPSON INVESTS IN STARTUP AI SILK

Seiko Epson Corporation (TSE: 6724, „Epson") and its subsidiary company Epson X Investment Corporation („EXI") have invested in Japanese startup company AI Silk Corporation through a joint fund, the EP-GB Investment Limited Partnership. Sendai-based AI Silk, a startup that spun out of Tohoku University, develops and manufactures a high-performance conductive textile called „LEAD SKIN®". AI Silk intends to use this third-party allotment of shares to expand volume production of LEAD SKIN®. The company plans to expand beyond Japan and to sell LEAD SILK® as a material to meet the growing global demand for automotive parts and wearable devices such as EMS products. It is also considering expanding into the medical field.

www.epson.eu

#Textile machines #Nonwovens

ITALIA TECHNOLOGY ALLIANCE (A.CELLI GROUP) ACQUIRES SADAS

© 2023 A.Celli

Italia Technology Alliance (ITA Holding) welcomes Sadas Srl, a Lucca-based company specializing in system integration and automation solutions and electrification for industrial plants, into the Group.The objective of this operation is part of the broader development plan that ITA carries out at a strategic level and which has recently seen the entry of other companies active in the fields of industrial automation, software development and process digitization. Sadas is a company founded in 2005 with the aim of making skills and know-how available to companies in the Paper & Tissue sector. **www.acelli.it**

#Textile Chemistry

TANATEX CHEMICALS FINALIZES ACQUIREMENT OF NEW TANATEX S.P.A.

TANATEX announced the outright purchase of New Tanatex S.p.A. by TANATEX Chemicals B.V. New Tanatex has been the exclusive agent and distributor of TANATEX Chemicals B.V. for the Italian market and for many Italian investee companies abroad since 2005.

tanatexchemicals.com

B.I.G. ACQUIRES AUSTRALIAN B2B FLOORING WHOLESALER SIGNATURE FLOORS

© Beaulieu International Group

B.I.G. has signed an agreement with Australian B2B flooring wholesaler to acquire its complete range of activities. Through this acquisition, both companies will strengthen their growth opportunities in both soft, resilient and hard flooring in Australia and New Zealand.

www.beaulieufibres.com

#Textile Chemistry

DYSTAR ANNOUNCES RESTRUCTURING PLAN FOR LUDWIGSHAFEN PLANT FACILITY

DyStar announces the plan to restructure its Ludwigshafen facility located in Germany. The strategic decision is made by the company in response to changing business conditions and market shifts. Mr. Xu Yalin, Managing Director, and President of DyStar Group said, "This is an important strategic move for DyStar. We will focus on developing key emerging markets, which have been shifting over a decade". Mr. Eric Hopmann, Chief Commercial Officer of DyStar Group said, "The restructuring of this facility will be carried out in a phased manner. DyStar will diversify the production activity out of Europe and start with the reduction of manpower as a consequence".

www.dystar.com

#Nonwovens #Exhibitions

INDEX™23 DEMONSTRATES THAT NONWOVENS ARE BACK IN BUSINESS

The international nonwovens community came together once again in Geneva for INDEX™23. Attendees were delighted to see such a global presence, with 610 exhibitors from 43 countries showcasing their products over 50,000 m² of gross exhibition space. This represented a significant increase in exhibitors compared with 2021 and is a clear indication that the entire nonwovens industry is back in business. The number of attendees also increased, with 12,017 visitor entries from over 100 countries joining the event. INDEX™26 will take place from 21 - 24 April 2026. **www.edana.org**

www.indexnonwovens.com

LEGAL NOTE

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#Textile machines #Spinning

OERLIKON SUCCESSFULLY PLACED CHF 340 MILLION DUAL-TRANCHE SENIOR UNSECURED BONDS

OC Oerlikon Corporation AG, Pfäffikon („Oerlikon") announces the successful placement of two series of senior unsecured bonds: CHF 220 million due in June 2026 and CHF 120 million due in October 2029 (together, the „Bonds"). These bonds are to repay outstanding debt and ensure a continued strong financial foundation following the acquisition of Riri.

www.oerlikon.com

#Apparel #Brand

ADIDAS REPORTS REVENUES ON PRIOR-YEAR LEVEL IN Q1 / 2023

In the first quarter of 2023, currency-neutral revenues were flat versus the prior-year level. The top-line development in Q1 was impacted by significantly reduced sell-in to the wholesale channel as part of the company's initiatives to reduce high inventory levels, particularly in North America and Greater China. In addition, the discontinuation of the Yeezy business weighed on the top-line development during the quarter, representing a drag of around € 400 million on the year-over-year comparison, mainly across the North America, Greater China and EMEA regions.

www.adidas-group.com

#Fiber

LENZING ON TRACK FOR RECOVERY AFTER ANTICIPATED DIFFICULT START

The business performance of the Lenzing Group during the first quarter of 2023 largely reflected market trends. However, signs of recovery emerged during the first quarter in terms of demand as well as raw material and energy costs. Textile fibers recorded moderate but steadily improving demand. Business with fibers for nonwovens and with dissolving wood pulp performed better than expected. Raw material and energy costs were still at an elevated albeit decreasing level. Revenue grows to EUR 623.1 mn – fiber sales recovered over the course of the quarter. EBITDA and net result for the period down compared with the first quarter of 2022. The cost reduction programme of more than EUR 70 million is being implemented as planned. Production of TENCEL™ brand modal fibers successfully launched in China. Lenzing confirms the guidance for 2023. **www.lenzing.com**

LENZING™ viscose production at the Lenzing site - bale warehouse © 2023 Lenzing AG/Christian Leopold

#Textile Machines #Weaving

ROGER SCHNÜRIGER NEW STÄUBLI CFO

Roger Schnüriger © 2022 Stäubli

Stäubli has appointed Roger Schnüriger as the Group's new CFO and a member of the Executive Committee. He will assume this position on June 1, 2023. With Roger Schnüriger, Stäubli gains an experienced manager in the successful transformation and development of finance for global industrial companies. The new appointment therefore fits ideally into Stäubli's current business strategy, which is focused on strong international growth. Roger Schnüriger was most recently Group CFO for the medical technology company Medela. He brings over 20 years of experience in finance as well as international management with multinationals Sonova, DKSH and Syngenta. He is known for his clear focus on achieving business objectives and creating strong governance frameworks in complex and matrix organizations. **www.staubli.com**

#Fiber

ROBERT VAN DE KERKHOF TO LEAVE LENZING AT THE END OF 2023

obert van de Kerkhof © 2023 Lenzing

There will be a personnel change on the Managing Board of the Lenzing Group, the world's leading supplier of wood-based specialty fibers. Robert van de Kerkhof, Chief Commercial Officer Fiber and member of the Managing Board since 2014, informed the Supervisory Board that he would not be available for a further extension of his contract, which runs until December 31, 2023. "Robert van de Kerkhof has excellently fulfilled his role as Chief Commercial Officer since 2014 and contributed significantly to the successful development of the Lenzing Group. With the disciplined implementation of the corporate strategy. We would like to thank him for his dedicated and trustful cooperation and wish him all the best for his future path," says Cord Prinzhorn, Chairman of the Supervisory Board of the Lenzing Group.

www.lenzing.com

Starting materials for the production of sustainable composites. © DITF

#Composites

CELLUN - A FIBER COMPOSITE MADE FROM BIOPOLYMERS

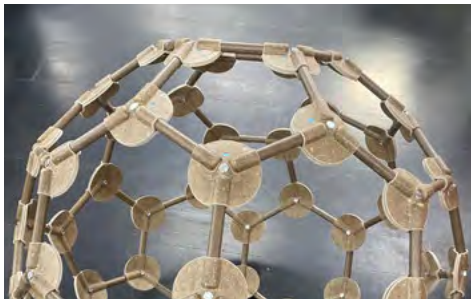
In collaboration with the project partners CG TEC, Cordenka, ElringKlinger, Fiber Engineering and Technikum Laubholz, the DITF are developing a new fiber composite material (CELLUN) with reinforcing fibers made of cellulose. The matrix of the material is a thermoplastic cellulose derivative that can be processed using industrial processing methods such as hot pressing or pultrusion. CELLUN made from renewable biopolymers enables the replacement of glass or carbon fibers in the production of industrial molded parts.

www.ditf.de

#Composites

BIOCOMPOSITE AT THE VENICE ARCHITECTURE BIENNALE

This year's Venice Architecture Biennale sees itself as a „Laboratory of the Future".



Final structure as buckyball with the developed nodes and pultrusion profiles. © Photo: Carsten Fulland, Zenvision

Bio-composites are not just dreams of the future in architecture. The German Institutes of Textile and Fiber Research (DITF) have developed a sustainable material for support profiles and connecting nodes, which will be on display at Palazzo Mora during the Biennale from May 20 to November 26. The ultralight components are the result of a joint project between partners from research and industry, funded by the German Federal Ministry of Food and Agriculture. In the future, they will be used in the field of mobile architecture and in pavilions and architecture with low load-bearing capacity. The DITF had the task of selecting suitable materials for the biocomposite and developing manufacturing processes. In order to achieve the highest possible organic content, hemp and flax fibers and a resin system based on epoxidized linseed oil were used. These natural resources were used in both pultrusion and hotpressing processes.

www.ditf.de

A chemical protective suit protects the person wearing it from chemicals in gaseous, liquid and / or solid state. They are classified into 6 types with different protection levels from gas-tight to restricted liquid-tight
© Hohenstein

#Technical textiles

PROTECTIVE CLOTHING AND GLOVES AGAINST CHEMICALS AND INFECTIOUS AGENTS

Since April 2023, the testing service provider Hohenstein has been testing and certifying in two new areas in the field of protective clothing: protective suits and gloves against chemicals and infectious agents. These are covered by Regulation (EU) 2016/425 and are therefore personal protective equipment (PPE). They protect people who do valuable and sometimes dangerous work for our society.

www.hohenstein.com

#Fiber # Textile Lightweight

INDUCTIVE DESIZING OF CARBON FIBRES FOR ECONOMIC RECYCLING

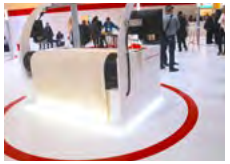
In the course of the project, a technical prototype for the desizing of carbon fibres was developed. In this process, the electrical conductivity of the fibres was exploited. By coupling inductive energy into the fibres, small ring currents are generated which lead to homogeneous resistive heating of the textile semi-finished products. In this way, desizing temperatures of over 400°C can be achieved in just a few seconds. This results in significant advantages in the standardisation of fabric properties, especially through the recycling of sizing-heterogeneous carbon fibre blends.

www.stfi.de

#Mew Materials

STRONG INTEREST IN RENEWABLE MATERIALS

465 participants from 32 countries attended the Renewable Materials Conference in Siegburg (near Cologne, Germany). The winners of the innovation award are bio-based and biodegradable elastic materials from KUORI (CH), carbon-light yeast oil COLIPI (DE) and the plastic-free natural polymer traceless® (DE). The annual conference, which took place from 23 to 25 May, is one of the largest and most important gatherings for the renewable materials industry. **renewable-materials.eu**



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REVIEW ITMA 2023
+ ANSWERS TO MEGATRENDS

PREVIEW CINTE TECHTEXTIL CHINA 2023
+ MARKETS, TRENDS AND APPLICATIONS
+ INNOVATIONS
+ HIGHLIGHTS OF THE EXHIBITORS

PREVIEW DORNBIRN GFC

SPECIAL: FIBERS FROM CELLULOSE

#INTERVIEWS ITMA 2023

+ + + NEXT ISSUE WILL BE PUBLISHED ON 2023-09-29 + + +