As we prepare for the opening of the 2014 edition of ITMA ASIA + CITME we can reflect on the efforts being made by European textile-machinery manufacturers to achieve ever greater levels of eco-efficiency in the technology they deliver.

Concern to protect the environment and the health of the citizen are no longer a preoccupation solely of the West. Some of the unfortunate, negative effects of rapid development are also afflicting the newly industrialised countries of Asia and many are now placing environmental sustainability high on their agenda. As a matter of urgent policy, their governments are encouraging investment in technology and processes that are both resource-efficient and non-polluting. China, the host nation of ITMA Asia + CITME, is a prime example, with its increasingly strict policing of pollution laws and determination to upgrade the whole of its textile industry.

In Shanghai we will experience the widest possible showcase of solutions from the best of the world’s textile machinery companies, for whom sustainability and economy are core concepts in product development. Most of the world has now accepted the need to reduce atmospheric emissions of CO2 and to cease the thoughtless chemical pollution of our waterways and oceans. But for the textile manufacturer the incentive to upgrade inefficient processes is not just ethical or humanitarian. Reducing the amount of energy or water used, or cutting waste in materials by enhancing precision, all makes perfect economic sense. That is where Europe’s machinery manufacturers score highly and why they will be busy all week in Shanghai.

Charles Beauduin, President, CEMATEX
www.cematex.com
ITMA Sustainability Bulletin

**Sustainability Briefing**

**ITMA Sponsors Future Materials Awards**

ITMA has signalled its commitment to the world of technical textiles by becoming the Headline Sponsor of the Future Materials Awards, which will take place in November 2014, in Dresden, Germany. ITMA joins Invista’s Cordura brand and speciality chemical supplier Archroma, which are Platinum Sponsors of the event.

A gala dinner and awards ceremony to reward innovation in the technical-textiles industry will be held on Wednesday, November 26, 2014 – the day before the start of the 8th Aachen-Dresden International Textile Conference. World Textile Information Network, publisher of international technical-textiles magazine Future Materials, launched the awards to recognise success in textile innovation and celebrate the essential work of the many businesses which support the industry.

“The technical-textile and nonwovens/materials sector is on a growth trajectory, led mainly by end-user industries’ demands for more applications and innovation,” said Charles Beauduin, president of CEMATEX, the owner of the ITMA exhibition. “We are delighted to be involved with the Future Materials Awards, which will honour the businesses and individuals that are shaping this sector.”

The ITMA Future Materials Awards are open to all the end-use sectors for technical textiles as well as materials experts, product developers and designers. They will celebrate winners in 21 categories, including the best innovations in sportswear, protective textiles, industrial textiles and medical textiles. There will also be awards for groundbreaking partnership development, best start-up company and a lifetime achievement award.

A panel of renowned industry experts will decide the winners, including: Linda Keppinger, global materials director at Nike; Dr Jean-Pierre Haug, secretary general of Oeko-Tex; Dr Peter Dinsdale, world president of the Textile Institute; Michael Sieber, research textile engineer at the US Army Natick Soldier Systems Center; Siegfried Winkelbeiner, CEO of Schoeller Textil; Thomas White, textile innovation director at Under Armour; and Lutz Walter, head of R&D and innovation of Euratex.

Entries for the Awards are now open – visit: [www.futurematerialsawards.com](http://www.futurematerialsawards.com). The deadline for entries is Tuesday, July 15, 2014. Finalists will be announced in mid-September. Winners will be announced at the awards dinner in Dresden on Wednesday, November 26, 2014.

**Denim Leaders Focus on Bangladesh**

Five Italian denim-industry leaders visited Bangladesh to preach the technical and environmental excellence of their products under the title: Italian DNA – Creativity and Innovation, the Italian way to Sustainability.

Representing various areas of the value chain, the five were: denim fabric producers and processors Candiani, ITV Denim and Okinawa; finishing-machinery specialist Tonello; and finishing-chemicals company Nearchemica.

Running in Dhaka from the March 24-28, the project was developed in cooperation with the innovative garment makers in Asia: Pacific Jeans and M&J Group. It began with a workshop for international buyers at the Westin Hotel in Dhaka and continued a series of business-to-business meetings throughout the following days.

After the workshop the Italian DNA team hosted a dinner, during which it presented a denim collection – the result of a collaboration between all five companies. The collection has been designed to illustrate the partners’ latest technologies and materials in terms of their sustainability and focuses on the trends of the upcoming seasons.

The organisers of the event say the importance of Bangladesh as a significant production country for the international fashion industry is growing every day. The Italian companies that decided to promote themselves and their core values have been working with the most important and innovative garment makers of the country for many years.
Invista Launches Bio-Derived Lycra

Invista has launched a bio-derived spandex for use in a wide variety of apparel fabrics and garments. Approximately 70% by weight of the new Lycra bio-derived spandex fibre comes from a renewable source made from dextrose derived from corn. The use of a renewable feedstock in manufacture of the fibre results in a lower CO2 emissions footprint than for spandex produced using traditional raw materials, according to Invista.

With this new Lycra brand offering, Invista said it is providing retailers and manufacturers of stretch fabrics a spandex fibre option that can affect the overall lifecycle analysis of fabric and garment.

Invista does not anticipate a need to re-engineer fabrics and finishing processes, or garment patterns as the fibre is made to a high standard, it said.

Dr Robert Kirkwood, executive vice president of Invista Apparel Marketing and Technology, said: “The bio-derived Lycra fibre offering is another example that confirms Invista’s commitment to the apparel industry.”

Arnaud Tandonnet, Invista Apparel global sustainability director, said: “We are very aware that sustainability topics are becoming increasingly important in the textile and apparel value chain, with growing awareness and building education on the subject at the consumer, brand/retail and mill level.

“In our research facilities we have successfully produced the fibre and evaluated it in fabric applications. The production of commercial quantities is planned for the autumn/winter 2015 and spring/summer 2016 collections.

We look forward to working with our customers throughout the value chain as we expand this new development.”

Nonwoven Oeko-Tex Certification Triples Since 2010

The number of certificates issued in accordance with the Oeko-Tex Standard 100 has tripled since 2010, to 744.

In total around 133,000 Oeko-Tex certificates have been issued to 9,500 companies from more than 90 countries for textiles at all processing levels. 13,078 of these are currently valid certificates issued in accordance with the Oeko-Tex Standard 100.

In the nonwovens segment, 325 of these certificates were issued in product class I (textiles for babies and infants) and 377 for product class II (textiles with direct skin contact).

There are also 10 certificates in product class III (textiles without direct skin contact) and 22 certificates in product class IV (furnishing materials). The certification focuses on appropriate interlinings for clothing textiles and materials for mattresses. There are also very delicate nonwovens for cosmetic and cleaning cloths, as well as fibre nonwovens with mechanical, thermal and chemical reinforcement which are used for filler materials and upholstery in the automotive industry, among others.

New EU Rules May Lead to Lower Energy Bills

Manufacturers of nonwovens, dyes and pigments, as well as companies active in the preparation and spinning of textile fibres, may see their electricity bills drop through new national-government subsidy rules announced by the European Commission.

Brussels will allow EU countries to give public money to energy-intensive industries to cope with the high electricity bills resulting from the support for renewable energy sources, and these textile sectors were mentioned in a list of 68 industries benefitting from the new, relaxed EU subsidy rules. It will, however, be up to the national governments to decide whether they would want to grant those subsidies to their industries.

If they do, companies would still need to pay at least 15% from the additional costs arising from electricity generated by renewable energy, but they may see that limit drop further if they can prove that they are highly electro-intensive.

The new rules apply retroactively from July 1, 2011, EU Competition Commissioner Joaquin Almunia said yesterday in Brussels. “This is about the right distribution of efforts to finance clean energy,” he added.
ACIMIT Updates Green Guide

Italian textile-machinery association ACIMIT has published the second edition of its ACIMIT Green Guide, providing a summary of the actions taken by Italian textile machinery firms in the field of sustainability. For the 39 manufacturers adhering to the ‘Sustainable Technologies’ project, launched by ACIMIT in 2010, the Green Guide lists the technology innovations that allow machine users to cut production costs while adopting environmentally friendly measures.

The Green Guide will be distributed at major trade fairs and can be viewed on ACIMIT’s website at www.acimit.it. A print version will also appear in Chinese, distributed at the upcoming ITMA ASIA+CITME 2014.

GOTS Sets Tighter Standards

The Global Organic Textile Standard (GOTS) International Working Group has announced Version 4.0 of its worldwide standard, which demands that textiles are made with 95% certified organic natural fibres (‘organic’) or at least 70% (‘made with organic’). GOTS’ core provisions, such as the 70% minimum content of certified organic fibres, the general bans on the use of substances from disputed techniques such as genetic engineering and nanotechnology, as well as carcinogenic substances, have been maintained. There are modified rules on permissible conventional ‘additional fibre materials’, which may now consist of up to 30% regenerated or synthetic fibres, provided these are environmentally certified. For regenerated fibres this means that the raw material must be from certified organic production, sustainable forestry management, or be certified recycled. For synthetic fibres, the raw material must be recycled and also certified according to recognised standards. In addition, the use of virgin polyester or angora has been banned. “Both bans are reasonable, said GOTS technical director Marcus Bruegel. “Recycled polyester yarn is already widely available. In the case of angora the ban is a consequence of the mostly unacceptable animal husbandry conditions of angora rabbits.”

Processing is also regulated more strictly. The already extensive list of banned substances and strict residue parameters has been further extended and the working group emphasises that all substances criticised by Greenpeace in its ‘Detox’ campaign remain banned in GOTS.

Euratex Initiates Energy Efficiency Campaign

Euratex is initiating a new information campaign to help more than 300 companies, notably small to medium enterprises (SMEs), to become more energy efficient. The Made-to-Measure campaign will run until 2016. The organisation points to the energy bill as a crucial element in the competitiveness of the textile sector and indicates that as the full textile and clothing industry accounts for almost 1 out of 10 of all EU manufacturing companies, the economic and social impact of a more energy-efficient industry is huge.

The campaign will promote synergies between European projects and organisations, the use of analytical tools, best practices, quality information delivered to managers and the training of companies’ staff. These actions aim to raise awareness of companies’ energy saving potential, opportunities, upcoming legal obligations and financial incentives.

The campaign has been initiated by Euratex (the European association for the textiles and clothing industry), in collaboration with ENEA (the Organisation for New Technologies, Energy and Environment) and other organisations across Europe. The initial events will be meeting with SMEs in Italy, Bulgaria, Romania, Lithuania and Portugal.
Sweden Threatens Lawsuit over Endocrine Disruptors

The Swedish government is to bring forward national legislation outlawing certain endocrine-disrupting chemicals (EDC) in 2014, including some used in textiles.

And it has threatened legal action against the European Commission, which has delayed the introduction of criteria to ban specific EDCs found in anti-bacterial agents used in the manufacture of shoes and clothing. Brussels says it needs an impact assessment first.

Sweden’s environment ministry tabled the legislation on March 11 after officials said the ministry was prepared to take the Commission to the European Court of Justice if it continues to ‘stall’ on introducing the criteria. Monica Törnlund, the ministry’s deputy director said: “Our position is that the Commission is moving too slowly on this important issue despite written guarantees that it gave. We have given the Commission two months to act or face court proceedings.”

Preparing for its planned national law, the ministry is assembling an EDC blacklist that includes flame retardants, diethylhexyl phthalates and azo dyes.

Spain is also committed to the manufacture of eco-machines…

By Jordi Galtés, President, amec amtex

As President of amec amtex, the Spanish Association of Textile Machinery Manufacturers, I would firstly like to thank all those of you who have made this type of initiative possible – in this case, CEMATEX, by periodically producing this newsletter. It enables us to share information and experiences on such an important matter as sustainability and environment protection.

We, in Spain, are also very much aware of the growing commitment of society to the environment, and more specifically in the textile industry. This ranges from consumers, who have high expectations regarding textile goods purchased: that they like them, that they are harmless to health, that they are manufactured in a socially responsible environment and that the product is manufactured in an eco-friendly and sustainable manner. We then move on to textile manufacturers of thread, fibres, fabrics and finished goods, and Spanish manufacturers of textile and garment-making machines, along with the administration, which, through strict regulations, obliges compliance with the law.

This global environmental commitment undoubtedly gives an important added value in the market. Limitation in the reduction of costs, the use of resources and energy saving are becoming the key drivers of the sector, as consumers are demanding manufacturers to be more eco-friendly.

In recent years, Spanish machinery manufacturers have made great efforts to develop sustainable technologies and processes for the textile and fashion industry. Examples of this are:

- laser and ozone technologies, with eco software, for treating denim garments, enabling significant savings in water and energy and reducing the use of chemical products
- new dyeing machinery, incorporating efficient gaskets, bringing major savings in garment washing and cutting both energy and chemical consumption
- heat recovery systems that enable 50-60% of exhaust gas to be cleaned and recycled into the system, thereby saving 30% of energy and reducing pollution by up to 40%
- recycling lines for textile waste

In all these cases, manufacturers have been able to automate the production process and, at the same time, reduce production costs.

This is our commitment, to manufacture high-performance machines, which reduce the consumption of water, energy and chemical products, and which give more added value and reduce the costs of the final garment.

See you at ITMA ASIA + CITME 2014!!!
Sustainable Solutions at ITMA ASIA + CITME

ITMA ASIA + CITME is the region’s leading textile-technology showcase, where textile manufacturers from the whole of Asia can see the cutting-edge environmental solutions offered by the best of Europe’s machinery producers. Opening on Monday, June 16, and running for 5 days at the Shanghai New International Expo Centre, this landmark show has something for every textile interest, from fibre to finished fabric. Many of the exhibitors will be keen to introduce visitors to technologies that are resource-efficient in terms of materials, water and energy, and thereby contribute to the twin aims of reducing environmental impacts and delivering economic efficiency. The following is a selection of what’s in store in Shanghai. For more information about the show visit www.itmaasia.com.

Finishing Technology Brings Energy Savings

Benninger Hall E6 A22

Benninger offers big cuts in CO2 emissions as a result of the reduced water required by its Trikoflex drum washer and by the Benninger-Küsters DyePad Basic, one of the key components of its customised continuous-processing solutions. It says the process makes it possible to reduce CO2 emissions by nearly two thirds in comparison to exhaust dyeing. Trikoflex is said to offer a high degree of washing efficiency in spite of low fresh-water consumption, and the drum washer with mechanically-assisted front and back washing reduces water consumption by more than 40% compared with conventional washers.

Optimised Air and Waste

AESA Air Engineering
Hall W4 B13

AESA Air Engineering is a global leader in the field of industrial air conditioning and waste-removal systems, focusing on spinning, weaving and man-made fibre facilities. Its expertise includes the optimisation of areas such as waste management and energy. Recently AESA engaged a close partnership with the first major Chinese investment in the textile industry in the USA, where Keer America Group is building an open-end factory and implementing AESA best solutions.

Energy required to heat washing water is also reduced. The DyePad Basic has been designed to suit the needs of Asian markets and focuses on easy handling. Two swimming rollers ensure a maximum deflection potential and allow dyeing of knit and woven fabrics without any restrictions, said Benninger.
Real Time Energy Monitoring

BMSvision Hall E1 F12

BMSvision is presenting its Energy-Master system for monitoring energy consumption in the plant and reporting a company’s CO2 footprint. It says integration of energy parameters with its other Manufacturing Execution Systems (MES) applications, such as monitoring of spinning, weaving and finishing operations, provides insight into the relationship between energy consumption and production, allowing quick identification of energy-saving potential.

A new module – ‘Management dashboard’ – allows combined presentation of data available in different software modules into a single web-based report. With this tool, the user can create their own dashboard showing important key performance indicators (KPIs) at a glance. Information concerning efficiencies, quality and energy consumption is displayed in real time on a single screen with zooming functions digging into any further detail if required.

Advanced Yarn Feeding System

BTSR Hall E5 A22

Low energy consumption is a feature of BTSR’s multi-patented UNIFEEDER for the sock, hosiery and knitting sectors, which incorporates a new ‘Yarn Anti-twist System’ concept, said to guarantee total combined yarn feeding and storage control. The Yarn Anti-twist System, Anti-Gravitational Floating Ring and Output Constant Tension Self-Adaptive Technology represent radical product innovations that are claimed to bring benefits in terms of production quality and repeat-ability, with unlimited styles programming.

UNIFEEDER technology includes yarn-breakage and knots-detection control as well as yarn-tears compensation, providing real-time machine stop signalling and preventing needle breakages, yarn waste and second rate production, according to the company. It is universally retrofittable on all types of socks, pantyhose, seamless and circular knitting machine brands by working as a ‘stand alone’ device with direct connection to the machine.
Needle specialist Groz-Beckert has developed an ‘app’ for circular knitters who wish to calculate the potential of their own operations for productivity and resource savings. ‘Fine tune your productivity’ shows examples of how big the positive effects might be of minimal changes in the five key parameters in the knitting process – machine speed, efficiency, needle life-time and breakage rate, and energy consumption.

Among an extensive range of products at ITMA ASIA + CITME, Groz-Beckert will show the EcoStar felting needle, for what it says is the best possible surface quality of flat needled products. EcoStar is said to offer users longer service life, reduced energy consumption and a fibre transport requiring a lower penetration force for the same efficiency compared with standard needles.

A cut in water consumption of 40% compared with conventional equipment is a feature of Monforts’ new Monfortex 8000 shrinking range. The completely redesigned machine is said to be built on the experience of making Sanfor machines for the past few decades and to incorporate identified customer requirements in terms of performance, technology and service. The system includes improved residual shrinkage, with lower rubber-blanket-contact pressure and longer blanket life. Grinding of the rubber blanket is fully automatic and blanket change can be accomplished in a single shift. Monforts is also showing its latest Montex 6500 stenter frame range, with Qualitex 750 software, which allows long-distance technical support. The TwinAir system and heat-recovery system are equipped to further reduce energy consumption and deliver superior production capacity, says Monforts. Optional nozzle types give wide adaptability and conform to the concept of energy conservation and consumption reduction.

Tonello’s latest introduction is the garment-finishing technology, Kit Batik 2.0, which is claimed to save 90% of water and 80% of chemical use compared with other similar systems. The new equipment achieves a range of special effects, including staining, tie-dyeing and fading with strong contrasts on the seams amongst others, says Tonello. The Kit Batik is compatible with all Tonello washing and dyeing machines, is fully automatic and requires no special preparations. The technology can be used to apply eco-softeners, resins and anti-wrinkle products to fabrics, denims and ready-to-dye garments.

A further reduction in energy consumption has been designed into the latest generation of THEN AIRFLOW piece-dyeing technology, the SYNERGY 8. According to Then, every tube now has an individual frequency-controlled blower with less installed power. All the other advantages of the THEN AIRFLOW SYNERGY series remain unchanged, which leads to shorter cycling times and substantial savings in water as well as high reproducibility and smooth fabric guiding. The model extends up to 12 tubes with individual control, suitable for various kinds of fabrics and with better flexibility, quality and ergonomics. In 2013, it won the Hong Kong Awards for Industries: Machinery and Machine Tools Design Award.
Drawing Machine Savings

NSC fibre to yarn Hall W4 C06

Energy savings will be a key benefit on show when NSC fibre to yarn division unveils its new GN8 intersecting drawing machine, as well as the latest evolution of its ERA combing machine for wool, flax and delicate fibres such as cashmere. There will also be improvements to the GC30 family of drawing machines.

NSC fibre to yarn division, whose brands include N.Schlumberger and Seydel, has opened a new service centre with a genuine spare-parts stock, in Zhangjiagang, China.

Energy Saving Godets

Rotech Hall W2 E21

Highly efficient motors are a key feature of the heated godets, which are Rotech’s flagship product and used on draw twisters running at surface speeds of 2,500-6,000 metres/minute. The Energy Saving Motor (ESM) is offered in three main sizes, available in different performance levels, and there are also different roll diameters and lengths. After defining the heated godet size, the type of heating can be decided according to the specific material, yarn count, number of threads and wraps, process speed and temperatures, draw forces and yarn properties.

In most cases the godets are heated by induction and Rotech engineers work out whether one zone or multi-zone heating is appropriate, according to the application. Rotech is focusing on increasing heating efficiency with two technologies. One option uses high-frequency application, which is efficient but costly; the other uses conventional 50/60Hz technology, which can produce higher energy losses but which Rotech says it has improved upon.

The company is also implementing Air Bearing Separator Rolls (ABSR) technology. This not only appreciable reduces air consumption, but Rotech’s latest version also cuts energy consumption by a third compared with conventional ABSRs, with the bonus of lower wear and tear.

Productivity with Efficiency

Santoni Hall E5 A01

Helping customers reduced their energy consumption will be among the preoccupations of Santoni, as it shows four different ranges of circular knitting machines under the slogan ‘Ever in Knit’.

SM8-FAST is a new patented model, designed for high productivity of seamless garments such as underwear, outerwear, sportswear, beachwear and sanitary wear. It allows 8 pattern feeds, characterised by high definition and colour sharpness and is claimed to be the fastest seamless machine on the market.

Santoni will also show the sock machine Star D, in which the main machine motor is of the hollow-shaft type, integrated with the cylinder housing. According to Santoni this solution eliminates the need for transmission between motor and cylinder thereby reduces friction and energy consumption.
Low Energy Suction Tubes

Rieter Hall W4 D1

With the ECOrized suction tube installed on a range of Rieter’s ring spinning machines, suction power can be reduced by up to 50% - eliminating one of the major sources of energy consumption. One of these is the G32 ring spinning machine, which will be on display and produces ring, fancy ring, twin and compact ring-spun yarn – quality controlled by the ISM individual spindle monitoring system.

Over all, Rieter will be demonstrating its competence across the gamut of spinning processes and presenting all four end spinning systems live at the show.

Energy Saving Chamber

Santex Hall E7 E14

Following on from the successful Santex Enairsave heat-recovery system, Santex has further developed its energy-saving expertise with the new ESC (energy saving chamber).

From the outside the Santex ESC chamber looks like a standard Santashrink heating chamber, but internally the air is handled in a completely new way, said the company. At ITMA Asia + CITME a technical presentation will be shown inside the chamber.

The Santex ESC can be added in front of an existing Santashrink Standard dryer. Whereas Enairsave is focused solely on saving energy, the ESC is also designed to increase productivity, says Santex. Standard energy saving devices use hot exhaust air to preheat incoming fresh air through external heat exchangers. ESC, however, uses hot exhaust air to directly preheat the incoming wet fabric. Efficient use of energy is ensured through cycling of air in the ESC chamber and can be identified through reduced exhaust-air temperatures at the exit. With an ESC chamber at the inlet of a dryer, and depending on exhaust air temperatures, an increase in productivity of between 15% to 20%, and a similar degree of energy saving, can be achieved.

On request, the retrofit ESC chamber can be supplied with an automatic lint belt cleaning system to work independently of an existing dryer with manual filters, says Santex.
Three Pillars of Efficiency

Saurer Group Hall W2 F01

Saurer Group, which encompasses a variety of leading brands in spinning and embroidery machinery, is introducing the new E3 label, standing for Energy, Economics and Ergonomics. One example of the principle is the Volkmann CompactTwister, a high-performance twisting machine for staple-fibre yarns. Saurer says it is possible to achieve savings in energy of up to 40% thanks to the eco drive concept and the eco spindle technology with adjusted spindle combinations. Productivity of the CompactTwister is 30% higher thanks to faster delivery speeds of up to 120 m/min. Operating costs are reduced on account of lower expenses for energy, floor space and maintenance. Similarly, the CableCorder CC4 cabling twister provides energy savings of up to 50% in the tyre cord cabling process. Saurer Group comprises: the spinning brands Saurer Schlafhorst and Saurer Zinser; the twisting brands Saurer Volkmann and Saurer Allma; Saurer Embroidery; and the Saurer Components division consisting of the brands Accotex, Daytex, Fibrevision, Heberlein, Temco and Texparts.

Solutions in Recycling

Laroche Hall W3 A08

Laroche has more than a century of experience in designing, manufacturing and commissioning textile-waste recycling lines, with a commitment to the scientific development of the textile-recycling technology. It believes is sustainable and tailor-made applications lead to better and cheaper products, as well as taking care of serious environmental problems and the shortage of raw materials. The company also delivers complete turnkey airlay nonwoven lines to process a wide variety of raw materials. At its facility in Cours-La Ville, it operates a 2000sqm demonstration room, equipped with a tearing line, a dosing, opening and blending line, and three airlay nonwoven lines. Customers are invited to use these facilities in their product development.
Follow the Green Thread

Weko Hall E6 D11

The ‘green thread’ has been created by Weko to guide visitors through a range of innovative products, including a centrally placed spray finishing system that is said to be sustainable, cost-efficient and gentle.

In the high-precision process developed by Weitmann & Konrad (abbreviated to Weko) liquor is sprayed on to the textile web by so-called rotor disks in a contactless manner. The rotors rotate at high speed and generate a steady stream of fine micro-droplets, in the quantity required for finishing, coating or impregnating the textile.

The precisely metered application quantity eliminates the subsequent squeezing of excess liquor and also reduced the need for drying, while increasing production speed. Another benefit is that there is no longer any mechanical stress on the fabrics by squeezing between rollers, so high-quality textiles are not strained and costly post-production is rendered unnecessary.

Filament Yarn Twisting

Verdol Hall W2 B22

Verdol’s wide-ranging offer for the processing of filament yarns includes a special focus on energy saving in the cabling and twisting of synthetic filaments and spun yarns. The company’s wide range of machines for mass production is now available with ecoTex, the range of textile components known for delivering a significant reduction in energy consumption. Verdol also offers a laboratory machine for challenging applications.

Eco-Efficient Processing

Superba Hall W3 G01

Eco-efficiency is a feature of Superba’s machinery for continuous heat-setting with saturated steam of BCF carpet yarns, and spun and wool blends. Its latest innovations include the TVP3 heat-setting line, the new MF400 friezing machine and the fully automatic B401 winder. Superba also manufactures the LV3 steaming and shrinking lines for the heat-setting of acrylic yarns, as well as the 8-colour MCD/LA space-dyewing machines.
Ecology in Yarn Dyeing

Thies Hall E6 A2

The new iCone yarn-dyeing machine from Thies consolidates the high ecological standards and technological intelligence exhibited in the successful fabric dyeing machines iMaster H2O and soft-TRD SIII, with large savings in water and electricity consumption, according to the company. Construction of the iCone is based upon Thies’s eco-bloc series, but incorporates innovative new technologies. Its newly designed ‘pump block’ system allows dyeing with an ultra short liquor ratio. Depending on carry-over of the material, liquor ratios of 1:3.6 in partially flooded vessels are performable in practice. Improved rinsing functions are said to allow reduction of after-treatment time by almost one hour. Moreover, the new ‘suction pipe’ design enables adjustment of flow reversal – from inside to outside and from outside to inside.

Thies says the iCone has been specifically developed to meet the requirements of stringent international and local environmental protection regulations with simultaneous consideration of its economic efficiency.

Nano solution offers zero discharge

Jeanologia Hall E4 H1

Aiming for zero discharge, Jeanologia’s e-Flow technology is designed to save 95% water and 79% energy. The e-Flow takes air from the atmosphere and turns it into nano-bubbles, which form a skin on the surface of the fabric or garment. The nano-bubble skin provides a homogenous mix of water, product and air, which is then used to apply easy care, wrinkle free and water repellent finishes, as well as softening agents and resins for 3D effects. The technology is said to cut product consumption by 50%. The e-Flow can be installed in an existing dryer or washing machine. The unit has a total installed power of 5.5Kw, weighs 400kg and has a compact 140x110x160cm design.
Sparking a Revolution in Sustainable Materials

The consortium behind the LAUNCH Nordic initiative are busy reviewing the candidates for a programme of intensive incubator support, designed to stimulate the development and commercialisation of new sustainable materials. LAUNCH Nordic was unveiled in April, in Copenhagen, Denmark, and extends the reach of the LAUNCH collaboration announced last year by Nike, NASA, the US Agency for International Development (USAID) and The US Department of State.

These founder members have now joined forces with IKEA Group, Novozymes, the fabric manufacturer Kvadrat and a variety of Nordic government institutions in order to foster new ideas that will lead to breakthrough innovations in materials and manufacturing systems.

The process began with a challenge statement and an invitation for people throughout the region to submit their ideas and solutions by June 1. Ten innovators will in due course be identified and provided with mentoring, networking opportunities and access to key investors to enable them to bring their innovations to scale.

Håkan Nordkvist, head of sustainability innovation at IKEA Group, said: “LAUNCH Nordic is a great opportunity for IKEA to develop transformational innovations that can help solve global sustainability challenges. Collaboration can bring great results; for example we work closely with Nike to pioneer new techniques for textile dyeing that dramatically reduce the use of water, energy and chemicals.”

Claus Stig Pedersen, head of sustainability development at Novozymes, said: “We already have many sustainable technologies but there’s so much more that can be done, and to realise that we need to connect to other partners and find out what can enable greater use of enzymes across the industry. Who are the partners we need to talk with to get our solutions into the market with speed and at scale?” He said the project was starting with a ‘blank sheet’ – “But hopefully we can come up with new business models.”

LAUNCH Nordic will seek to identify innovations that have the potential to scale-up in two years, as well as ‘game-changing’ early-stage technologies and prototypes. The promoters say innovations can be business models, financial instruments, technologies and programmes that accelerate research, education and capacity building.

“The Nordic region is a pioneer when it comes to sustainability,” said Diane Powell, chair of LAUNCH and head of partnerships at NASA. “I look forward to collaborating closely with Nordic companies and institutions on open innovation and scaling innovators in sustainable materials.”

In addition to the companies, the initiative involves the Danish Ministry of the Environment/EPA; the Danish Ministry of Business and Growth/Danish Business Authority; the Danish Foreign Ministry/Global Green Growth Forum – 3GF; the Technical University of Denmark; the City of Copenhagen; and the Capital Region of Denmark.

The summit was attended by Denmark’s Minister of Foreign Affairs, Martin Lidegaard.

Among the projects identified in the original LAUNCH initiative are: the Benign by Design programme at the University of California, Santa Barbara, which uses a data-drive process to show companies exactly how textile wear leads to fibre pollution and how these emissions can be controlled; Qmilk, which has developed a casein-based fibre as a potential replacement for cotton; and artificial honey-bee silk, developed by Australia’s Commonwealth Scientific and Industrial Research Organisation (CSIRO).