Industry Changes Reinforce Huntsman’s Strengths

<table>
<thead>
<tr>
<th>HIGHLIGHTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESIDENT’S MESSAGE</td>
<td></td>
</tr>
<tr>
<td>AROUND THE WORLD</td>
<td></td>
</tr>
<tr>
<td>SUSTAINABLE INNOVATION IN ACTION</td>
<td></td>
</tr>
<tr>
<td>EVENTS</td>
<td></td>
</tr>
</tbody>
</table>
Industry Changes Reinforce our Strengths

*Increasing global concern about environmental matters is irrevocably changing the dyestuff manufacturing sector. What are the implications for us and our industry?*

The textile dyeing and finishing sector is in the midst of dramatic change, as evidenced by plant closures, capacity restrictions, capital outflow and supply chain consolidation. All of these changes have their roots in tighter environmental regulation and more stringent industry-led environmental standards.

Consider the situation in China, where decades of industrial growth have increased both prosperity and pollution. Urban smog and contaminated water have become sources of public complaint and this pressure has prompted the introduction of tougher environmental legislation and stricter enforcement policies. The recent crackdown on small high-polluting firms in Hebei and the closure of a major dyestuff factory in Jiangsu are evidence of how seriously China is taking this issue.

Additional pressure is being applied by the world’s clothing leading brands and retailers. To protect their reputation in the face of consumer concern about the impact of industrial production on people and the environment, brands are demanding that their suppliers operate transparently in accordance with high environment, health and safety (EHS) standards.

The result of these combined pressures is a shift in our industry. Many mills, dyestuff companies and intermediate chemical manufacturers have closed because they lack the technology and knowhow to adhere to the new requirements. Others are operating at levels significantly lower than their manned and technical capacity as local governments re-evaluate plants’ production capacity permits to reduce overall production and therefore pollution.

These closures and lower production supplies have resulted in price hikes for the raw materials used in textile dyestuff. Accordingly, globally, the industry is looking at a price hike for many dyes, with reactive blacks doubling. Stiffer increases may not be unexpected as environmental regulations continue to be more strictly enforced.

Further industry consolidation is also to be expected. These difficult times call for increased investment in modern production technology and wastewater treatment facilities, more compliance monitoring, and greater research and development spending. Very few companies are doing this. On the contrary, we are seeing investment leaving the chemicals sector.

For Huntsman Textile Effects and our partners, the changes sweeping our industry represent a levelling of the playing field. Other suppliers and mills will have to invest to create greener products, to bring their manufacturing facilities up to standard and to improve their process safety and product stewardship. Low-cost competitors will no longer be able to cut corners with impunity and governments will also be stricter in the issuing of production permits, which will help stabilize the industry in the longer term.

The mills and producers we serve will also be at an advantage as the major brands begin consolidating their supply chains to gain greater control and demonstrate transparency as part of their Zero Discharge of Hazardous Chemicals (ZDHC) 2020 commitments. Companies that adhere to our ZDHC Joint Road Map-compliant Formulation List and partner us to create greener products and processes differentiate themselves as industry leaders.

Huntsman is the acknowledged frontrunner in EHS, product stewardship and innovation. We walk the talk and this puts us and our partners in the strongest possible position as external forces play to our strengths.

**Paul Hulme**
President
Huntsman Textile Effects
Fabrics China® Hangtag Program Gains Momentum

**Baleno launches new line of UV protection polo shirts**

The Fabrics China® Joint Hangtag program is gaining momentum in China, with mills, brands and retailers embracing it to assure consumers of their quality, innovation and environmental sustainability.

Popular Asian clothing brand Baleno has become the latest to launch a product range carrying the label, which features the Huntsman logo. The new line of Baleno polo shirts adheres to stringent testing and certification processes to earn the right to carry the Fabrics China® UV Protection hangtag.

The Fabrics China® Joint Hangtag program is a co-branding initiative introduced by China Textile Information Center (CTIC) and Huntsman Textile Effects in 2012. It builds on HTE’s value-adding finishing effects, such as Quick Dry, Water and Stain Resistant and UV Protection, and aims to improve the quality of China’s textile products.

The Fabrics China® mark of assurance

The Baleno polo shirts use a CVC knit fabric (a cotton-rich polyester-cotton blend) made by Nice Dyeing. One of the world’s largest fabric manufacturers, Nice Dyeing has transitioned to higher value production in recent years. It has added new machinery and developed new processes to increase productivity and product quality while reducing energy consumption, environmental impact and cycle times.

The new Baleno shirts were a hit with customers at the Global Textile and Apparel Supply Chain Conference (TASCC) 2014 in Suzhou on June 12, where more than 100 were distributed during the HTE Breakout Session.
Formulation List for ZDHC Manufacturing Restricted Substance List
Now Online

HTE shows support for industry sustainability with MRSL launch

Huntsman Textile Effects has launched a Manufacturing Restricted Substance List (MRSL) in support of the Zero Discharge of Hazardous Chemicals (ZDHC) Joint Road Map. When mills apply the dyes and chemicals on the HTE Formulation List as recommended, they can be confident that their products will comply with the ZDHC Joint Road Map, V2.

Mills, brands and other partners are invited to download the HTE MRSL here at the Huntsman website. Leading brands such as H&M and adidas have already implemented this list.

"By launching our updated HTE MRSL and making it freely available online, HTE is driving sustainability for the textiles industry. We believe that collaboration is the best way forward and we are proud to offer innovative and technologically advanced products that help mills and brands minimize their environmental footprint," said Peter Gregory, HTE’s Marketing Director for Sustainability.

The launch of the MRSL reinforces HTE’s commitment to helping to lead the transition to a more sustainable textile industry. HTE was an early and active supporter of the ZDHC initiative. We see ZDHC’s move to adopt a harmonized MRSL as an important step to reducing the compliance burden that the textiles supply chain, particularly mills, have to carry. Textiles suppliers must comply with a host of standards and certification schemes, especially around chemicals, which adds unnecessary cost.

To provide clarity and simplicity for the industry, the ZDHC MRSL sets limits on more than 200 chemical substances used by mills. HTE’s unique MRSL complements this with dyes and chemicals that mills can use to safely manufacture textiles for brands that have signed up to ZDHC.

Huntsman Baroda Honored for Self-Manufacturing & Export Excellence

Baroda wins both Gujarat Dyestuff Manufacturers Association and Dyestuffs Manufacturers Association of India awards for the 2nd time

Huntsman International India Pvt. Limited. (HI IPL) has once again been recognized for performance excellence at its Baroda manufacturing plant which specializes in the production of reactive dyes and intermediates.

Huntsman Baroda edged out 28 other contenders to secure the Gujarat Dyestuff Manufacturers Association (GDMA) ‘Highest Self-Manufacturing Turnover from Domestic & Export of Dyes & Dye Intermediates’ award for 2012-2013. This follows its success last year, when it won the GDMA ‘Direct Export of Self-Manufactured Dyes’ award for 2011-2012.
In addition, the facility has also been given the ‘Excellent Performance in Exports of Dyestuffs by a Large Scale Unit’ award for 2013-2014 by the Dyestuffs Manufacturers Association of India (DMAI), making it a 2nd win in a row over the past 2 years.

“These awards are a further testament to the professionalism and ongoing commitment of the team at the Baroda site. It will inspire us to continue to invest in our people and technologies in order to support our customers in India and the region to grow their business in a sustainable and profitable way,” said Dattatraya Kamat, Regional Operations Director for Huntsman International India Pvt. Limited, South Asia & Middle East.

S. Venkatesh, Huntsman Baroda’s Supply Chain Manager (left) receiving the DMAI award in Mumbai on 4 Aug 2014

GIZ and HTE Raise the Bar for the Textile Industry in Bangladesh

Chemical Environmental Management Program helps develop best practices in the industry

Huntsman Textile Effects and GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) have jointly set up the ‘Chemical Environmental Management for Competitiveness Program’ in Bangladesh to help textile mills improve their management of chemicals. It builds on the existing GIZ Promotion of Social and Environmental Standards (PSES) initiative to further develop chemical management (CM) best practices in the Bangladesh textile industry with the support of local and international Environmental Management System specialists.

GIZ, a German federal agency that promotes sustainable development globally, has collaborated with the Bangladesh government through the PSES initiative over many decades. More than 60 consultants from 20 service organizations have already received CM training to promote the proper handling and storage of chemicals, workplace safety, compliance with environmental laws and cost efficiency. To support this program, HTE will share its expertise in optimization of washing and dyeing processes and offer audit and consultancy services to local mills through its Productivity Improvement Program.

Commitment to sustainability

Magnus Schmid, PSES Program Coordinator, said, “Textile factories in Bangladesh are now taking environmental issues more seriously as regulatory requirements become stricter and the economic benefits of sustainability become more widely recognized. PSES has already made a great impact with our CM training program and other initiatives and we look forward to doing even more through our new partnership with Huntsman Textile Effects. With Huntsman, we are committed to helping the industry eliminate hazardous substances from the production process in order to achieve a cleaner and safer textiles sector.”

Peter Gregory, HTE’s Marketing Director for Sustainability, added, “As a global leader with a long established presence in Bangladesh, HTE is pleased to join hands with GIZ to help local factories optimize their production efficiency and environmental compliance whilst also building local competence to enable continued adoption. Our international staff will also receive training from GIZ on its CM toolkit so that we can extend our efforts to factories in other countries as well.”

The cooperation with GIZ is part of HTE’s commitment to the Zero Discharge of Hazardous Chemicals program.
Associate-led community projects support World Environment Day 2014

In a company-wide effort spanning the globe, more than a quarter of Huntsman Textile Effects’ associates at major sites in eight countries were mobilized to promote environmental sustainability through community activities during June and July.

Clocking upwards of 1,100 hours, more than 750 volunteers came together in this ‘Sustainability in Action’ initiative to support HTE’s ‘We See a Better World’ focus.

“As a leading supplier of dyes and textiles chemicals, HTE recognizes that we have a responsibility to not only create value for our stakeholders today but also make a sustainable and vibrant world possible for future generations,” said HTE President Paul Hulme.

“In our latest initiative, HTE associates around the world have customized activities to meet the specific needs of their local community. By showing sustainability in action, we are making a difference and celebrating environmental sustainability as a way of life in our workplaces and homes.”

By showing sustainability in action, we are making a difference and celebrating environmental sustainability as a way of life in our workplaces and homes.” The latest ‘Sustainability in Action’ projects were organized and carried out by associates around the world in support of the United Nations’ World Environment Day (WED) 2014 which was held on June 5.

The HTE WED 2014 initiatives include:

• Tree planting in Atoto, Mexico; Baroda, India; Bogota, Colombia; Guatemala City, Guatemala; Istanbul, Turkey and Mahachai, Thailand
• Hazardous household waste collection and safe disposal drives in Atoto; Bogota; and Langweid, Germany
• Recycling initiatives in Guatemala City, Istanbul and Singapore;
• Community clean-up projects in Charlotte, USA; Panyu, China; and Singapore; and
• Community education programs in Baroda, Bogota, Istanbul and Panyu.

“HTE’s approach to sustainability is grounded in the belief that individual actions have the power to bring about extraordinary change when we all work together. This is also a central tenet of WED,” Mr. Hulme said.

Sustainability is a core value of HTE: our innovations help textile mills reduce waste and conserve resources; our processes and work environment encourage us to use fewer resources and turn waste streams into profitable products; and our role as an industry leader compels us to help our partners take sustainable approaches to business. We are committed to addressing the textile industry’s toughest challenges, such as higher energy prices and scarcer water sources, through our product research and development programs – and our community-based projects.
Langweid's Waste Calendar educates associates on correct waste disposal methods. Panyu associates clean up the greenway leading to Hai'ou Island.

Associates in Guatemala join in the Planting Day and embrace the ongoing recycling initiative.

Associates gather at the environmental awareness workshop in Turkey to discuss recycling initiatives and receive a symbolic gift of a small tree to plant at home or around the site.
Global Interest in Digital Inks Grows in 2014

HTE at InPrint, FESPA Digital, and ITMA ASIA +CITME

As a leading manufacturer of digital inks, Huntsman Textile Effects continues to help printers around the world adopt digital printing technology to improve their competitiveness and extend their market reach. We are now seeing interest picking up across a broad range of industries, with the digital printing-focused trade shows attracting more visitors than ever this year.

InPrint 2014 (Hannover, Germany)

Exclusively dedicated to industrial print technologies, InPrint 2014 drew almost 7,000 visitors from 61 countries to Hannover from April 8-10. HTE noted a wide variety of customers and partners at its booth, with visitors representing textiles, packaging, ceramics, aeronautical, automotive, electronics, and other industries.

Interesting discussions were held around the development of new inkjet applications for both textiles and non-textile applications, and in the field of water-based pigment inks.

“Environmental and toxicological issues and waterless coloration systems were key topics of interest at InPrint 2014, as was the question of how to simplify application processes. As a result of HTE’s reputation for innovation and our expertise in these areas, we were sought out by many of the leading manufacturers, suppliers and print companies at the show,” said Kevin Myers, HTE’s Senior Manager for Global Inkjet Technology. “Going forward, we have several very exciting potential development projects to consider.”

FESPA Digital 2014 (Munich, Germany)

FESPA Digital is the largest and most comprehensive international digital wide format print exhibition. HTE was among more than 400 global exhibitors at the show in Munich, which attracted a record number of printers, print service providers, designers, product managers, brands, agencies, marketers and advertisers from May 20-23.

“With visitors very aware of the potential of digital printing to help them grow their business, there was a high level of interest in sublimation technology,” said Sergio Prenna, HTE’s Global Marketing Manager for Textile Inkjet. “FESPA Digital again proved to be a great platform for Huntsman to confirm its position as the partner of choice for customers planning to invest in industrial digital applications.”

HTE’s launch of its new TERASIL® Subli XKS inks earlier this year enabled true industrial-speed dye sublimation transfer-paper printing for the first time. Developed in close cooperation with leading printhead and digital equipment manufacturers such as Kyocera and MS, these new inks deliver excellent results through a simplified application process that entirely eliminates the need for water during printing. After becoming increasingly popular in the signage and sportswear markets, HTE is now seeing sublimation technology beginning to make inroads into the fashion apparel sector, too.
ITMA ASIA + CITME 2014 (Shanghai, China)
Around 100,000 visitors from 102 economies converged on Shanghai’s ITMA ASIA + CITME exhibition this year to preview cutting-edge solutions and machinery for companies across the textile industry. The biennial show, which has grown steadily since its launch as a combined event in 2008, was held from June 16-20, with almost 1,600 exhibitors showcasing solutions at the show’s 150,000-square-meter exhibition area.

The HTE booth was a hive of activity, attracting an equal mix of new and existing customers, including end-users, brands and retailers. Visitors were impressed that HTE works closely with inkjet service providers and machine and print head manufacturers to develop innovative digital inks for every purpose. They also enjoyed experiencing the latest developments in digital textile printing via the onsite demonstrations, which highlighted the speed, print resolution and quality and ink consumption of the new solutions.

“HTE focused on presenting our expertise as a leading certified water-based textile inks manufacturer for all digital printing. We showed a full range of innovative inks for different print head technologies, including Kyocera, Seiko and Epson,” said Maurizio Ponchioli, HTE’s Business Development & Marketing Manager for Global Inkjet.

Tony Lai, HTE’s Business Development Specialist for Inkjet China, added, “Live demonstrations at our booth, which we held in concert with Fuji, helped us sustain a very high level of interest throughout the five days of the show.”

Revolutionize the way you print today!
Click here to email us for more information on our digital inks competencies.

Industry Continues to Focus on Innovation

HTE at Indo Dye Chem, TTNA and Febratex
Innovation and sustainability continue to be key areas of concern for major players in the global textile industry, with Huntsman Textile Effects engaging customers and partners on these themes at major trade shows.

Indo Dye Chem 2014 (Jakarta, Indonesia)
Indo Dye Chem is part of Southeast Asia’s largest and most influential textile industry event, along with Inter Tex (for textile and garment machinery and accessories) and Inatex (for textile products such as yarns, fibers and fabrics). A total of 592 exhibiting companies from 23 countries and more than 13,800 trade visitors from 24 countries participated in the three exhibitions from April 23-26, 2014.

“More and more customers are realizing that sustainability is crucial to the future of their business,” said Dheeraj Talreja, HTE’s Commercial Director for Northeast/Southeast Asia. “What was very clear at this year’s Indo Dye Chem is that Huntsman is already well known as the best global partner to help mills, retailers and brands move towards sustainability and face their toughest challenges.”

HTE found that visitors were eager for information on integrated solutions, digital printing and HTE products that support compliance with the Zero Discharge of Hazardous Chemicals Joint Roadmap.
The HTE team discusses our non-fluorine solutions and dye manufacturing capabilities with customers at TTNA 2014

Febratex 2014 (Blumenau, Brazil)
Known as one of the biggest textile-related events in Brazil, Febratex 2014 lived up to its name as it showcased the latest collections and trends in machinery, materials and technologies for the textile industry. Around 350 exhibitors and more than 89,000 trade visitors from Brazil and other countries were in attendance for the event held on August 12-15.

HTE had the opportunity to network with more than 100 customers, with many of them expressing keen interest in products such as AVITERA® SE, our water and energy-saving dye, as well as our ERIOFAST® XKS range of digital printing inks for brilliant colours in the fashion and sportswear segments.

New customers and existing ones alike were impressed with HTE’s technological competencies across the areas of pretreatment, dyeing and finishing and more importantly, our strong focus on building a more sustainable textile industry!

HTE Extends Stakeholder Collaboration

HTE hosts Polyamide Seminar and sponsors TASCC 2014
Huntsman Textile Effects believes that collaboration between key industry stakeholders is the best way to deliver integrated solutions that add value to the consumer and drive sustainability throughout the textile supply chain. In the past few months, we have been instrumental in bringing the industry together in Taiwan and China with a view to raising standards and promoting growth.

HTE ‘Innovations in Polyamide’ Seminar (Taipei, Taiwan)
Organized by HTE with strong support from Taiwan Textile Federation (TTF), the ‘Innovations in Polyamide’ seminar was designed to create value for HTE’s textile partners in Taiwan. Held on May 20, 2014, it drew close to 50 delegates, representing mills, converters and brands, to Taipei to hear about innovative new technologies and solutions for the polyamides market.

With expert speakers from TTF and HTE, the seminar focused on how delegates can:
- Reduce total production costs;
- Create value through product differentiation;
- Deliver environmental solutions; and
- Create a sustainable business.
Justin Huang, Secretary General of TTF, opened the seminar and urged the local textile industry to move towards more sustainable, high-value and high-performing solutions.

Several speakers from HTE were on hand to overview global polyamide market trends and share the company’s product roadmap. They discussed how new HTE innovations can deliver enhanced fabric value and improved functionality, emphasizing LANASET® PA, ERIOFAST® Navy M and ALBATEX® PS-35 / UNIVADINE® MC.

The polyamides seminar follows the successful ‘Creating Value for the Taiwan Textile Industry’ seminar that TTF and HTE jointly held in April 2013.

TASCC 2014 (Shengze, China)
The Global Textile and Apparel Supply Chain Conference (TASCC) is a high-profile annual event organized by the China National Textile and Apparel Council (CNTAC) as a platform for the industry to discuss the latest technologies and upcoming trends in supply chain management. This year’s conference was held in Shengze, Suzhou, one of China’s most important textile industry hubs, from June 12-13. More than 2,000 invited business leaders, academics and industry experts attended.

HTE played a prominent role at the conference, with much to contribute to its theme: Collaboration and Innovation in Green Supply Chain. We also again stepped up as an exclusive sponsor of this important event. HTE was honored with a Special Contribution Award as part of the conference opening ceremony. It celebrates our commitment to the industry and our many successful projects.

Accepting the award, HTE President Paul Hulme delivered a short speech that highlighted our ability to help brands and mills meet their legislative and Zero Discharge of Hazardous Chemicals commitments.

Paul Hulme also delivered a well-received presentation, entitled “Collaborating and Innovating for a Sustainable Textile Industry.” In it, he outlined the challenges facing China’s textile industry and proposed a new sustainable business model as the answer to achieving economic success while meeting stricter environmental standards.

HTE also hosted a Breakout Session for customers that emphasized our key focus areas of Sustainability, Innovation and Collaboration (SIC). A lineup of senior executives explained what HTE is doing to help the industry transform towards a more sustainable future and introduced innovations such as ULTRAVON® SIR/EL, LANASET® PA and TERASIL® TC, and our latest advances in rain and stain management and other new effects.

This session also featured the Fabrics China® Joint Hangtag program signing ceremony, officiated by Jay Naidu, HTE’s Vice President for Marketing & Strategic Planning and Albert Fu, Vice President of China Textile Information Center (CTIC).
HTE’s Jay Naidu (left) and CTIC’s Albert Fu sign the Joint Hangtag program memorandum of understanding at TASCC 2014
Economical Dyes Deliver Superior Wetfastness, High Light-fastness and Bright Fashion Shades

Demand for cost-effective polyamide (PA) fabrics is rising worldwide. With high light-fastness and exceptional wetfastness, such fabrics are produced in bright colors for high-performance outdoor wear and sportswear, such as wind breakers, skiwear and mountaineering clothing, as well as swimwear and lingerie.

To help textile mills capture this growing market, Huntsman Textile Effects has now extended its LANASET® range of dyes to deliver additional bright shades for woven and knitted PA fabrics.

Tailor-made for PA fabrics, the cutting-edge LANASET® PA dyes offer excellent trichromy with perfect tone-on-tone build-up and very high flexibility for shade matching. Fully compatible with the original LANASET® dyes, the extended LANASET® PA range has been designed to offer easy dye selection, broad shade coverage and flexibility. Very deep shades are easy to achieve and PA microfiber dyeing is simple, economic and efficient, with minimal effluent pollution.

These dyes provide excellent wetfastness, in most cases, without the need for a fixation step, making them extremely suitable for laminated fabrics. Preserving the integrity of lamination, which can be hampered by conventional fixing agents, the LANASET® PA dyes also exhibit excellent fastness to chlorinated water, avoiding the need for an additional chlorine fastness improver. These therefore reduce cost and the risk of shade change and tannin migration.

The economical LANASET®PA dyes complement the existing LANASET® range of dyes for polyamide/elastane (PA/EL) blends, including microfibers, and the high-performance ERIOFAST® dyes.

Make your polyamide work better for you today!
Click here to email us for more information.
See You There!

With a global presence that ensures we can serve you wherever you are, Huntsman Textile Effects actively participates in key industry events around the world.

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
</table>
| 24-26 Sep, 2014       | Shanghai, China | Techtextil China 2014  
Join us at Techtextil China to explore our wide range of products to boost the functionality and coloration of your technical textiles for work wear, automotive applications, nonwovens and more! |
| 22-24 October, 2014   | Las Vegas, USA | SGIA Expo 2014  
Find out more about our capabilities in digital inks for textiles at SGIA, the ideal platform for specialty imaging technologies and networking opportunities. |
| 19-21 November, 2014  | Guangzhou, China | FESPA China  
Discover how you can become more competitive with our leading digital inks for Kyocera-based machines and Seiko and Epson heads. Our digital printing technologies will help you deliver a wide variety of applications for the apparel and fashion, swimwear, home textiles, signage and automotive sectors. |
| 4-7 December, 2014    | Istanbul, Turkey | FESPA Eurasia  
Come view our competencies in the areas of digital printing inks at FESPA Eurasia, where you will also see other industry technologies in the areas of wide format digital printing, screen printing, signage and garment decoration. |