Regd. No. MH/MR/South/04/03-05
Licenced to post without prepayment no.: South-04/03-05
Posted at Mumbai Patrika Channel Sorting office on 1st/2nd of same month & 15th/16th of same month

www.TextileExcellence.com

textile Excellence

VOL. 3 No. 1

In tune with Intelligent Enterprise

JULY 1 - 15, 2005 PAGES 62 Rs. 25

Rendzvous

Century is doubling its Denim capacity

— R. K. Dalmia

Page 61

Rendzvous

Obliterate the existing retail structure!

— Subodh Sapra

Page 59

A moment of renewal, Series of accomplishements over the past two years, some difficult times; continuing with a sense of purpose; Contributing our bit towards the betterment of the Indian Textile Industry

— Textile Excellence

Export Levies

Apparel exporters in dilemma over service tax

MUMBAI: Apparel exporters fear a loss amounting to approximately Rs.500 crore per year due to the imposition of service tax on export cargo freight rates.

The government by way of notification no 28/2005 has withdrawn the exemption enjoyed by the air cargo operators from June 16, 2005. As a result, an additional burden of 10.2 percent service tax will be levied on export cargo freight rates.

Further the notification adds, that the tax collected for services rendered will have to be in Indian rupees.

Confederation of Indian Apparel Exporters (CIAE) president Amit Goyal explained, "The apparel exporters ship their goods on CIF basis which means that exporters collect the freight amount from the customer in foreign currency and make the payment to the airlines in India in rupees, but this is foreign inward remittance so why should the service tax come under it. This is totally illogical."

Visibly upset by this notification, the export community facing stiff competition from China in the new quota free world, fear negative government policies will force export units to close down as they are already working on narrow margins. Also the Indian exporting community has had to bear consistently tough conditions in the past one year, but they have overcome it in determined fashion and which will help them to compete with the best in the coming years. ■

INSIDE

Textile processing unit on cards in Hyderabad

HYDERABAD: A state-of-the-art textile processing unit is expected to come up in the Rs 300-crore Hyderabad-Hitech Textile Park, proposed to be developed by Infrastructure Leasing and Financial Services (IL&FS).

The processing unit comes up as a result of association of over 125 weaver entrepreneurs from Mahabubnagar district in Andhra Pradesh.

The IL&FS and the entrepreneurs recently signed a memorandum of understanding (MoU) to develop a national textile hub at the proposed site. Chief minister Y S Rajasekhara Reddy was present on the occasion, according to a press release.

The Government of India has approved a proposal for providing financial assistance to develop infrastructure for the proposed textile park which is expected to cost about Rs 28.18 crore. The Centre will provide Rs 18.48 crore while the state government will offer an assistance of Rs 4.73 crore for the development of infrastructure, the press release said.

Over 300 shuttleless powerloom weaving units at a cost of Rs 150 crore would be set up at the park, which is expected to be ready with all the basic facilities by June 2006.

The textile processing unit will act as a mother unit and cater to the requirements of textile units functioning both within and outside the park, the press release added.

It needs to be added Andhra Pradesh's conversion rate of project proposed and those which are finally approvedis highest in India. ■

Next Issue :
- Survey on Indian Textile Industry
- Meet Fleissner, CEO Hans-Georg Bucker

Value-added Textile Technology

–Dr. Shafiul A. Islam, CText, FTI*

IMAGINATION, innovation and technology take textiles to the extreme specialty applications as our quest for comfort and quality lifestyle prevails. Can we tailor textile technology to make things stronger, lighter, faster, smarter and safer? The answer is yes a fcnd imagination is your limit.

Stronger: High performance fibers are expected to replace metal parts for superior functional properties. The combination of strength (tenacity) and resistance to extension (modulus) provides the ultimate performance of the fiber (Table 1). Japan is the prime producer of the most high performance fibers. Toyobo produces Zylon (aromatic heterocyclic, lyotropic liquid crystalline polymers, polybenzazole - PBO) - the strongest fiber with a tensile strength of 42 g/d and a modulus of 2000 g/d.

At Nexia, we spun miles of recombinant protein based artificial spider silk fiber, BioSteelÒ. We envisioned spinning nature's mystery, a strong spider web. Despite encouraging experimental results, our expectations fell short. We failed to conquer nature's superiority and were faced with the crucial challenge of batch-to-batch chemical inconsistency and cohesive molecular integrity. However, our R&D initiatives led to proprietary process design and new product development nirvana.

Lighter: Table 2 compares economic benefits of reducing the weight of ultimate structures. Lightweight means comfort, less transportation costs and reduction of fuel consumption. Airbus and Boeing have been exploiting the economics of building lighter aircrafts with reinforced high performance composites. Even high performance fibers can be coated with lightweight (density ~0.8g/cc) visco-elastic adhesives and resins namely, neoprene, urethane etc.

Teijin developed Technora - a co-polymer type para-aramid (para-aromatic polyamide) fiber in 1974. DuPont uses petroleum-derived terephthalic chloride and para-phynylenediamine to produce Kevlar, whereas Teijin introduced diamine as a third component. Technora includes ether bonds in its molecular structure, and has higher tensile strength, better abrasion and fatigue resistance, prolonged heat resistance and superior chemical resistance to Kevlar. Teijin showed that Technora of 11 mm diameter lifted an 8 tonne tetrapot.

Table 1: Properties of selected fibrous polymers

Material	Density (r)g/cc	Tenacityg/d	Modulus g/d
Polypropylene	0.9	2-10	6-60
Polyethylene	0.94-0.97	4-35	150-500
Carbon	1.7-1.9	12-32	200-500 GPa
Kevlar	1.44-1.45	22-23	525-800
Technora	1.39	25	570
Zylon	1.54	42	2000

Faster: Faster and lighter often go hand in hand. The lightness of the object is measured by its density or specific gravity usually expressed in g/cc. If the specific gravity of the fiber is below 1, it floats on water. Polypropylene and polyethylene have density below g/cc - they float on water.

Satellite Launched Missiles used carbon-carbon composites that achieved several times the speed of sound. Most Formula One racing cars including Williams F1 BMW FW26 features a chassis made of carbon fiber reenforcement with epoxy resin. With heat and pressure laminating layers of materials moulds the components.

Table 2: Economic benefits (US$) of reducing the weight by 1 kg	
Rockets/satellite	200,000
Missiles	1,500
Helicopters	350-1,500
Aircrafts	70-350
Ships - Industrial Materials	40
Cars	<4

Smarter: Advanced rockets, space satellites, missiles, aircrafts, helicopters, and military vehicles use embedded optoelectronic and textile technology to unleash superior performance. Interdisciplinary collaborations are key to advancing smart textile technology.

Peter Testa has designed a 40-storey carbon tower prototype model, which uses high performance fibers1. Imagine such a building would be woven together as a single structure, eliminating numerous assemblies susceptible to buckling, shifting, gravity and wind. This is now a part of the 'Extreme Textiles' exhibit at the Cooper Hewitt National Design Museum, New York.

In order to exploit the emerging opportunities in smart textiles, CTT Group (groupecttgroup.com) initiated the ITTA (Intelligent Textile Technology Alliance) and ExperTex programs. These programs are designed to serve the contemporary changing and challenging needs of the textile industries today.

Safer: Innovation proliferates extensively in the area of multi-functional protective and safety textiles. They encompass high modulus ropes, fire-fighting garments, cut resistant gloves, airbags, acid-resistant filters, biocompatible antibiotic substrates and range of specialty products.

Tulmar Safety Systems Inc. (tulmar.com) uses coated textiles and RF (Radio Frequency) welding technology to produce inflatable life jackets, life rafts for the aerospace industry. These TSO life jackets are integrated with optoelectronic devices and compressed CO2 cylinders that inflate the jackets momentarily.

Trends and Tendencies

Estimates suggest that global Textile and Apparel (T&A) Trade is approximately US$ 1 billion a day and average per capita fiber consumption of ~10 kg per annum. Global fiber production hit 67 million metric tons in 2004.

David Rigby Associates (DRA) estimated global technical textiles consumption is expected to be 23.8 million tons at a value of US$ 127 billion in 2010 with the highest growth potential in Asia.

Beyond the basic demand, our appetite for smart T&A and our quest for comfort and a quality lifestyle seem to drive the growth of the T&A sectors from country to country. Reinvesting in innovative process-product-technology and employee training are essential to attain, maintain and retain world-class work environments to remain internationally competitive.

Qualified textile technologists have been keen to restructure their careers due to lack of competitive compensation despite the growing demands of a high-skilled workforce for our industries. Such attitude undermines the growth of our T&A sectors, unlike the emerging lucrative industries.

Specialized technical and cosmetic textile innovations will initially proliferate in the advanced countries, and then gradually shift to exploit competitive growth potential. Farsighted strategies and healthy work environments are crucial to fostering innovations and continuous improvement.

Fast-paced globalization and trade liberalization will continue to force labour-intensive T&A enterprises to knit cross-cultural business collaborations for exploiting global market potential and competitive investment opportunities.

We live in the age of extreme global economic inequality. Any unfair trade pact we envision for protecting our T&A trade horizons will fall like the Berlin Wall. Today's highly competitive T&A trading environment needs a more compassionate close-knit cross-cultural collaboration than ever before. ■

* **Dr. Shafiul Islam,** CText, FTI, is a founding consultant of TexTek Solutions, www.textek.bravehost.com. His research and innovations have led to a lengthy list of articles, patents, books, thesis and conference presentations. He is a Royal Chartered Textile Fellow of the Textile Institute International and President of Institute of Textile Science Canada. He can be reached at
Tel No: 1 613 632 4090