A Fantastic Result in Milan

What a result! I think we can say without reservation that ITMA 2015, with its exhortation to ‘Master the Art of Sustainable Innovation’, was a spectacular success. For eight exciting and satisfying days the global textile industry came together in Milan in impressive numbers, to see the best in planet-friendly manufacturing technology.

In this edition of the ITMA Sustainability Bulletin we have varied the usual format to reflect in detail on this recent and important series of events. As befits the world’s most important textile machinery show, it includes a selection of the innovations that will help reduce the environmental impact over the coming years – but with so much to see in Milan and only limited space in the Bulletin, this can only be a sample of the impressive creativity displayed there, so we offer our apologies to those who are not mentioned.

ITMA 2015 was accompanied by several conferences, some of which also took sustainability as their central theme. Among them were ITMA’s first Nonwovens Forum, organised jointly with EDANA, and the Textile Colourants and Chemical Leaders Forum. In addition the World Textile Summit approached sustainability from a business perspective and our report here includes an extended interview with keynote speaker Mary Porter Peschka, of the International Finance Corporation (IFC), a division of the World Bank.

Finally, and very importantly, ITMA 2015 saw the inaugural ITMA Sustainable Innovation Awards and our congratulations go to all the finalists for this evidence of the positive role that the textile industry can play in making tomorrow even better than today!
ITMA Sustainability Bulletin

Masters of Planet Friendly Manufacturing

The global textile and garment manufacturing industry converged at ITMA 2015 in Milan to source innovative solutions to enhance their business sustainability. Their commitment to sustainability is evident from the strong industry turnout. At the end of eight days, the 17th edition of the world’s most established textile and garment technology exhibition had attracted almost 123,000 visitors from 147 economies. An enthusiastic CEMATEX President, Charles Beauduin, commented: "We registered a 20% jump in visitor numbers compared with ITMA 2011. More importantly, from participants’ feedback, we can confidently say that this is one of the best ITMA exhibitions! Our message on sustainability has resonated greatly with buyers.”

He praised the industry’s resilience and forward-looking agenda, adding that global industry players have understood the importance of investing in innovations that are planet-friendly and which can also help improve their business bottom line. "Our exhibitors have discovered that the visitors - whether they are seasoned ITMA visitors or attending the exhibition for the first time – are serious about checking out new innovative solutions to improve their competitive edge.”

Themed ‘Master the Art of Sustainable Innovation’, ITMA 2015 featured exhibits from the entire textile and garment making value-chain spread over 108,268 square metres of net exhibition space at Fiera Milano Rho. Organised by MP Expositions, it also featured several conferences with the sustainable agenda, as well as the first ITMA Sustainable Innovation Award. Overall, exhibitors felt that the quality of visitors was high and there was strong buyer interest. Visitors from Italy form the biggest contingent. They accounted for 18% of the visitors. Outside Italy, the top visiting countries were India (9%), Turkey (8%) and Germany (7%). Other countries which made it to the top 10 list were France, United States, Iran, Brazil, Pakistan and Spain. The lifting of sanctions on Iran in the near future has buoyed the country’s textile and garment sector, resulting in more visitors. ITMA 2015 welcomed many groups from the Indian sub-continent. There were also delegations from Central Asia - a region where the textile and clothing industry is slated for development as the sector has the potential to create jobs. A 140-strong Uzbekistan textile and garment industry delegation spent three days at the exhibition. It was coordinated by the Textile and Garment Ministry of Uzbekistan.

ITMA 2019 will be held from 20 to 26 June at Fira de Barcelona Gran Via fairground. For more information, please visit www.itma.com.

First Focus on Nonwovens

The first-ever Nonwovens Forum was held at ITMA to introduce attendees to a growing industry defined by its versatility. The forum was jointly held by ITMA and EDANA, the nonwovens trade association.

Pierre Conrath, sustainability and public affairs director at EDANA, opened the forum by describing nonwovens as “probably one of the few sectors in which we define ourselves by what we are not.” He emphasised its adaptability, and how it can use many fabrics or materials.

Mr Conrath presented the first historic mention of
nonwovens, when General Robert W Johnson, an American industrialist, outlined his means to produce surgical gauze in the 1930s: “Take cotton or another fibre, spread it to form a sheet, give it some sort of treatment to bond it, to form a nonwoven fabric,” he said. “There is a wealth of possibilities in nonwovens.” He described formation and consolidation as two steps in producing nonwovens, adding that the ability to combine aspects of both steps was key to the versatility of the industry. The use of nonwovens in numerous growing areas – filtration and hygiene in particular, the latter of which comprises two thirds of nonwovens production in the world – makes it an ubiquitous industry, and one that is also demonstrating an increasing commitment to sustainability.

**IKEA Reaches Major Cotton Milestone**

Swedish home furnishing multinational IKEA has announced that since September 2015, all the cotton used for its products comes from more sustainable sources – specifically, from farmers who use less water and fewer less chemical fertilisers and pesticides, and who are also able to increase their profits. This makes IKEA as the first major retailer to reach this milestone, the company claims. All the cotton used in IKEA products now comes from Better Cotton Standard sources, which includes cotton sustainably grown in the USA. Each year, IKEA uses around 0.7 per cent of all the cotton grown around the world, with its main sources from India, Pakistan, Turkey, China, Brazil and the US. Of this total cotton procurement, approximately 5%, or 7,400 metric tons, comes from the US.

“This year is the beginning of a new era for cotton at IKEA,” said Pramod Singh, Cotton Leader, IKEA. “Reaching our goal of sourcing 100% of cotton from more sustainable sources is a great achievement, but it also marks the start of our next challenge – to maintain the 100% and to find even more ways to support cotton producers around the world to be more sustainable.”

In 2010, IKEA together with the conservation organization WWF, and other leading public and private organizations, helped set up the Better Cotton Initiative (BCI). “We are extremely proud of our partnership with IKEA,” said Paola Geremicca, BCI director of communications and fundraising. “We applaud them for setting such an ambitious target and for acting as an example to other retailers and brands. IKEA’s commitment to BCI helps us fulfill our mission of establishing Better Cotton as a mainstream commodity.”

**Clothing Sector on Course to Meet Green Targets**

In just two years retailers, brands and organisations from across the clothing supply chain have reduced water impacts by a significant 12.5% per tonne of clothing, against a 15% reduction target by 2020. They are also making encouraging progress to cut carbon impacts, having achieved a 3.5% reduction per tonne of clothing against a 15%, according WRAP, a British charity that advocates sustainable use of resources in clothing manufacture. This progress against targets, which was announced today at WRAP’s annual conference, has been achieved through the collective action of 82
signatories and supporters of the Sustainable Clothing Action Plan’s (SCAP) sector commitment - SCAP 2020 - which is led by WRAP.

SCAP 2020 launched in 2013 when WRAP identified for the first time key action areas that could deliver the biggest reductions in the environmental impact of clothing, including: using lower-impact fibres; extending the active life of clothes; and increasing re-use and recycling.

Two years on and the sector is embracing the drive for more sustainable practices and making positive changes to the way it designs and manufactures products. For example, there is a move towards more sustainable fibre choices, in which recycled material is being chosen over virgin options, particularly for polyester. Similarly for cotton, the industry is moving away from conventional cotton to lower-impact cottons like those accredited by the Better Cotton Initiative. Moves like these are contributing to the overall reduction of impact on water.

The level of waste arising has remained stable so far and requires SCAP signatories to work closely with their supply chain. In addition, WRAP is working with industry to reduce waste to landfill by 15%, and progress against this target is being assessed and will be reported on next year.

WRAP director Marcus Gover said: “SCAP signatories have made great progress against the targets to date, particularly water. This is a positive indication of what can be achieved and we must capitalise on the momentum we’ve built. We will be working with the sector to ensure focus is maintained on priority areas. And whilst waste arisings haven’t been reduced, they have remained stable and we are encouraging concentrated efforts in this area.”

SCAP continues to attract support and recently UK clothing brand George (at Asda) signed up to the commitment, meaning that the signatories now represent over 50% of the UK retail market by sales, volume and value.

In order to meet the SCAP 2020 targets, signatories must focus on: increasing the use of lower-impact fibres; increasing product durability; helping consumers care for clothing and reducing waste to landfill (through WRAP’s consumer campaign Love Your Clothes); and, working with supply chains to reduce waste arisings, according to WRAP.

To help signatories and supporters take action WRAP provides a range of guidance and tools for each area. Given the importance of embedding durability, WRAP is about to publish industry guidance entitled ‘Sustainable Clothing Guide’. This is a practical how-to guide aimed at designers, manufacturers and retailers that will help them enhance clothing durability and performance.

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Textile Fibres Found in Seafood

A study by the University of California-Davis, US, and Hasanuddin University, Indonesia, has revealed that, despite the industry’s best efforts, textile fibres are being found in seafood – having been carried by wastewater into the ocean. Fish from Indonesian and Californian markets were sampled and the percentage of waste found during examination was higher than expected.

Researchers tested for both plastic and textile-fibre waste and the results revealed that:

- In Indonesia, 28% of individual fish contained waste materials, with 55% of all species tested containing waste materials
- In California, 25% of individual fish contained waste materials, with 67% of all species tested containing waste materials

All of the waste products found in Indonesian fish were plastic. However, 80% of the waste inside the US fish consisted of fibres. While the researchers could not determine whether the fibres were predominantly natural or synthetic, it was established that they came from clothes.

This is because water used in consumer washing machines empties into wastewater treatment plants, which often do not catch microscopic fibres before sending the sewage effluent out to sea. Just one garment made from synthetic fibres such as polyethylene terephthalate (PET) can shed 1,900 fibres every time it is washed.

Advances in man-made fibres and technical textiles have seen the creation of fibres that do not shed – for example, Gore ePTFE Fabric. However this recent study suggests that much more development in this area is needed if textile production is to become a truly sustainable process.
Dyeing Unit to Recover All Water

Olimpias, a company controlled by the Italy based Benetton family, has opened the first European water treatment plant capable of recovering up to 100% of the processed water from a textile dyeing plant.

Before renewing the water treatment plant, the textile factory, in Osijek, Croatia, used 1,600 cubic metres per day of water where only 10.5% was coming from recovery treatments. Now, thanks to investment, the percentage of water recovered has increased to about 70%, or 1,000 cubic metres per day. This has resulted in considerable reduction (to less than 600 cubic metres per day) in the amount of water taken from the local well, which lowers cost while giving environmental benefits.

Normally, 1,000 cubic metres of water is equivalent to daily use of a population of 7,000 individuals.

Olimpias’ new treatment plant is capable in time of recovering up to 100% of the water used and is the most tangible result to date of the Water Saving Process for Textile (Wasatex) project financed by the European Union as part of the Eco-Innovation programme. This involves two companies specialised in engineering systems and water-treatment processes – Aspel and Europrogetti, from Padua.

“In our vision there cannot be sustainability without innovation,” said Olimpias Group CEO Gianni Zanella. “By revolutionising the treatment of the processed water we can significantly reduce water and energy consumption, resulting in an important positive impact on the environment, costs savings and improved finished product thanks to the higher quality of the reused water. “The project is part of a broader strategy that the company started years ago to support its eco-friendly supply chain. It began with the elimination from our processes of all chemicals harmful for the environment and health.”

The earlier water-treatment plant could effectively remove only the organic substances but could not treat inorganic components such as hardness, alkalinity, silica, chlorides, sulphates and heavy metals, making it impossible to use the outlet water in production. In comparison, the new purifying unit includes a number of advanced technologies, such as a membrane bioreactor, resin bleaching filters and softener filters, in addition to a reverse-osmosis system capable of producing water that is technically perfect and stable, with very low values of hardness and Total Dissolved Solids (TDS).

Moreover, the nanofiltration system allows recovery of the brine (NaCl) for reuse in the dyeing plant and, finally, the OX system allows a reduce in final discharge, destroying and then removing the complex molecules with high molecular weight, such as Chemical Oxygen Demand (COD) and colour.

The project also allows a considerable energy saving. The purified water has, in fact, an average temperature of 30°C compared to the 15°C of the well water; hence the energy required for heating in the dyeing baths is significantly reduced and, ultimately, there is, as a consequence, a further reduction in production costs. The reduction CO2 equivalent emissions is more than 1,250 tons per year.

Olimpias was created in a Benetton Group spin-off in January 2015 and is the group’s main supplier. Its advanced manufacturing facilities are located in Italy, Croatia, Serbia and Tunisia.
EDANA Hosts Second Renewables Workshop

EDANA, the global association for the nonwovens, recently conducted a second workshop on the use of renewable raw materials in nonwovens and related products. The workshop, in Brussels, was attended by more than 40 experts and executives, representing 33 EDANA member companies covering various steps of the nonwovens and related value chain. The second edition confirmed key trends discussed during the previous edition in 2012. Renewable raw materials in general, and bioplastics in particular, have experienced significant growth in volume, and a diversification of their feedstocks and applications. Bioplastics have matured in several major market applications, thanks in part to the good recognition of certification schemes among converters of polymers, supporting further growth in a wide variety of application areas.

Additionally, a new development highlighted during the workshop is that biopolymers are now being sold based on their performance first, with biodegradability and compostability being treated as additional advantages rather than as the main selling point, according to EDANA.

Attendees heard that challenges remain with the use of renewable raw materials in nonwovens and related products, and major volumes will be unlocked only if the performance of renewable materials is effectively communicated to retailers and B2B customers.

Historic Mill Completes Clean Energy Project

Green energy consultancy Think Renewable Energy has completed a 200kW biomass project at one of the oldest textile mills still operating in the UK.

Pingle Mill, near Huddersfield, has been manufacturing cloth and yarn since the 1700s. The factory has been extended and improved by woollen yarn maker R. Gledhill Ltd, which first started manufacturing at the mill in 1936. The new biomass system is expected to generate 528,380kWh a year, cutting overheads and allowing for further investment in innovation and product development.

A spokesman for R. Gledhill said increased capacity in recent years had broadened the company’s range of manufactured products, opening up new markets with major UK retailers. “Switching to biomass will ensure we remain competitive and will help us to adhere to the environmental standards that our customers demand from their supply chain.” he said.

The project included the design of a new plant room and fuel store in keeping with the historic mill premises.

Chris Paddey, managing director of Think Renewable Energy, said the textile industry was a key growth area for commercial renewable energy, with mill premises often presenting a strong business case for biomass. “Given the scale of production at Pingle Mill, the age of the buildings and its off-grid location, Pingle Mill saw the project as a way of reducing its energy bills, which are significant,” he explained. “The new biomass system will provide energy for heating and processing across two mill buildings and an office block, cutting costs and helping the business achieve its carbon reduction targets.”
Levi Strauss Win Inaugural Innovation Award

Levi Strauss & Co was declared the winner of the first ITMA Sustainable Innovation Award, clinching the ITMA Industry Excellence Award category in competition with two other finalists: Berto Industria Tessile (Italy) and Gebrüder Otto (Germany).

Using the NoStone® garment washing technology from Tonello, an ITMA 2015 exhibitor, Levi Strauss & Co has started preliminary development work in its Plock facility in Poland. Tonello’s technology provides Levi Strauss with an important first step towards solving an industry challenge in denim finishing – the use of pumice stones, which have environmental, economic and mechanical disadvantages. Receiving the award at the ITMA 2015 gala dinner was Levi Strauss & Co’s R&D Product Researcher, Franky Vangaever. He said: “We are very excited to be the first winner of the ITMA award. The success is a testimony of the strong collaboration of two iconic brands – Tonello and ourselves – in pursuit of industry sustainability.”

CEMATEX launched the ITMA Sustainable Innovation Award as part of its ongoing efforts to encourage and recognise outstanding industry members and post-graduate students for their contributions to the sustainable development of the global textile and garment industry. The two award categories are ITMA Industry Excellence Award for ITMA 2015 exhibitors and their clients, and the R&I Excellence Award for post-graduate students of institutions participating in the Research & Innovation Pavilion. CEMATEX President Charles Beauduin, who also sat on the judging panel, said: “The ITMA Sustainable Innovation Award celebrates the successful collaboration between technology providers and industry users. With both parties working closely together, innovative, yet practical solutions that positively impact the environment and business bottom line can be created. Hence, we hope to continue to encourage more of such industry collaborations. CEMATEX would like to congratulate the winners and finalists for their excellent efforts.”

Finalist Berto Industria Tessile is a leading vertically integrated manufacturer of denim products. It leverages the Matex® Eco Applicator range by ITMA exhibitor Monforts to significantly reduce the amount of liquid needed in finishing denim fabrics, leading to energy savings and a huge reduction in waste water produced. Co-finalist Gebrüder Otto is a leading yarn manufacturer, which implemented Mayer & Cie’s spinitsystems® to produce single jersey fabric using up to 35% less energy compared to the conventional process.


The winner of the Industry Excellence Award received a cash prize of €10,000 euros and a trophy, among other rewards. The winner of the R&I Excellence Award received a cash prize of €4,000.
Business Case for Sustainable Manufacturing

The World Textile Summit 2015, hailed as a great success by attendees and speakers alike, explored business responses to the international drive for sustainable manufacturing and the importance of a strong sustainability policy in the textile manufacturing value chain.

The Summit, co-located with ITMA 2015, was hosted by award-winning journalist Nadine Dereza and was organised by ITMA, MP Expositions and World Textile Information Network (WTiN). It brought together influential speakers from a large variety of companies across the textile sector and beyond. The Summit aligned with the overarching sustainability theme at ITMA. It has become clear that addressing sustainability is now vital in the textile industry. Mary Porter Peschka, director at the International Finance Corporation (World Bank Group), and keynote speaker at the event, made this point clear. She discussed the merits of pursuing sustainability in the industry, the challenges businesses may face and how, in fact, with the correct values and training, these can be transformed into opportunities.

IFC, a member of the World Bank Group, is the largest global development institution focused on the private sector in developing countries. It is aimed at fighting poverty and promoting inclusive growth. Ms Porter Peschka’s crucial message was that businesses can benefit by integrating sustainability into their strategy and value chain. In fact, businesses can improve their short- and long-term profitability through the adoption of sustainable practices in a number of areas – for example, through the efficient use of natural resources, and improved labour standards and working conditions. These will ultimately enhance the reputation and brand value of a business.

From increasing demand for natural resources to economic disparity and climate change, urbanisation, a rising middle class and a growing population, companies are facing a more complex array of challenges across their value chains. However, there are opportunities embedded in these challenges. For example, a growing population and rising middle class will drive up demand for consumer goods, including textiles. This represents an interesting opportunity for the textile industry. In addition to this, young people can also drive the sustainability initiative forward. Ms Porter Peschka states that young consumers, dubbed the ‘millennium generation’, are increasingly sustainability-conscious, with far more consumer-awareness than any previous generation, and it is hoped that this will help to change overarching attitudes in businesses towards sustainability. However, she added that responsibility cannot lie purely with consumers. The industry, governments and other relevant stakeholders, including international organisations such as the IFC, have to work together to help implement sustainable strategies and practices in the textile industry.

“Consumers can drive changes in the industry and propel sustainability within the industry forward, but businesses have to decide to act.”

In particular, with the rise of social media and a growing inability to control customers’ interpretations and...
reactions to a company’s decisions, which can easily gather steam across these platforms and provide lasting damage to a brand, large multinationals and SMEs are increasingly talking a long-term view towards managing both environmental and social risks. Ms Porter Peschka emphasises that “by addressing environmental and social issues, companies, particularly in the textile industry, can achieve better growth and cost savings, improve their brand and reputation, strengthen stakeholder relations and boost their bottom line.”

In order to support more sustainable practices, she notes that incentives for the industry need to be established, although the market is beginning to respond and there has been a growth of investments in sustainable businesses. Ms Porter Peschka said: “Levi Strauss is hoping that, by incentivising its worldwide web of suppliers to operate more responsibly, it can create what it is calling a sustainability ‘race to the top’ in its supply chain. In exchange for improving their performance across a number of sustainability and corporate social responsibility (CSR) metrics, Levi Strauss’s suppliers will be able to access a sliding-scale of lower-cost financing arranged by the IFC.” Ms Porter Peschka added: “Investors are now realising that there is a correlation between good environmental and social practices, and financial performance.” The Summit brought a wide range of perspectives to the subject. Paula Oliveira, Director, Interbrand, discussed how sustainability can deliver a marketing edge. She stated that ‘strong brands deliver financial results’ and that 69% of people would pay more for sustainable products, while this number is growing – this initiative, Ms Oliveira notes, needs to be ricocheted across the whole supply chain.

However, she stressed that, while this is a strong incentive for companies to adopt a sustainability framework, sustainability is not just a business opportunity but a moral imperative. The financial benefits of adopting sustainable practices were also acknowledged by Vivek Tandon, co-founder of French private-equity investor Aloe Group, which specialises in sustainable investments, with particular interests in the fibre sector. He explained how strong sustainability credentials can help a business to attract investment from capital markets.

Alfonso Saibene Canepa, Director, Canepa SpA, Roger Yeh, President, Everest Textile Co Ltd and Ajay Sardana, Vice-President, Aditya Birla Group, also presented at the event, each on their company’s experience and stance on the investment case for ‘green’ technology. All three speakers have first-hand experience of the advantages of investment in ‘clean’ manufacturing.

Similarly, Burak Tun, Director Sales, Menderes Tekstil and Alan Garosi, global marketing manager, Fulgar each presented a case study at the Summit, focusing on their company’s application of environmentally friendly materials. Helga Vanthournout, Engagement Manager, McKinsey & Co, considered how recycling and the re-use of end-of-life textile products can deliver economic and business value. From a statistical point of view, a 2011 McKinsey Survey showed that 76% of CEOs consider that strong sustainability performance contributes positively to their business in the long term. The recognition of the importance of a sustainability strategy, therefore, can be shown to be present.

Other speakers included: Linda Keppinger, recently retired as Global Materials Director, Nike Inc, who reviewed sustainable trends in product development; Christian Dietrich, Director, Systain Consulting, who described the response of suppliers to an initiative by a grouping of major retailers to mitigate the CO2 burden of their businesses; and Dr Gemma Cranston who, alongside Dr Helen Crowley, Head of Sustainable Sourcing Innovation, Kering, presented the findings of a study by the Cambridge Institute for Sustainability Leadership (CISL), part of the University of Cambridge, whose Natural Capital Leaders Platform investigated the natural capital dependencies and impacts of cotton production and its associated risks. The study was conducted in partnership with major businesses including Olam International, Kering, C&A and Asda.

The event was sponsored by SPGPrints, MS Printing Solutions, bluesign, Oeko-Tex and EFI Reggiani.
In this edition, the Bulletin surveys some of the sustainability gains available from innovation on show at ITMA 2015.

Resource Productivity Calculator
Swiss company, Bluesign Technologies, exhibited its Resource Productivity Calculator at ITMA 2015. The web-based application was launched at the fourth Bluesign conference in July 2015. The Calculator, which enables visitors to find out how their processes can be optimised in terms of resource savings and environmental impact, uses intelligent process technology and smart chemistry from verified chemical suppliers that can reduce the consumption of water by 50%, energy by 30% and chemicals by 15%.

www.bluesign.com

Staple Fibre Solution
Oerlikon Neumag presented the compact Staple FORCE S 1000, specifically designed for the economic production of staple fibres in small batch sizes of up to 15 tons per day. Not only does the plan offer low initial investment and compact construction, but by replacing the conventional steam and water baths with a dry drawing process over godets, the energy costs are considerably reduced. The company also showed the inline technology, that includes the spinning operation and the subsequent drawing in one process step. With the compact construction, it is possible to produce staple fibre capacities of up to 80 tons per day. The applications range from fibres for geotextiles, filtration applications or hygiene applications to reinforcement fibres through to fibres for automotive applications.

www.oerlikon.com/manmade-fibers/

Yarn Energy Savings
Loris Bellini’s new yarn dyeing machine, which was on show at ITMA, boasts electrical energy savings of more than 70%. The Pulsar machine is said to combine top-quality dyeing with a dramatic cut in running costs. In comparison with standard technology, the Pulsar machine demonstrates particularly low consumption figures, says the company. It offers more than 70% savings in electrical energy, a very low 1:4 liquor ratio for most fibres and a 20–30% saving in water, chemicals and steam, the company adds.

www.lorisbellini.com

Bio-degradable Polyamide 6.6
Synthetic fibre manufacturer Rhodia, part of the Solvay Group, launched a bio-degradable polyamide 6.6 yarn, Amni Soul Eco. Garments made with the new yarn, which has been five years in development, decompose after disposal in landfills over about three years. The yarn also offers properties like soft touch, easy-care, breathability, extreme comfort, easy washing and moisture management, along with environment-friendliness. It is Oeko-tex (Standard 100, Class 1) certified. This sustainable innovation has also been recognised by two awards – the Kurt Pulitzer Prize, awarded by ABIQUIM (a chemical industry representative association) and an award from the American Chamber of Commerce.

www.rhodia.com

Energy Efficient Winding
Savio exhibited a variety of new innovations at ITMA, as it continues to broaden its range of applications. The group’s core business is winding, represented by a number of high-end and niche products with
Savio’s EcoPulsarS, a sustainable automatic winding machine. Savio’s CEO, Lorenzo Cucchetto, said: “The Eco PulsarS delivers energy savings of up to 30% and enhanced productivity up to 10%. Plus, suction is generated as needed and used without losses.”

www.saviotechnologies.com

Full Steam Ahead
Swiss textile technology innovator HeiQ launched Barrier Eco Dry – a performance-enhanced version of its fluorine-free durable water-repellent technology, Barrier Eco. HeiQ focuses entirely on DWR technologies without fluorocarbons, providing environmentally friendly alternative solutions to textile brands with diverse applications. Textile brands have recently been under pressure from a number of environmental NGOs, criticising the use of fluorocarbon (PFC) chemicals that are bioaccumulative and persistent in the environment. Barrier Eco’s innovative hyper-branched 3D structure imitates a duck’s feathered coat, repelling water and snow effectively and ecologically without harmful fluorocarbons, says the company.

http://heiq.com

Dyeing Small Lots
Dyeing technology manufacturer Thies showcased the new, more resource-efficient iMaster mini for the first time. The technology is a fully-equipped variation of the iMaster H2O able to be used with a load capacity of 20-80kg for small production runs and laboratory work. Undertaking the testing and optimisation phase of the manufacturing process on the iMaster mini offers the possibility to incorporate new kinds of fabrics, recipes and processes in the production sequence more effectively and cost-efficiently. Thies also displayed the iCone yarn dyeing machine and the iMaster H2O.

www.thiestextilmaschinen.com

Energy Efficient Roving Frame
Saurer Zinser’s ZinserSpeed 5A roving frame, presented for the first time at ITMA Milan, reduces operating costs and raises productivity. Its energy-saving mode for suction and flyer table blowing reduces overall energy consumption by 20 per cent. It has the additional benefit of a smaller footprint. The roving frame is connected to the new ZinserImpact 72 compact spinning machine by means of a Zinser Autoflow system, a roving bobbin package transport system. The company says the Zinser 72 is the most economical ring spinning and compact spinning technology in the world. With a length of 2,016 spindles, it is setting new standards for economy in the commodity yarn sector.

www.saurer.com

Spunlace Nonwovens Line
Autefa showed a new energy efficient jet design for spunlace nonwoven production. The jet design saves more than 30% energy compared with existing spunlace systems, achieved through its new patented hydroentangling unit. Meanwhile Autefa Solutions Switzerland (formerly Strahm) introduced a new modular Square Drum Dryer SQ-V for spunlace, with proven energy savings of up to 40%. The Square Drum Dryer SQ-V concept combines the low space requirement of a drum dryer with best drying efficiency and controllable airflow sections of a
Green Print Mission
During ITMA, EFI Reggiani showed new technological solutions and processes, based on new eco-chemistry for water-based inks, as well as new automation technology. EFI Reggiani said its innovations are the result of extensive research targeted to improve productivity and quality, optimise the textile manufacturing process, and reduce energy and water consumption, as well as environmental impact. The company adds that, without compromising machine performance, its solutions save on human resources, water, inks, colour waste, energy and stock holdings, while also exploiting recyclable materials.

Inkpresso Instant Inks
Seeking to eliminate the environmentally unfriendly transportation of bulk digital textile printing inks, or which the biggest component is water, Archroma presented the Inkpresso, a system that formulates the inks from concentrates at the point of use. The name is inspired by the espresso coffee maker. It was developed together with Ink-Situ, a Swiss technology provider, and Archroma says it brings together benefits that have so far been unattainable in inkjet printing – production flexibility, no shelf-life problems, a larger colour spectrum and the possibility of an individual colouristic fingerprint. The central component of the system is the Inkpresso Ink Formulation Unit (IFU), where eight colour modules are available. The colours can be mixed to meet manufacturers’ specific needs, at any time. Depending on the size and complexity of the printing company, inks can be sent directly from the Inkpresso IFU to the printer through a piping system, or several printers can be supplied simultaneously using a special distribution unit. In addition, colours can be stored for several weeks in a storage unit.

Saving Energy in Weaving
Aachen University’s Institut für Textiltechnik (ITA) has joined forces with 3T TextilTechnologieTransfer GmbH to reduce energy consumption in weaving by up to 60%. Visitors to ITMA could see a working alternative to projectile, rapier and air jet weaving. The test bench for the analysis of magnetic weft insertion offers particularly high productivity at low cost with up to 60% of potential energy savings. The test bench for energy efficient fibre transport saves between 20% and 30%

With the magnetic weft insertion test bench, 3T and ITA have developed a technology that transports the weft yarn by a clamping device which is actively led through the shed. The new insertion method combines the productivity of air jet weaving with the versatility of rapier insertion. By avoiding air compression, energy costs of up to 60% can be achieved compared with air jet weaving, says the company.

The test bench for the optical measurement of fibre transport systems in spinning mills features a new integrated measuring system. Fibres are usually transported by airflow but the transport ventilation is often too large. ITA’s new integrated measuring system
recognises the position and velocity of the flocks in the transport channel. The integrated signal adjusts the transport ventilator so the fibre flocks start to float after two to three minutes, compared with a previous time of 15 minutes. In industrial processes, this can achieve between 20% and 30% in energy savings. This new system will be available at the end of 2017 and ready to use in weaving machines by 2019.

www.ita.rwth-aachen.de/
www.3t-gmbh.de

The Textile Colourant and Chemical Leaders Forum at ITMA attracted many delegates eager to hear about the Zero Discharge of Hazardous Chemicals (ZDHC), REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and novel approaches to textile dyeing and finishing that create a more sustainable approach to wet processing.

Conference chairman Stefano Cavestro (AICTC) welcomed the delegates and said that in order to increase sustainability in textiles and clothing, all stakeholders in the supply chain network need to fully co-operate in order to initiate more environmentally friendly processes.

John Mowbray (MCL Global) explained the impact of the Greenpeace DETOX campaign programme, how it had evolved and how the textile industry brand leaders and retailers had responded. A number of leading brands had committed to the ZDHC (Zero Discharge of Hazardous Chemicals) in their supply chain by 2020.

Greenpeace’s focus on fluorocarbon finishes was considered by many to have missed out on more important issues in the textile industry, which affect the environment.

In 2014, MCL Global published a 130-page report on Detox Deconstructed. Although there was some opposition to the report, some of its recommendations and new testing procedures had been adopted. Greenpeace appeared to be changing its strategy, moving away from zero discharge and focusing on tougher MRSL (Manufacturing Restricted Substance Lists) limits.

Dr Maurizio Colombo (Federchimica) gave an update on the REACH regulation, pointing out that it was hazard-based (assessing the potential of a substance to cause harm) rather than risk-based (also taking account of the likelihood and severity of any potential harm). The REACH documentation was extensive, making it difficult for SMEs (small and medium enterprises) to deal with. The cost of dealing with REACH was estimated to cost the Italian chemical industry around €370 million.

While some countries outside the European Union were introducing REACH-style regulations, there was still a problem with some imported textiles where banned substances might be present, especially from countries where regulation was weak.

Continuous contact with the authorities at national and European level was needed to help the textile industry maintain a high level of safety and environmental protection. Alberto Gallina (Benetton Group and representing the ZDHC Group) discussed how retailers, brands and a diverse group of stakeholders had moved to clean up the fashion-apparel supply chain. ZDHC was
now a legal entity in Holland, with executive director Frank Michel appointed on 1 August. Mr Michel was supported by a team in Holland to drive forward the vision and objectives of the ZDHC Group. The functional tools had been completed with the eventual objective of setting new international standards. The fundamental tools included a framework for prioritisation of hazardous chemicals, MRSL levels, Research List, Audit Protocol, Right to Know Chemical Disclosure Methodology, Chemical Management Systems Guidance Manual and Chemical Management Training for suppliers in Bangladesh, China, India and Vietnam. Many of these tools were available at www.roadmaptozero.com.

The ZDHC Joint Roadmap Update had been released in September 2015. ZDHC was viewed as an industry leader and innovator and companies could join the group as a signatory brand or an associate. Other speakers included Gel Egger Ceccarelli (Salvatore Ferragamo SpA), Professor Giuseppe Rosace (University of Bergamo), Dr Pankaj Desai (Colourtex Industries Private Ltd), Han Kuilderd (Novozymes), Georg Lang (Archroma), Dr Murray Height (HeiQ Materials AG), Mauro Fassi (Loris Bellini), Matteo Tagliapietra (Tonello), Lutz Walter (The European Technology Platform for the Future of Textiles and Clothing) and Professor Marc Van Parys (Unitex).

The presentations covered a wide range of natural fibres that could be used in fashion, REACH versus ZDHC, developments in chemical finishes and machinery for dyeing and finishing and emerging technologies and future trends in textile processing. Other topics included materials, resource efficiency and new business models as the drivers for sustainability in the European textile and clothing industry.