With less than 6 months to go until ITMA 2015, and early bird registration open, excitement is mounting about the sustainability themed event of the year. The need to be more sustainable is a topic that affects the whole of the textile industry and with all businesses striving to be more environmentally friendly, knowledge sharing is, to an extent, triumphing over competitiveness in the market. Thankfully, ITMA 2015 will provide the most appropriate arena for discussions to take place on how we can make significant progress.

No area is under more scrutiny than dyeing and finishing, with pollutants, water, and energy usage critical areas of concern. As a result, ITMA – under the theme ‘Master the Art of Sustainable Innovation’ – is set to host a rousing forum for textile colorant and chemical leaders, with an agenda focused on sustainability in dyeing and finishing processes. Whilst the forum will look at the challenges being faced by this huge area of the textiles industry, it will also discuss solutions to these challenges; those offered by innovation in technology throughout the supply chain.

The next instalment of the World Textile Summit will focus on the business side of sustainability, seeking to answer sustainability questions that matter to the industry’s strategic decision-makers. It’s important for businesses to feel reassured that capital investment in resource-efficient technologies will see a return; that they feel confident about how to monitor a sustainable supply chain; and that market opportunities will arise from a strategy based on clean production and sustainable materials.

Knowledge Sharing for a Sustainable Industry

Charles Beauduin,
President, CEMATEX
www.cematex.com
Euratex Promotes Energy Efficiency Link-Up

The Euratex-led Energy Made-to-Measure campaign – an initiative for energy efficiency in the European textile and clothing industry – is to intensify due to new collaboration with both the VDMA’s Blue Competence initiative and the Sustainable Technologies project of ACIMIT. Two separate Memorandums of Understanding have just been signed for these actions to join efforts with the campaign for the benefit of European companies. Since 2014, Euratex, the European Apparel and Textile Confederation, in collaboration with dozens of organisations across Europe, has run the Energy Made-to-Measure (EM2M) campaign. This provides companies, particularly small and medium sized enterprises (SMEs), with tools, best practices and training to assess options and take informed decisions about energy efficiency measures, according to Euratex.

The US Environmental Protection Agency (EPA) is, for the first time, to use its Toxic Substances Control Act (TSCA) authority to collect health-and-safety information on nanoscale chemicals already in use. The EPA is proposing one-time reporting and recordkeeping requirements on nanoscale chemical substances. “Nanotechnology holds great promise for improving products, from TVs and vehicles to batteries and solar panels,” said Jim Jones, EPA’s assistant administrator for chemical safety and pollution prevention. “We want to continue to facilitate the trend toward this important technology. Today’s action will ensure that EPA also has information on nano-sized versions of chemicals that are already in the marketplace.” EPA currently reviews new chemical substances manufactured or processed as nanomaterials prior to introduction into the marketplace. Companies will notify EPA of: certain information, including specific chemical identity; production volume; methods of manufacture, processing, use, exposure, and release information; and available health and safety data. Nanoscale materials have special properties related to their small size such as greater strength and lighter weight, however, they may take on different properties than their conventionally-sized counterparts. The proposal is not intended to conclude that nanoscale materials will cause harm to human health or the environment; rather, the EPA said it would use the information gathered to determine if any further action under the Toxic Substances Control Act (TSCA), including assessing whether additional information collection is needed. The proposed reporting requirements are being issued under the authority of section 8(a) under TSCA. The agency is requesting public comment on the proposed reporting and recordkeeping requirements 90 days from publication in the Federal Register. EPA also anticipates holding a public meeting during the comment period.

ACIMIT created the Sustainable Technologies project with the aim of developing and promoting new production models and efficient processes from an energy standpoint, with a reduced environmental impact. Based on such clear mutual interest in sustainability and in the competitiveness of textile manufacturing, Euratex said it signed agreements with the two leading associations to join forces and benefit from each other’s achievements in applicable areas, for instance, technical know-how and communication. Common activities were discussed recently in Budapest at the SET project Advisory Board, of which both VDMA and ACIMIT are members. Early results and upcoming steps will be presented during ITMA Milan, in November.

ECHA Demands Information on ‘In Situ’ Biocides

Textile-finishing companies with products manufactured or sold in the EU have been told to re-examine them in respect of their biocidal impact, in case combinations of chemicals within a preparation create a new biocide during and after use. The European Chemicals Agency (ECHA) has released new guidance on so-called ‘in situ generated active substances’, saying companies that have yet to declare such chemicals for assessment under the EU’s biocidal products regulation can do so by September 1, 2016. This is an additional year over the existing September 1, 2015, deadline for logging other biocides. An ECHA note explained: “While many in situ generated active substances are included in the Review Programme, the submission of data on the precursors has not been consistent…and consequently precursors have not been consistently evaluated.” Details can be viewed here. The reform comes as ECHA has warned that some companies have experienced difficulties in managing their biocidal product authorisations “since their assets have erroneously expired and ‘disappeared’ from the [registry for biocidal products] R4BP 3 system…” The EU agency has asked competent authorities that grant authorisations for biocidal products “to urgently send information to the agency on the expired assets for authorisation that are still valid.” Also, EU chemical regulatory authorities have been contacting biocidal product manufacturers making so-called ‘orphan authorisations’, where the unique identifier of a future authorisation holder is missing from the EU’s registry. This is necessary for the biocidal product to be part of ECHA-co-ordinated controls, which must be followed by September 1. An ECHA note said the work would be completed in June. Meanwhile, nonwovens association EDANA has published a Guide to the European Biocidal Products Regulation, which has been in place since 2012. The association said it, and other stakeholders, had engaged with the European Commission in discussions about ‘treated articles’, and its BPR Guide highlights the details and outcomes of these discussions.
ITMA Open for Earlybird Registration

ITMA 2015 is now open for visitor registration. An earlybird rate of €80 for the full eight days, or €40 for a single day, is available to anyone registering online at www.itma.com before October 15. This compares with a daily rate ‘at the door’ of €80.

ITMA 2015, the latest edition of the world’s largest and most important textile and garment technology showcase, will take place at the Fiera Milano Rho, in Milan, Italy, from November 12-19, and is expected to attract more than 100,000 visitors. To date, 1,500 exhibitors have lined up to participate.

Bangladesh to Create Textile Oversight Body

The government of Bangladesh is reported to be planning a new authority to oversee the country’s textile mills, with a mandatory requirement for the registration of mills. According to local press reports, the authority would oversee compliance with safety and environmental regulations. Mills which are subcontracted by other mills to produce textiles and garments would also be covered by the legislation.

• See also: Insight

VECAP Celebrates Ten Years of Emissions Reduction

The Voluntary Emissions Control Action programme (VECAP), a product-stewardship programme that aims to reduce potential emissions of brominated flame retardants (BFRs), is ten years old, and in its latest VECAP European Progress Report, the European Flame Retardants Association (EFRA) again shows reductions in emissions to land, water and the air. Notwithstanding the fact that fewer BFRs are being used, the survey results show a continuing improvement in environmental performance, with lower releases per ton of chemical applied. Substances covered are TBBPA, Deca-BDE, HBCD and, since 2014, EBP.

Eric Sitters, European VECAP manager ICL-IP Europe, recently appointed VECAP Europe leader, said: “It is with great honour that I lead this programme. VECAP makes the industry proud, clearly demonstrating that engagement, commitment and co-operation across all levels of the value chain make for a success story.”

VECAP was established 10 years ago by three of the main producers of flame retardants – all members of the Bromine Science and Environmental Forum (BSEF) – together with the UK Textile Finishers association and run by the European Flame Retardants Association (EFRA). It now operates in Europe, North America and Canada, as well as being promoted in Mexico, China, Japan, South Korea and Taiwan.
DyStar Phases Out Colour Index

DyStar Group says the absence of environmental information is behind its recently announced decision to phase out its usage of the Colour Index – a reference work published jointly by the Society of Dyers & Colourists (SDC) and the American Association of Textile Chemists & Colorists (AATCC) which lists manufactured colorants, both pigments and dyes. It is commonly used by manufacturers and the textile industry to identify colorants. DyStar said the Index does not guarantee compliance with international regulations or place restrictions on potential contaminant substances, which can be a problem for seller and buyer. It argued that the manufacturers of pigments and dyes that commit to be compliant with legal, voluntary and retailer RSL (Restricted Substance List) requirements had no way of differentiating themselves from the other suppliers. On the other hand, textile manufacturers, brands and retailers might not be aware what they were buying could have severe consequences for the brand.

In a joint statement the SDC and AATCC said work was in hand to revise the format of the Colour Index to include environmental compliance data.

Fair Trade Standard for Textile Manufacturing

Most people in the textile industry are familiar with concept of ‘fair trade’ in the sourcing of commodities, as promoted by Fairtrade International, which introduced its certified cotton standard in 2005. And now the organisation has revealed plans to introduce a parallel set of rules for practices in textile manufacturing. It has published a draft standard (www.fairtrade.net/standards-work-in-progress.html) for the textile supply chain and recently concluded a consultation exercise in which all interested parties were invited to comment. Matters covered by the proposed standard include: social development; labour conditions; freedom from discrimination and harassment; child labour/protection; collective bargaining; wages; working hours; wastewater & environmental management; trade; traceability; and product composition & sourcing. Fairtrade International says it ran mock audits with textile producers in India and South Africa over the past year to test out the standard. It points out that the end of April marked two years since the collapse of Rana Plaza in Bangladesh, but claims that as yet no substantial improvements have been made for workers in the textile industry. The independent certifier FLOCERT will be responsible for monitoring the new standard. Among its many provisions are stipulations for the environmental performance of textile manufacturing companies. These include:
• WASTEWATER: If your company uses wet processing (eg. desizing, bleaching, mercerising, dyeing, printing, and other specific treatments where waste water occurs) you must treat the waste water to prevent ground water pollution and for pollution control according to national legislation. Wastewater analyses must be performed and documented periodically at normal operating capacity.

• ENERGY: Your company must measure energy consumption and develop a plan for reduction and recovery. Progress should be documented on indicators set by respective cross-unit teams. You must have a system to measure achievements in place.

Keeping up the pressure on the textile supply chain, April 24 was designated ‘Fashion Revolution Day’, when people in 66 countries around the world challenged global fashion brands to demonstrate commitment to transparency across the length of the textile value chain. Fashion Revolution Day was fronted by some of the biggest names in fashion, including model Lily Cole, blogger Susie Lau, Eco Age founder Livia Firth and writer and broadcaster Lucy Siegle. Supporters were encouraged to take a ‘selfie’ photograph, with the label in their clothing visible, to send it to a brand via social media, asking ‘who made my clothes?’, with the Twitter hashtag #whomademyclothes, and to share the reply. It was a repeat of a stunt first conducted last year, in which tens of thousands of people participated on the first anniversary of the Rana Plaza factory collapse. This catastrophe, which has recently led to murder charges being brought in Bangladesh, has become a talisman for campaigners in the field of social and environmental responsibility. Well over 1,000 people were killed in the Dhaka factory collapse, and over 2,500 injured.

Insight

Greenscape

Sustainability and Profit Aligned

By Victor Matthews
Chairman, British Textile Machinery Association (BTMA)

Meeting sustainability targets is often seen as a burden on mills, as they strain to meet regulatory requirements or the increasingly strict standards imposed by their customers. But this is the wrong way to approach the question. The essence of sustainability can usually be described in another word: efficiency. Now, that’s a word that all manufacturing businesses can respond to. But what does efficiency involve? In many instances it means avoiding the unnecessary consumption and waste of resources, an often hidden syndrome that can be the real burden on manufacturers. Energy, water and material inputs are all significant costs, and all add to a mill’s impact on the local and global environment. Reducing these consumptions – and cutting the volumes of unused materials left over after inefficient processes – is, for many businesses, at the core of a sustainable operation. Achieving this goal does not always require major capital investment; it
begins with good housekeeping. And existing production equipment can often be upgraded to work more efficiently, while effective control systems will help mills to identify and eliminate sub-optimal performance, both in an individual machine and across an entire production workflow. These need not be a major cost – and they will pay back rapidly in financial as well as environmental terms. Where a mill identifies the need for investment in new plant or machinery, it should ask how efficient that machine will be throughout its working life, and not just whether it will do the job, or how much it will cost to buy and install. In this instance, as in many others, the interests of profitability are aligned with the interests of sustainability.

The British textile machinery community has many companies with the expertise and advanced technologies to meet these goals, all of them working in close partnership with mills across the globe to help make their textile processes meet the best efficiency as well as quality standards.

Low Energy Drive System
Tatham Ltd is offering a machinery drive system designed to cut energy consumption by up to 50%. Tatham’s TS System is intended to offer the latest drive control technology to help customers achieve significant energy and operational savings. Contrary to fixed speed motors, which always operate at full speed, variable speed drive systems use drive converters to adapt to their operating requirements. The Tatham designed system only draws the amount of power necessary at that particular point, thereby significantly reducing energy consumption. A variable-speed drive converter also eliminates the current spikes generated during acceleration and torque surges, ensuring less wear on the mechanical system components. This soft starting and stopping reduces stress on the complete drive mechanical transmission line, increasing the machine’s operational lifetime. Specifically designed for the textile industry, the TS variable speed drives are used in carding machines, crosstappers, needlelooms, spinning and twisting frames. Adam Firth, senior electrical engineer, said: “A TS drive system will directly replace any DC drive, with the latest AC variable speed drives offering the most practical solution both technically and economically. The drives are completely synchronised and do not require feedback devices, allowing finite control of the machine at all speeds.”

www.tatham-uk.com

Halogen-Free FR Powder Coating
Archroma’s halogen-free flame retardant powder coating additive, Pekoflam HFC, is the first powder additive to be officially recognised by Oeko-Tex as a manufacturer-certified product for coating applications. It helps textile producers and protective-clothing manufacturers to achieve both Oeko-Tex 100 compliance and effective fire protection for their finished goods. Pekoflam HFC is an organic phosphorous/nitrogen compound which performs on synthetic materials, including polyamide fibers and blends. Archroma said that the unique chemistry displays higher efficiency compared to commonly used nitrogen and/or phosphorous based chemicals. It is also applicable in water-based systems as well as in Oeko-Tex Standard 100 compliant ‘green’ solvent based coating systems. Hence, it offers a higher flexibility to fabric coaters serving different end-use segments. The ecological profile enables use in both indirect and direct skin contact applications.

www.archroma.com
**Lower Emissions in Polyester Dyeing**

The new DYEFAST dyeing accelerator from HeiQ is designed to allow faster dyeing of polyester fabrics using conventional dyeing equipment. The process time saving of 33% directly leads to a much lower environmental footprint and, if it was used throughout the global polyester dyeing industry, 50 million metric tons of CO2 emissions could be saved per year.

The standard polyester dyeing process, with temperatures up to 130°C, has a large impact on the environment including high water and energy consumption, waste water burden, and up to 4kg CO2 emission per kilogram of textile. DYEFAST increases the productivity on existing dyeing equipment without having to change dye recipes and therefore significantly lowers the overall process costs. In addition, HeiQ said its technology system provides enhanced colour levelling and reduced risk of spotting, achieving better dye wash fastness, and potentially prolonging the useful life of the textile.

www.heiq.com

**Roberto Saves Energy in Brazil**

Brazilian textile producer Sueco Têxtil reports practical evidence of energy savings from Richard Hough’s Roberto squeeze rolls for dewatering applications. Sueco is a private company with 300 employees, located in Sao Paulo, and has recently invested in two Roberto rolls.

Immediate proof of the effectiveness of the Roberto in water removal came when Sueco ran controlled tests to compare the new rolls against its original rubber rolls, positioned before each of its two stenters. The results showed that the sample from the Roberto roll contained 32% less water than the conventional rubber sample. On long run production with viscose/Lycra knits, in the drying/heatsetting process, the working speed was increased by 11% and the consumption of heat energy on the stenter was reduced by 14% by mass of fabric.

The secret of the Roberto lies in a special microporous covering, used as a high-performance replacement for conventional rubber or PU.

www.richardhough.co.uk

**Cutting Print Waste**

Production Colour Profiling (PCP) software from AVA CAD/CAM allows textile printers to reduce on-press waste and eliminates the need for conventionally produced samples of decorative textile prints. PCP software models the complex interaction of the chosen inks or dyes, substrate and production process to enable a digital workflow, which, from computer monitor through inkjet-printed digital samples, is totally based on the output of final bulk (usually rotary screen) production. This allows designs to be refined, re-coloured, and digitally sampled with the confidence that both computer monitor and digital prints will match conventional production of any particular design/colourway.

AVA says this revolutionary technology allows printers to achieve the speed to market and short runs of digital production with the advantages of traditional analogue capacity, such as lower unit costs for large runs, and depreciated assets. Lead times and costs are reduced and there is an environmental bonus in less wastage and energy and materials.

www.avacadcam.com

**Dyebath Flame Retardant**

Avocet Dye & Chemical Company has received Oeko-Tex accreditation for its CETAFLAM DB9 dyebath flame retardant for polyester. Its inclusion in the list of active chemical products means that it can be used when producing Oeko-Tex certified articles. Compared to more conventional technologies, the product offers considerable savings in water, energy and process time.

Avocet says that by incorporating flame retardant application into the dyeing stage, a 40% reduction in process time is achievable, increasing productivity and reducing process cost. Consequently there is a significant saving in energy and
Avocet’s CETAFLAM DB9 flame retardant is Oeko-Tex compatible

Garnett Controls Ltd says its range of energy-saving drives and controls can offer major savings in electricity consumption, compared with old-type electrical panels. New drives can save around 50% of the electricity of those they replace, depending on loads and speeds. Maintenance costs are also less.

Garnett says that, whilst large electrical panels such as those driving elements of carding machines and processing lines are obvious candidates for energy savings, smaller drives used to power fans and pumps can also be replaced to achieve savings of up to 50% in power consumption.

The company offers a free initial survey to highlight areas where savings can be made.

www.garnettcontrols.com

How to create a sustainable future for the textile industry?

Measured by its sq km, Belgium is a small country, but measured by its impact on the world textile industry, it is not so small. Belgium is responding to the challenge of helping the textile value chain create a sustainable future.

Transforming into the textile factory of the future

Belgian machinery-technology providers are contributing to the transformation of textile mills into textile ‘factories of the future’. Such factories will deliver, for equivalent output levels, energy and resource consumption that is 50% less than current levels. The flexibility of their production systems, in terms of product mix and lead times, will be at least twice current levels. But factories are more than equipment. In factories of the future, employees will be more autonomous, more creative and perform more knowledge-intensive jobs. This
combined progress in the productivity of capital and human resources will result in a doubling of the added value of the products and services coming out of those factories.

How to bring the textile factory of the future closer?
The Belgian textile-machinery industry and its customers work hard to reduce raw-material waste and energy consumption, and to increase the flexibility of textile-production systems. All three are key drivers for a more sustainable performance.

Energy efficiency
It will come as no surprise that almost two-thirds of the energy in industry is consumed by electromechanical drivetrains. Therefore, it is clear that making these more efficient must be a major objective. By optimal design and dimensioning of drivetrains, adopting intelligent energy management, integrating novel hybrid energy storage, and making all drivetrain subsystems active, we are achieving major reductions in energy consumption. With the help of an energy-management system in new-generation machines, the energy flows in the drivetrain can be optimally controlled. Such energy-management systems will reduce the average energy consumption of a drivetrain by at least 25%, while at the same time improving other aspects, such as the lifetime of its components. With the help of an energy-management system in new-generation machines, the energy flows in the drivetrain can be optimally controlled. Such energy-management systems will reduce the average energy consumption of a drivetrain by at least 25%, while at the same time improving other aspects, such as the lifetime of its components.

Flexibility and waste reduction
Increasing the flexibility of the production system contributes greatly to the reduction of waste throughout the textile value chain. Increased flexibility allows for smaller lot sizes and shorter lead times. That results in lower work-in-progress throughout the value chain. The value chain is better equipped to produce exactly what the customer wants at the time the customer needs it, with less need for buffer stocks of (semi-)finished product that might never sell.
Belgian weaving machines are continuously being improved to allow for more versatility and shorter set-up times. Also, the number and length of test runs required before new production lots can be produced are being reduced significantly. Raw material is precious and should only be used in the final product that is needed by the end-user.

It takes a factory of the future, to create a factory of the future
For the development of all this advanced production technology, Belgian machinery producers clearly need the appropriate tools. One example is a model-based design environment. That offers us the opportunity to analyse different concepts, the dimensioning of its components and the evaluation of, for example, energy-storage and energy-recovery systems. It also enables us to assess the impact of various control schemes. Once the design of the future-proof machine is ready, a highly technological and extremely resource-efficient production system is set in motion to produce the textile machine. Clearly, it takes a factory of the future to create a factory of the future.

Source: [www.madedifferent.be](http://www.madedifferent.be), [www.flandersmake.be](http://www.flandersmake.be)