

Novelties at 13th Techtexsil: Trade fair for technical textiles and nonwovens

The technical textile and nonwovens sector came in droves to its leading international trade fair, with numbers never before seen. Visitors and exhibitors alike perceived Techtexsil to be an event full of intensive business activity and rated their participation in the trade fair as very good; over 80 percent of exhibitors were very satisfied with the extent to which they had achieved their targets for the fair. Most of the leading textile machinery manufacturers showcased their latest technologies and got very good response from the audiences, some of them are summarized below:

Neuenhauser: system and solutions of winding of fabrics

Neuenhauser has created a wide range of products for winding fabrics on weaving, knitting and other production machines. The product range reaches from basic batch winders for standard woven fabrics to highly sophisticated winding units for technical weaving and knitting applications.



Neuenhauser displayed its new products for special demands in weaving mills and latest developments in off-loom fabric winding technology. The OPTI Winders by Neuenhauser for advanced surface winding tasks, offers perfect operation and roll shape. The different types of CENTER winders enable winding of difficult technical fabrics without is another interesting machine for these applications.

Neuenhauser is also active in the manufacturing and sale of coating and drying systems for technical fabrics. Normally these systems are connected directly to the fabric producing machine (e.g. weaving machine), enabling only one production step from warp to finished product.

The models of the coating and drying systems are varying as much as the different types of coated, technical fabrics. Neuenhauser's strength is to deliver customized solutions.

Bekintex: New anti-static, shielding and heating products

Bekaert (Bekintex), a leader in innovative textiles displayed its new anti-static, shielding and textile heating products at Techtexsil in Frankfurt.

The **TexiShield BabyProtect** offers pregnant women and their unborn babies' protection against the increasing amount of electromagnetic radiation from mobile phones, microwaves, and computers. Bekaert says that the special fabric construction provides 99.99% shielding (40dB) and the fashionable designs which are available in various colors, are comfortable to wear and resist multiple washings. The same technique is used for the protection of high voltage line workers.

The new anti-static cotton **Bekinox yarns** for protective clothing in the oil and gas industry, where workers are often exposed to explosive and flammable atmospheres were also exhibited at the show. Due to their excellent conductivity, Bekaert Bekinox fibres and yarns take away the ignition source by preventing build-up of static electricity.

Personal protective clothing made with Bekaert Bekinox yarns easily fulfill the international safety norms and are the preferred solution in the market due to their outstanding wash resistance. As a lot of these garments are still made of cotton, a new range of cotton Bekinox yarns have been developed for both summer and winter protective clothing.

Bekaert is also introducing a complete heating set with battery and controller which can be easily integrated into all kinds of outdoor clothing. The flexible and ultra thin textile heating pad generates a warm and comfortable heat and resists to multiple washings.



Crosrol MK7 card for nonwovens

The carding specialist Crosrol has recently launched its new highly anticipated MK7 Card.



Crosrol MK7 card.

Recognizing demand in nonwoven and medical textile applications, Crosrol supplies cards for these specialized end uses and displayed the information at Techtexsil in June 2009.

"Technological superiority, innovative concepts, with exceptional low owning and operating costs make the MK7 card the logical solution for your carding requirements.

The benefits are the chute feed with air pressure, pivoting feed control, adjustable tanker in waste control, multipoint waste removal system, Siemens Plc, ABB inverters and motors and web take off", the company says.

New blowroom machinery

The Crosrol range of modular Blowroom machinery enables an opening line to be individually tailored to suit the unique fibre processing needs of the company's customers. "Every Crosrol Blowroom machine in the opening line is designed and manufactured to the same high degree of standards that Crosrol has used for the carding machines during our 70-year history", Crosrol says.

The successful integration of traditional stages of opening and cleaning into multi-functional machines results in effective capacity utilization and significantly reduces the need to transport the fibres from one machine to another.

As today's industries focus on ever increasing power costs, the Crosrol Blowroom utilizes only European drive motors and gearboxes together with Japanese bearings to ensure that the consumed electrical energy is converted into the opening and cleaning power at the highest possible efficiencies.

Stoll flat knitting technology for technical applications

H. Stoll & Company has widened application areas in use of knitting machines and in particular flat knitting machines in technical applications. Flat knitting machines are mainly used in the apparel sector for producing knitted outerwear and accessories but Stoll has pioneered the use of the technology for technical applications. The company has a dedicated sales and technical team for technical textiles and works closely with customers to develop new applications.



Stoll CMS flat knitting machines can now be found in wide ranging applications for medical devices such as orthopedic and compression soft goods and for specially engineered upholstery and suspension fabric solutions used in the furniture industry.

In addition Stoll flat knitting machines are also used for making a range of wire products and conductive knits as well as for textile substrates processed in composite products.

GF Machinery for fibre glass and fabrics

GF Machinery is active in the manufacturing of textile machinery for the processing of fibre glass and fabrics. At Techtexsil Frankfurt, they presented the latest printing and rewinding line with slitting for the processing of glass fabric material or other materials like PET folia, paper and electro materials. The line consists of an unwinding unit, printing unit, dryer, slitter and winding unit.

The main advantages of the machines offered by GF Machinery are high flexibility, designing to customer requests, up to four independent winding shafts for slitting of folia and electro material, different knife equipment for different process materials and high efficiency of the line speed of up to 120 m/min.

GF Machinery also produces roving glass processing lines, finishing machines, such as driers, creels, printing lines with slitting, wallcovering lines, mesh lines, slitting equipment, inspection system for mesh fabric density and quality checking,

automatic material handling, transport lines and regulation and design of custom machinery and lines.

This company is also able to meet the requirements of customers looking for PCB production technology, carpet finishing lines, vacuum presses and in the other fields of industry.

Italian textile machinery on show had positive response



ACIMIT (Association of Italian Textile Machinery Manufacturers) and ICE (Italian Institute for Foreign Trade) had organized a meeting

point at Techtexsil 2009. The Meeting Point hosted about ten Italian machinery manufacturers involved in the production of machines for technical textiles.

The Italian industry is paying particular attention to the technical and innovative textiles sector and ACIMIT estimates that about 100 Italian manufacturers are now offering machinery for the production of technical textiles and nonwovens.

The excellence of Italian technology in the sector is the result of the synergy between the Italian manufacturers on one side and the Italian textile industry on the other.

The technical textiles sector in Italy embraces several companies, which are leading in different fields of application and the steady research and innovation activities in the production of technical textiles linked together textile producers and Italian technology suppliers makes for a successful alliance.

The large number of countries which buy Italian textile machinery bears witness to the high quality of the Italian textile technology.

International Natural Fibres Conference held during Techtexsil 2009

As part of the International Year of Natural Fibres, Messe Frankfurt held a congress on natural fibres during Techtexsil 2009. The aim of the congress was, inter alia, to bring natural fibres into closer contact with technical applications and to draw attention to the benefits offered by natural fibres.



Thus, the focus of the congress was on the functionality (function) of natural fibres and the latest findings about innovative applications in fields such as mobility and construction, i.e., architecture and building.

Although natural fibres already play an important role in the textile industry, their share of the technical segment is still rather low. And it is in this connection that the Natural Fibres Congress should generate new impulses. The combination of natural fibres and technical textiles open up new perspectives for this market.

The congress was supported by important trade associations, such as the Bremen Cotton Bourse, the German Linen Association, the German Association of the Yarn, Woven Fabrics and Technical Textiles Industry (IVGT), the International Textile Manufacturers Federation (ITMF) from Switzerland and the International Wool Textile Organisation (IWTO) from Belgium. These associations form the organising committee that, among other responsibilities, supports the programme committee in the selection of subjects and renowned speakers.

2009 - International Year of Natural Fibres

The UN General Assembly declared 2009 as the international year of Natural Fibres at the end of 2006. According to the Food and Agriculture Organisation of the United Nations (FAO), the Year of Natural Fibres will help achieve the UN Millennium Development Goals.

Thus, it is hoped to give a boost to the efficiency and sustainability of this branch of agriculture, which provides employment for millions of people in the poorest parts of the world. The International Year of Natural Fibres will promote awareness of and demand for natural-fibre products throughout the world.

Messe Frankfurt launched a special internet site on the occasion of the International Year of Natural Fibres. The website at www.naturalfibrescongress.messefrankfurt.com provides information about projects planned within the framework of the Year of Natural Fibres, shows the benefits of this natural product and offers detailed information about the Natural Fibres Congress at Techtexsil 2009. ♦

KB Seiren from Japan features new filament yarn

KB SEIREN, Ltd. started their business as a group company of SEIREN Co., Ltd., in Japan succeeding major textile business of Kanebo, Ltd. on July 1, 2005.

At Techtexsil, some of the products on display include: **Bellcouple** fusible polyester filament, **Belltron** conductive synthetic fiber and **Expansione** polyurethane nonwoven fabrics.

The company also introduced new yarns such as those with heat shielding or heat storing properties and as industrial material applications. It also presented new functions and applications in the sectors of electronics, medical, automotive and architecture.

New products highlights of EMS-GRILTECH

EMS-GRILTECH has manufactured and marketed GRILON® fibers since 1952 and Griltex® hotmelt adhesives since 1965.

These are intermediate products, which are further developed into highly specialized products for use in innovative and technically demanding applications.

Flexible Copolyester: High adhesion values on metals, polyamides, ABS/PC and PET is one benefit of flexible Copolyesters. Their special formulation guarantees good bonding performance even at temperatures below the freezing point. Softness and a good barrier effect against dyestuff migration make them predestined for the coating and bonding of transfer labels.

Flame Retardant Adhesives: To fulfill the stringent legal regulations an increasing number of textiles are finished with a flame retardant. The flame retardant products from EMS-GRILTECH are designed with this in mind. Available in granule or powder form these Griltex FR adhesives are ideally suitable for applications which require a flame retardant performance.

Spun dyed polyamide fibers: The advantage of spun dyed fibers is the much easier processing and color fastness compared to solution dyed fibers. The opening on the carding machine is excellent with reduced fiber damage and the finished substrate will have an excellent fleece picture.

Short cut fiber for wet laid: Short cut fibers from EMS-GRILTECH are produced with staple length of 6 - 18 mm from different thermoplastic polymers, they can be functionalized with additives for different applications and are available as mono- or bicomponent fiber.

Melt bonding fibers: The product range of our outstanding melt bonding fibers goes from fine count 1.7 dtex mono-component up to coarse count of 67 dtex bicomponent fibers made with CoPA and CoPES or spun from other thermoplastic polymers.

Matrix soluble yarn for high performance composites: GRILON MS is an auxiliary- or stitch-yarn which stabilizes the dry carbon fibers of high performance composite materials before curing. The solubility of this yarn in the epoxy resin ensure a homogenous composite matrix which surround the carbon fiber flawlessly. The performance and the mechanical properties of the composite can be greatly enhanced with the use of GRILON MS yarn.

Twisttechnology® specialized in designing and producing twisting machines

TWISTECHOLOGY® uses in-house technology and patents to convert current production process into more efficient, versatile and economic twisting procedures. Following are the products and their main features showcased at Techtexsil 2009 by Twisttechnology.

TANDEM - Twisting machine for small production lots or for producing a wide range of different products. This machine can produce the same product in all spindles or different products in each spindle. The production data is stored for 99 different products. The machine is specially designed to take care of technical and delicate yarns, twist quality is optimized with the help of automatic self control and adjustment systems, with a maximum speed of 200m/min.

TWIST UP FG - Revolutionary in-line twisting system offers modular machine concept for twisting in-line with your next process, therefore there is no need of pre-installation and thus automatic synchronization to the speed of next process is also incorporated. Each module

is fitted up with 3 spindles, single twist system, twist range: 0-999 tpm / S or Z, with a maximum speed upto 7,000 rpm.

TWISTEC - Twisting machine for laboratory or small production lots. This machines offers individual spindles, and thus different yarn production in each spindle is possible. The system is specially designed to take care of technical and delicate yarns.

Advansa in association with Lenzing presented viscose and polyester filling

Advansa - headquartered in The Netherlands was formulated as a result of joint venture between Sabanci and Dupont de Nemours in the year 2000 concerning the polyester department of the American manufacturer which sold its parts in this activity to the Turkish group in 2004. Advansa belongs to a Turkish holding company, Haci Omer Sabanci and the last two letter of the company's name (namely "sa") is a reminder that Advansa is part of a group commonly referred to as Sabanci.

The company produces polyester staple fibre and filament yarn, intended for two markets. An average sleeper loses half a litre of water through perspiration each night, which must be released outside the duvet to avoid discomfort. A new polyester and viscose pillow and duvet filling fibre was launched, the fruit of a partnership between Advansa, polyester manufacturer and Lenzing, a viscose specialist. Sold under the name Suprelle Fresh and Tencel (the names of two components), this new product releases over 57% more moisture than a standard 100% polyester duvet.

The Advansa polyester fibre ventilates this water thanks to its surface crimps and hollow structure. At just 1.6 denier the viscose is very fine and provides the softness, while the polyester guarantees the loft of the end product.

This new filling exists in three versions. Long fibres (63 mm) are carded to form sections intended for duvets. Short fibres and flakes (polyester 8 mm, viscose 12 mm) are best used with pillows depending on the level of comfort preferred by the user (memory pillow or soft). Generally speaking, articles with this material are middle to top of the range.

Suprelle Fresh and Tencel pillows and duvets will be available from distributors and retail stores from September, including from Dodo and Abeil, both manufacturers of bedding articles, who already manufacture under an Advansa license.



Menzel: Laminating lines

The nonwoven industry combines high-tech products and complex manufacturing processes with high production speeds. Menzel manufacturing program includes: Coating systems, dryers, winding systems, drawing devices, cooling devices, reversing systems, accumulators, lamination, calendar and custom made machinery.



Laminating Line M224 - 10.

Menzel laminating ranges operate reliably when producing technical textiles of different kinds, i.e. ranging from automobile industry to laminating of membranes made of PTFE for protective clothing and filter technology. At Techtexsil in Frankfurt, Menzel presented laminating calendar with curtain applications.

Menzel offers single and multi stage coating lines, combination ranges (vertical – horizontal). The coating material includes PVC, PUR, Silicone, Vinyl, Acryl, dispersions, lacquers, adhesives, etc. The applications include tarpaulin fabrics, air bag material, conveyor belts, artificial leather, wall covering, insulation material, flocked material, PVC floor covering, back coating for carpet floor covering.

Asahi Kasei Fibers

Asahi Kasei Fibers is the core operating company for all fibers and textiles operations of the Asahi Kasei Group. Asahi Kasei Fibers Corporation provides nonwovens for filters, industrial materials, electronics, consumer goods and agriculture.

At Techtexsil in Frankfurt, they presented **Eltas** - Spunbonded nonwovens, **Precise** – Three layer spunbonded and meltblown nonwovens, **Smash** – Heat-press formable polyester spunbonded nonwovens, **Bemliese** – Cellulosic continuous filament nonwovens and **Micoweb** – Meltblown nonwovens.

A newly developed spunbonded fabric made from engineered plastic was also exhibited. A pilot plant for producing this engineered plastic spunbonded fabric went into operation in April 2009.

Kuraray Co. Ltd

Kuraray Co. Ltd. exhibited **Vectran** – high-strength polyarylate fibers, along with PVA fibers, high function polyester, nonwovens and **Clarino** – man-made leather and will proposed new application developments.

Vectran possesses high tenacity and elasticity, dimensional stability, low moisture absorption and shock absorbing property. A carbon nanoube (CNT) coated Vectran and CNT-coated polyester fibers. When these non-metallic conductive fibers are woven into a fabric, it can be used as a light, thin, compact sheet heater featuring superior bending fatigue. In fiber form, it can be utilized as a light non-metallic electric line.

Maschinenfabrik Herbert Meyer GmbH showcased RPS-L laboratory laminator

Founded in 1949, company Meyer have been one of the most important manufacturers of special machines for bonding, coating, pressing and molding. Meyer produces innovative machinery such as fusing machines, heating presses, laminating lines and also large molding lines. The RPS-L - laboratory flatbed laminator was on display at the recent Techtexsil at Frankfurt. The salient features of this machine are given as under:

- ❖ Heating zone with spring mounted elements.
- ❖ Integrated cooling zone.
- ❖ Pressure rollers with level adjustment.
- ❖ Pressure and level adjustment manual.
- ❖ Conveyor belts string guided.
- ❖ Control system: Meyer Touchtronic for top and bottom heating zone and speed.

SPIKE® AirCarding by Formfiber Denmark

Formfiber Denmark is known for design and manufacture of the revolutionizing air-laid technology, 'SPIKE'- which enable manufacturers an infinite versatility and flexibility in nonwovens production.

Formfiber Denmark has also developed the unique fiber opening and mixing system, 'SPLIT' – as well as the exceptional cost effective cutting zone technique, 'SLIT'. Formfiber Denmark hold the worldwide patents for the following technologies:

- ❖ **SPIKE:** Air-laying technology.
- ❖ **SPLIT:** Opening and mixing system.
- ❖ **SLIT:** Cutting zone.

According to Mr. Morten Stenbro from Formfiber Denmark, "SPIKE® AirCarding

Technology is an advanced webforming system which enables manufacturers' exceptional flexibility in both production and cost reduction. The principle of rotating spikes guarantee a homogenous blend of the fiber material prior to the webforming – hereby ensuring an optimized and consistent quality. The versatile SPIKE technology applies to all traditional air-laid and carding markets, product applications and beyond."

SPIKE® advantages

Formfiber Denmark offers a multipurpose webforming (machine) technology. Formfiber Denmark's customized design guarantees that each SPIKE former will meet the clients specific requirements and include the following process advantages.

- ❖ One forming technology – multiple market applications.
- ❖ Reduction of bi-component bonding fibers.
- ❖ Manufacture products with short / long fibers and powder / granulates – simultaneously.
- ❖ SPIKE forming can be combined with all bonding methods.
- ❖ Low vacuum required for the production of light weight high loft webs.

Bonas showcased applications in technical textiles

Jacquard machines are synonymous with tradition, such as furnishings, damasks, apparel, etc. but a significant demand for Jacquards comes from the technical sector. Fully flexible structures, double layered fabrics and high warp densities are just some of the necessities, that today's modern technical weaver requires, which are achievable from electronic Jacquard weaving machines.

The automotive safety bags are at the forefront of technical Jaquard weaving technology in technical textiles. Therefore, the utilization of jacquard weaving technology in the manufacture of the safety airbags has meet all the relevant performance criteria well beyond its previous limits. A typical curtain bag, fitted to most modern cars, requires a Jacquard of approx 12000 hooks to weave at speeds in excess of 600 ppm.

Bonas Jacquards are the perfect companion for many technical textiles weaving applications, yarns and widths. Faults are detected within the pick cycle, without any damage to fabric. Bonas electronic Jacquard models also offer the highest lifting capability per selector whilst maintaining a precise drive principal and very low torque figures.

Decoup+ - Ultrasonic cutting and sealing solutions

Decoup+ is a specialist in the designing and manufacturing of ultrasonic cutting and splicing solutions which are applicable at any stage of the textile and nonwoven fabrication and conversion process.

For cutting on looms Decoup+ offers a compact and easy to install device on any type of loom, producing stable and consistent edges, whilst maintaining fabric properties. This is an ideal solution to avoid hot cutting drawbacks for the high quality needed for the demanding market of technical textiles. Furthermore, Decoup+ also offers reliable and accurate devices to cut and seal edges on stenters and inspection machines. The latest development is an ultrasonic forging solution to reinforce fabric edges. Fabric edges are strongly reinforced, thus increasing the product durability.

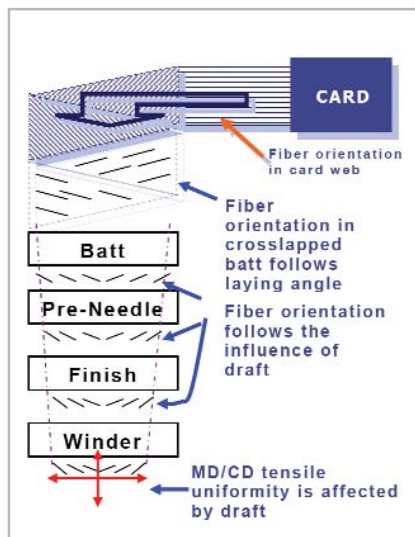
NSC nonwoven speeds up its customers innovations: IsoProfile® IsoProDyn®

NSC nonwoven is a worldwide, major supplier of Excellence® and Axxess cards, crosslappers, drafters, needlelooms, winders and slitters-rewinders.

Over the last decade, innovations in crosslaid technology were concentrating exclusively on improved weight evenness.

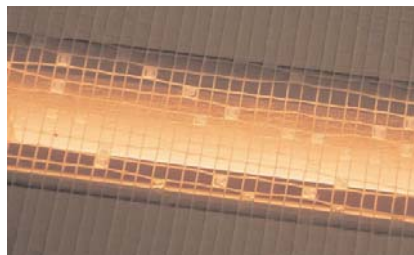
IsoProDyn® not only further improves the capability of the famous Prodyn® system but also controls the characteristics in MD CD across the fabric width. The direct benefits include:

- ❖ Enhanced strength uniformity.
- ❖ Improved weight uniformity.
- ❖ Added product value and performance.



Osif GmbH - Optical sensor techniques for inspection and form recognition

The **Gridinspector** is for the inspection of mesh material like reinforcement fabrics, fly screen, grid materials, etc. the system detects weft and warp defects, holes, fluff, foreign objects, skewed edges, etc.



Faulty meshes, clogged with adhesive.

The **Meshinspector** is a system for the measurement of mesh characteristics of materials like wire screens, expanded metal, punch metal, etc. This is an optical system for the measurement of mesh geometries like wire screens, expanded metal, punched metal, sieves. The device offers automatic determination of standard mesh characteristics according to DIN ISO 3310 as well as automatic documentation of the detected defects, deviation from tolerances and measured mesh characteristics.

The **Screeninspector** is a system for the inspection of framed wire screens with applied printing masks. By including the cad-mask data into the inspection even small deviations between cad-mask data and the real mask can surely be detected. What is more the system detects open and closed screen areas, holes, closed meshes or open mask areas that are too small.

The **Texinspector** is for the inspection of periodic structured material like carbon or glass fibre webs. The system detects all deviations from a homogeneous (periodic) surface. Optical inline inspection system for evenly textured endless materials as well as inspection of structured plastics and metals.

Bulge 3D is a high-speed 3D inline inspection of slightly curved surfaces. The measurement of flatness, detection of bulges, dents and waviness is possible through this device, which also offers inline inspection during the production process.

Monti Antonio: Hotmelt bonding and coating calender

Model 908-evo by Monti Antonio is an hot melt bonding/coating calender using directly polymers (glues) melted through an extruder/fuser. The applica-



tions include interlining, upholstery, technical textiles/clothing, footwear, automotive industry, mattress, carpet coating, sound proofing, medical, military equipment, geotextile and many others. The versatility of the machine allows the end-user to bond with reactive polymers or with thermoplastic polymers or by fusing films/webs.

Model 912 is another model of hot-melt bonding/coating calender, which is directly using polymers (glues) melted through an extruder/fuser, distributing them in full field to the substrates to be bonded or simply coating by means a smooth roller system for full coating.

Nautical showcase from Portugal

Smart textiles for the textile and apparel industry or for new applications in construction, health or nautical industry are some of the proposals "made in Portugal" shown at Techtex 2009. Technical textiles are one of the development priorities for the Portuguese industry and represented in 2008, 6% of the turnover of the Portuguese textile and apparel industry, in a total of 400 million euros.

Eight Portuguese companies – Alta Visibilidade, Artefita, Biodevices, Coltec, Cordex, ERT, Endutex and Gulbena – in an organization by Associação Selectiva Moda, in partnership with Citeve, supported by EU funds (QREN).

Among the smart textile "made in Portugal", the main novelties announced are ribbons with high-tech properties, namely water proof, flame retardant, anti-UV or anti-static, produced by Artefita; high performance lifestyle articles in terms of breathability, thermal comfort, insect repellence and bacteria prevention the result of a combination of several lamination, coating and finishing technologies made by Coltec; and products without PVC and materials for tensioned ceilings for interior, developed by Endutex.

The Portuguese delegation organized by ASM/Cuteve at Techtexsil "Nautical showcase from Portugal", where are highlighted some of the most innovative solutions for nautical practice, such as cables, sails, diving and surf suits, security and rescue systems, etc. The promotion of the country as an excellence centre in the research of sea and nautical sciences in Europe is a priority in national strategy. Associacao Slectiva Moda and Citeve are both placed as partners of this strategy, underlines Fernando Merino, head of Citeve's Future Textiles Department.

Tanatex Chemicals B.V.

Edolan® breathable is the tanatex range of aqueous coatings for various performance textile applications. The specific products obtain a coating with so-called "breathable" characteristics due to its ability to transport moisture vapour.

The **Edolan®C**-range is the new product range of water based polyurethane dispersions with a high amount of solids. The Edolan® C-range is 100% water based and thus emission free, not harmful to the environment and skin friendly.

Edolan®ca is very soft and has an extremely good adhesion towards synthetics, especially polyamide and therefore, exceptionally usable as a basecoat.

Edolan®ct is medium soft with a high flexibility, but with excellent abrasion resistance due to the toughness of the final film. It is ideal to be applied as a top-coat for articles with high light fastness requirements.

Outlast Europe GmbH

The Outlast® technology was originally developed for Nasa to protect astronauts from temperature fluctuations. Outlast temperature-regulating technology features microencapsulated Thermocules™ that absorb excess body heat, store it and then release it when the body is cold.

The applications of Outlast® materials in apparel, shoes, in bedding and other uses are widely spread and increase the comfort of millions of consumers. Furthermore, the industrial applications where energy plays a role are becoming more important.

Moreover, new application processes have been developed with matrix infusion coating (mic), where an advanced formulation of Outlast® MPCMS are finely printed onto various flat fabrics, including cotton or polyester. Improved Outlast® phase-change materials (pcm) which balance temperature changes by absorbing excess heat, storing and releasing it.

Mayer & Cie: Innovative developments to open up new markets for circular knitting producers

Mayer & Cie. presents a new machine design **Technit D3** - which stands for an exciting innovation which is set to open up new fields of application for circular knit fabrics.

This new development knits 3 threads in 3 plies per feeder. The 1st plated thread is 50% visible on the fabric face, while the 2nd plated thread is located inside the fabric and therefore concealed, allowing both threads to be used as a functional thread adding a function to the fabric.

This new technology produces fine rib knit goods and 3D spacer fabrics capable of addressing a varied application spectrum. Fine rib with functional threads can be used, for instance, to provide a shield against electromagnetic waves (EMC) in articles of clothing.

The functional thread can be used for electrical transmission of heat in outdoor clothing or seat covers. Thermal functions permitting the selective dissipation of body moisture, while offering simultaneous thermal insulation are additional application fields for these new-style fabrics.

Due to their substantially higher abrasion resistance values (2 yarns per stitch and 3 per feeder), Technit D3 fabrics are particularly suitable option, wherever durability is called for: In the home textile sector for seats and upholstered furniture,

in the automotive sector for linings and seat covers, or for inner linings and inlay soles in shoe production.

But in the field of medical technology too, the function thread can be used for a whole range of different treatment methods - such as knitting in a silver thread.

The Technit D3 is undoubtedly set to open up new and exciting scope for replacing conventional methods by lower-cost circular knitting technology with all its benefits - such as outstanding elasticity and restoring capability.

The Technit D3 comes with up to 4 needle tracks and is offered as standard with a machine frame for 520 mm fabric rolls and Quick-Change for simple gauge conversion, and in a choice of a rib or a spacer fabric version. The relevant conversion kit is offered as an optional extra, allowing one machine to be used for producing both rib and spacer fabrics. By exchanging cam parts the production of Interlock-based knit goods is equally possible.

The Technit D3 is optionally available with an industrial frame (920 mm fabric bales), a giant frame (1250 mm fabric bales), or with an open-width frame. Patents are pending for all patentable developments associated with the Technit D3. ♦

Smart Fiber presented newly developed Smartcel™ Hygienic fiber

Smartfiber AG for the first time presented its new copper fiber, which caters for clearly enhanced air conditions, without unpleasant odours.

By the integration of copper the natural smartcel™ functional fiber counteracts noxious pathogens like germs, viruses and fungi. Inserted in filters and functional nonwoven smartcel™ hygienic caters for an enhanced, bacteria-reduced air and eliminates unpleasant odours.

The Chief Executive of the Smartfiber AG, Michael Kohne, exclusively presented the newly developed smartcel™ hygienic fiber at Techtexsil. By the integration of copper the natural Smartcel™ functional fiber counteracts noxious germs, viruses and fungi and thereby deeply diminishes unpleasant odours in filters and functional nonwoven.

Further highlights of trade fair appearance of the Smartfiber AG are the smartcel™ clima fiber, which caters for a unique heat regulation and the SeaCell® fiber with algae additives, which is in the SeaCell® active+ version the first antibacterial acting silver ions fiber that also can be bleached.

The smartcel™ hygienic fiber stops germs in filters and nonwoven in an ecological way – thanks to copper ions. ♦

