



INDIAN TECHNICAL TEXTILE ASSOCIATION

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INDIAN TECHNICAL TEXTILE
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The Textile Institute
NISTI(Regd.)

Jointly Organise

CONFERENCE & EXHIBITION ON

"OPPORTUNITIES IN HIGH GROWTH
SEGMENTS OF TECHNICAL TEXTILES"

12th July 2019

Silver Oak Hall, India Habitat Centre, New Delhi

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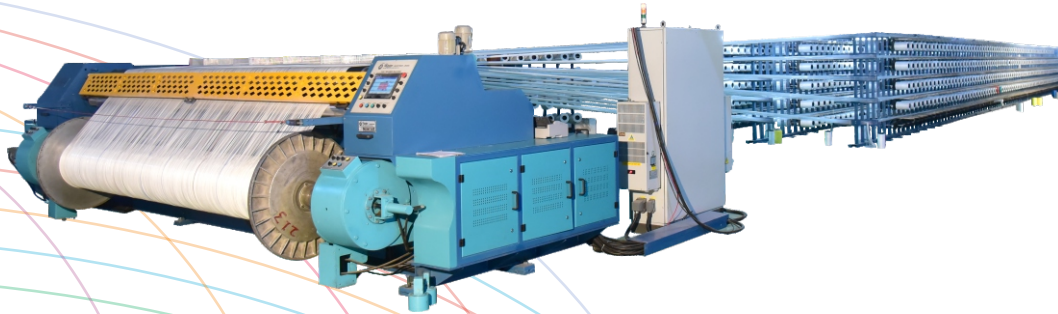
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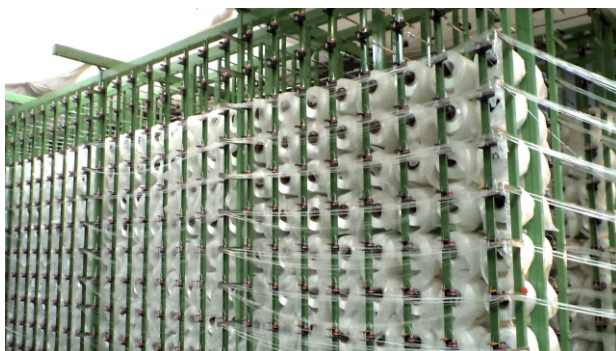
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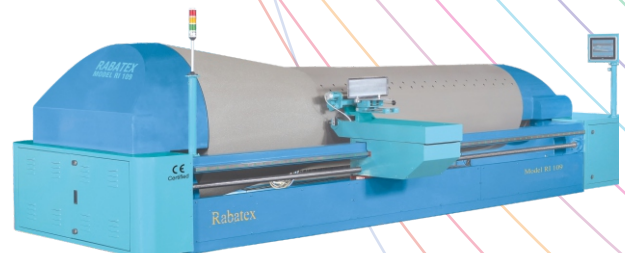
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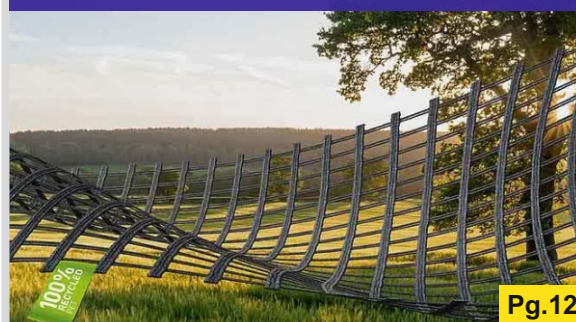
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INDIAN TECHNICAL TEXTILE ASSOCIATION

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SPECIAL REPORT

CONFERENCE AND EXHIBITION

"OPPORTUNITIES IN HIGH GROWTH SEGMENTS OF TECHNICAL TEXTILES"

24th April 2019 | The Residency Towers, Coimbatore, India

The Indian Technical Textile Association (ITTA) jointly with North India Section of the Textile Institute (NISTI) organized the Conference and Exhibition On *"Opportunities in High Growth Segments of Technical Textiles"* on 12th July, 2019 at Silver Oak Room, India Habitat Center (IHC), New Delhi. The event was organized to enrich knowledge about the latest global innovations on new technology & product development in high potential segments of Technical Textile i.e. Medical Textiles (Meditech), Protective Textiles (Protech), Automotive Textiles (Mobiltech) and Structural Composites.

Welcome address was given by Dr. Vinod Shanbhag, Chairman NISTI. Dr. Sundararaman K.S., Chairman, ITTA delivered the Special address, saying that there are tremendous potential of marking innovative technical textile products and market it appropriately in domestic and export market. The

Conference was inaugurated by the Chief Guest, Dr. Sainen Kumar Chaudhuri, Vice-Chairman, The Textile Institute, Manchester, UK. He said that the technical textile sector has a very high growth potential in India as compared to the conventional textiles. Since these products are used in very critical applications, industry should be very careful in adhering the product specifications. He also said that the subjects chosen in this conference are very interesting and relevant to the current technical textile scenario.

Eminent Speakers were from various Govt. R&D organizations, COEs & Technical textile Industry who shared their rich experience and latest trends & information on the supply chain management, marketing challenges, innovative technology and investment opportunities with major focus on the Meditech, Protech, Mobiltech and Structural Composites.



STRUCTURAL COMPOSITES

The First Technical Session on Structural Composites was chaired by Prof. B. K. Behera, IIT Delhi. This session witnessed the excellent presentations by the speakers, namely, Mr. Ravi Sriraman, Principal Application Development Scientist-Aerospace and Composites, E.I. DuPont India and Dr. Dhaval Patel, Director, Nikol Advance Materials.

"Raw Materials for Structural Composites" was presented by Mr. Ravi Sriraman. Mr. Ravi highlighted that a material composed of two or more distinct phases (matrix phase and dispersed or reinforcing phase) that have bulk properties significantly different from those of the constituents is defined as a composite material. Composite materials can be tailored (designed) according to the desired performance of the structure. Hence, the raw material becomes very important for any structural composites. In this talk we present raw materials used as reinforcements (Kevlar®, Nomex® fibers and fabrics) and Nomex® paper used for making the honeycomb structures that forms the core of sandwich composites. Kevlar® based composites provide light weight, tough structures whereas Nomex® based composites provide lighter weight, high temperature resistance composites. These composites find wider application in the area of aerospace, railway, marine, automotive, civil engineering, and all the others where specific

mechanical properties related to weight are important and needs to perform at higher temperatures.

Dr. Dhaval Patel presented the topic on *"Product Development Potential in Composites (Growth Rate & Market Penetration)"*. He spoke about the definition of composites, types of reinforcements and different advanced applications of composites such as aerospace, naval, military, automotive, railways, energy/wind turbine, sports goods, industrial application and civil construction. Properties of composites - High Stiffness-to-Density Ratio, Non-conductive and conductive, Low Thermal Expansion, etc. and its uniqueness like high weight-to-strength Ratio and Anisotropic Properties: Ability to achieve desired properties in desired directions. He said that Indian composite industry will grow from 3.5 lacs metric ton production to 60 lacs metric ton in next two years. Pipe and tank, transportation, wind energy, construction and defence are the major market segments of composites in India. He also highlighted the opportunities for India i.e. to increase the length of pipeline network across the country, electric vehicles to combat carbon emission, indigenisation of parts and assemblies by defence organisations like DRDO, HAL, ADA, etc., modernisation and upgradation of Indian railways and wind turbine installations to achieve 60 GW power generation by 2022 from 32 GW currently.

PROTECTIVE TEXTILES

Prof. V K Kothari, Ex-IIT Delhi chaired the Second Technical Session on Protective Textiles and three papers were presented, key points are described below-

Mr. Narendra Kajale, Vice President-Technology & Innovations, Texport Syndicate presented the *"Latest Trends in Protective Work wear"*. He said that as the Economy & Industries are growing, so does Hazards such as Fire, Electric Arc, Health, Molten Metal, Chemical, Biological, Accident and Cut. USA is the largest consumer of PPE having highest levels of standards, legislation & compliance with moderate industry growth. India has limited standards, lenient legislation, Inadequate & voluntary compliance. Approx. 5 crores organized working

population & same no. in unorganized sector and they are exposed to various hazards. Newer hazards like Radiation, electric arc, chemical exposure, biological exposure, poor air quality, poor water quality etc. posing new challenge to human life. These factors demand newer protections for these threats individually or in combination. Protective wear trends beyond fire protection are electric arc garments, liquid chemical splash suit, gas chemical protection suit, EMF shielding suit, cement workwear, high visibility suit, civil ballistic vest, extreme cold climate suit, etc.

Dr. M. S. Parmar, Deputy Director, NITRA (COE-PROTECH) talked on the topic *"Innovation Opportunities on Personal Protection Equipment"*

(PPE)"and innovative products developed by NITRA. Also the advance testing facilities set-up in NITRA to evaluate Protective textile products.

Mr. Kunwar Venkteshwar Singh spoke about the *"Quality Assurance in Personal Protective Equipment"*. He highlighted that Global Personal Protective Equipment (PPE) market will grow steadily at a CAGR of almost 8% by 2023 and Asia-Pacific is anticipated to become the fastest growing market in terms of CAGR over the forecast period. Construction is projected to be the fastest-growing end-use industry segment, due to the increasing consumer spending and new construction projects in developing countries such as India, China, and Brazil. PPE are divided into 3 categories - PPE Category I (Low Risk): clothing that

protects against rain & gloves for gardening work, PPE Category II: high-visibility warning clothing & safety gloves that protect against mechanical risks and PPE Category III (High Risk): protective clothing & protective gloves for fire fighters. Indian PPE markets contain products such as hand protection, foot protection, respiratory protection, face protection, fall protection, etc. He emphasized that for quality assurance of Protective Clothing, it should have testing, certification, processing and evaluation. They confirms the safety and conformity of your product and which has a high level of international acceptance and reduce your liability risk and the probability of complaints due to documented tests and standards.

AUTOMOTIVE TEXTILES

The Third Technical Session on Automotive Textiles was chaired by Prof. Kushal Sen, IIT Delhi. There were three presentations on various topics as discussed below-

Mr. Ravishankar Gopal, Chief Consultant, K's Technical & Management Consultants presented on *"Future trends on use of different technical textiles with their functions in designing modern vehicles"*. He mentioned the automotive products wherein textile materials are used such as carpets, covering, composites, rubber reinforcements, tyres, seat belts, airbags, belts and hoses. Automotive Reinforcements mainly used are Nylon, Polyester, Steel, Rayon & Kevlar. He explained the future trends in reinforcement of Tyres are more eco-friendly reinforcement like Rayon, recyclability of reinforcement and matrix material will be mandatory, change in Tyre design to reduce dependence on air for cushioning and reduce tyre weight and rolling resistance for Electric Vehicles. Two concepts are used for Textile Trims in Textiles are Happy Attitude- To allow consumers to change elements of the Interior Décor and Light Attitude- reducing the weight of vehicles. He also highlighted the requirements of different products such as automotive seats & seat covers, hoses, composite reinforcements, electric vehicle- two wheelers, etc.

"Future Trends and Challenges in Nonwoven Automotive Textiles" was presented by Mr. Aswan Kapoor, MD, Uniproducts. He talked about the Use of

Nonwoven Textiles in Automobiles - Headliner Fabric, Filters and NVH Components used in Engine Compartments, Trunk Trims and in Cabin. He explained the future trends of nonwoven products in different parts of vehicle i.e. Insulator Assy Dash Panel, Engine Room Absorber Parts, Floor Carpet, Parcel Shelf, Fender Rear Lining, Insulation Engine Under Cover, V LAP Felt and Light GSM Fabric having excellent NVH Property & is light in weight. He also spoke about the notified automotive regulations like BS VI – All Models, RDE data collection along with BSVI type approval, BSVI Inservice conformity & Ped. Protection All Models and proposed regulations such as Braking as per IS 15986:2015/ AIS 151:2018 – New models, Brake Assist system (if fitted) – AIS 152:2018 – New models, Electronic stability control (if fitted) – AIS 133:2016 – All Models, etc.

Mr. Shantanu Aggarwal, Executive Director, BMD-LNJ Bhitwara Group presented the topic on *"Trends in Automotive Upholstery Textiles"*. He said that in 2017-18, the Indian Passenger Car Market have Domestic Vehicles sales - 3.46 million units, Export Vehicles sales- 0.75 million units, FDI in Automotive sector- \$2.42 billion and Global Automotive Production rankings- 4th Rank. He pointed out some important key trends i.e. Luxury cars growth, Growth in SUV's, Vehicles with automatic transmission, Focus on fuel economy, Destination for export, Globalization and Hybrid and electronic vehicles. He also emphasized on some of the innovative products with applications

such as PVC laminated - Door trim, Coating/Padding, High Stretch Fabric- Yarn and process variation, High Stretch Fabric- Foam change, Neoprene Look-Alike- High density circular

MEDICAL TEXTILES

Mr. Anup Rakshit, Executive Director, ITTA chaired the Fourth Technical Session on Medical Textiles. The following presentations were made during this session.

"Disposable Gowns & Drapes- Growth driver in Medical textile" was presented by Mr. Parveen Gulati, Director, SHI Mediwear. He emphasized about the importance of Disposable Gowns & Drapes in the growth of Medical textile. There are many sources of infection like primary i.e. personal, other patients & environment and secondary i.e. patient himself. He highlighted the solution for saving lives by Single Use Garments which have advantages such as Comfortable, Fluid repellent, Viral/ Bacterial Barrier and Breathable. The fabric used eliminates contamination, offers barrier and ensures protection. He also mentioned some of the products of medical textile such as Breathable Viral Barrier (BVB), Ahlstrom TenderGuard™ (high performance surgical fabric), Ahlstrom TrustShield™ (surgical drapes) and Ahlstrom Reliance Tandem (sterile barrier systems).

Mr. Samir Gupta & Ms. Ritika Gupta of Business Co-ordination House (BCH) spoke about the *"The Indian Absorbent Hygiene Products Market -Finally Delivering on its Promises"*. Ms. Ritika spoke on the disposable hygiene market in India which has seen robust growth since 2010, especially in the sanitary napkins and baby diapers category and is now growing in the categories of adult diapers, under pads and wipes too. The diverse requirement of the Indian population which stands at around 1.3 billion people is aggressively consuming the disposable hygiene products and India, will see exponential growth in the coming decades and fast catch up with Chinese numbers. The feminine hygiene sector catering to products of necessity has 40% penetration levels as of today and in all other categories the market is much under penetrated. Currently the market is dominated by' multinationals in the baby diaper and the feminine hygiene category to the extent of above 90% and the

knit, TENCEL- Natural Raw Material (Eucalyptus Wood), No Smell, No Stain Fabric- Hydrolysis resistant with WR treatment, Recycled 100% PET and Anti Slip Fabric, etc.

adult diaper category is dominated by imports and Indian private label. Considering the low penetration levels many private and international players are looking at entering the market. Even though there is lack of awareness and many other disadvantages to resist the growth of the disposable hygiene industry, there seems to be a huge demand for such products. Retailers, Product convertors or raw material producers are all interested and want to be a part of this growing industry in India. The government is making a great push necessary to create awareness and support this industry which has really added a lot of meaning to awareness creation.

Mr. Basudev Basu from Ginni Filaments presented the topic on *"Usage of Spunlace Nonwoven in Medical Textile Products"*. He spoke on the importance of Medical Textiles and said that the disposable clothes are easy to use, hygienic and cost effective, by eliminating laundering process wherein cost comes to either equal or higher by 15% to 20% that of linen, in case of disposables. So, Disposable Nonwovens with required barrier properties are the requirement to reduce HAI. He pointed out that Medical Disposable Nonwoven Sales market is projected to grow at a CAGR of 5.1% with tonnage consumption at a CAGR of 6.2%. Surgical Drapes & Gowns is the largest medical nonwovens globally. Incontinence products are the 2nd largest and the fastest growing & Wound Care is the next fastest area. He emphasized that Spunlace Fabric is the best suitable application in Meditech products - a) its produced under controlled environment & strict quality checks of Hygiene and GMP standards, b) Testing for mould & bacteria, c) better absorption characteristics and wicking properties, d) Functional finishes like antimicrobial, liquid barrier properties but breathable with softer feel, e) 95% usage of Spunlace nonwoven are meant for Hygiene related applications and f) Compliance with BIS standards and International Standards.

PANEL DISCUSSION

The theme of Panel discussion was on “*Scenario of Technical Textiles in India*”. Dr. V. Shanbhag, Chairman, NISTI was the Moderator and the experts were Mr. Sanjay Raut, President (Technical and New Businesses), Garware Technical Fibres, Dr. Arindam Basu, Director General, NITRA, Dr. Mohan Varkey, Head of QC, Datt Mediproducts Ltd., Dr. Kuldip Sharma, CEO & Director, Megatech Overseas (I) Ltd. and Dr. Swapna Mishra, Director, Textile Skills Council were the panelists.

The panel discussion was a platform for the entities constituting a part of the larger eco-system of the technical textiles industry to present its views. Mr. Raut emphasized that the world's market place for technical textiles lay at India's feet to capture and narrated instances from his own company's experiences on how marketing and branding combined with perseverance and long term goals were vital to success in overseas markets. Dr Sharma described the intricacies of technical textiles projects and the pressure on new entrepreneurs to fall back on expert advice and

guidance through project development and commercialization. This naturally led to Dr Basu profiling the totality of the R&D system in India focused on technical textiles and, in particular, achievements of NITRA in the field of protective textiles in wide range of applications, topped by defence and security requirements. He drew attention to the prevailing syndrome of rarity for Indian industry to invest in R&D, which is essential for the growth of technical textile industry. Dr Jana threw a spotlight on the inclusion of this subject matter in the learning content devised by NIFT in its recent curriculum revision, noting particularly the evolving feature of wearable technical textiles amid their strong presence in active wear and other sporting applications. As the moderator highlighted the skill gaps that the industry complained about, Dr Mishra dwelt on efforts of the Textile Skills Council to survey the gaps and to work towards a diploma-level curriculum for human resource development specifically focused on the technical textiles industry.



The conference received over whelming response and attended by more than 170 delegates from the technical textile Industry, potential investors,

FEEDBACK FROM THE PARTICIPANTS

The feedback from the participants was very encouraging and most of them mentioned that their experience was overwhelming and the participation in the Conference was very useful. The topics

number of graduate & post-graduate students and teachers from various textile and management universities and colleges.

covered, speakers present and quality of discussion were very relevant in the context of encouraging the innovations in the field of Meditech, Protech, Mobiltech & Structural Composites.

3rd All India Shade Nets Manufacturers Meet – 2019 held at Daman

The 3rd All India Shade Nets Manufacturers Meet was held on 19th July, 2019 at Hotel Royal Garden, Daman to discuss the concerns and development in the Industry. Shri Amit Agarwal, Vice President, ITTA was instrumental in organising this event. More than 100 delegates attended the meet.



Mr. Amit Agarwal addressed the delegates by giving introduction on ITTA, its activities and achievements, investment drive, then discussed on the growth and development of the shade net industry. During the event following areas were discussed:

Refund of accumulated ITC against inverted Tax structure - Mr. C. K. Hande (Dy. General Manager) – Commercial, Garware Technical Fibres Ltd. - Patron Member - Indian Technical Textile Association.

- Discussion about Manpower - Target 2000 New Operators including Training module.



- CPWD - Schedule of Rates (SOR) of Scaffolding net - Ministry of Housing and Urban affairs.
- Distribution Channel Strategy – Mr. Sachin Patodkar GM (Marketing) - RAD Global Pvt. Ltd. Jaipur.
- Discussion about GEM – Govt. E Market Place: How do we get - Agro shade net/ Scaffolding net - to be on the Govt. of India - E procurement portal/ Marketing and Increase areas of application of Shade nets.
- Discussion about Notices received about Gujarat Pollution Control Board.
- Discussion with regards to the Selling Rates Including Profitability/ Defaults and Ministry of Corporate Affairs Notification on payments to MSME.

Indian Technical Textile Association (ITTA) had a table space at the meet wherein ITTA display their banner and discussed about the activities of ITTA and ITTA membership. During the meet, total 17 shade net manufacturers became the member of ITTA. Details of these companies are given in Page No. - 20 on - "Welcome to New Members" in this Issue.



ITTA ACTIVITIES

DEVELOPMENT OF INDIAN STANDARDS ON TECHNICAL TEXTILES

I. Meeting of BIS Sectional Committee on Composites and Speciality Fibres (TXD 40) in joint session with Sectional Committee on Textile Materials for Sportech Applications (TXD 37)-

The 2nd Meeting of Composites and Speciality Fibres BIS Sectional Committee, TXD 40 in joint session with Textile Materials for Sportech Applications BIS Sectional Committee, TXD 37 was held on 18th July 2019 in the Conference Room at Bureau of Indian Standards (BIS), Mumbai.

Since Dr. Anil Sharma, Director, WRA Chairman of the committee was not present. Mr. A K Bera of BIS requested Dr. Anup Rakshit, ED, ITTA to chair the meeting. The meeting was then conducted under the Chairpersonship of Dr. Anup Rakshit. The feedbacks submitted by ITTA members i.e. Saertex India Pvt. Ltd. & Nikol Advance Materials to BIS were discussed and necessary actions were taken.

Highlights of the discussion taken in the meeting-

1. Committee suggested to modify composition of the Committee. ITTA gave few members' names from the industry to include.
2. Start working on the identification of Stds as per the needs of the Industry (sector specific)
3. ITTA members gave list of International Standards on composites to develop by BIS.
4. 16 draft Indian standards (adopted from ISO) were sent for wide circulation. If no comment is received then they will be published.

II. BIS Expert Panel Meeting under Geosynthetics Sectional Committee-TXD 30

The 12th BIS Expert Panel meeting was held on 19th July, 2019 at Conference Room, BTRA, Mumbai. Dr. Anup Rakshit, ED, ITTA was the convener.

Following points were discussed & decisions taken-

1. Working draft of "Specification of geogrids for flexible pavement" was finalized by Panel members and sent to BIS-Delhi.
2. Working draft on "Specification for Polymeric Strip/Geostrip used as Soil Reinforcement In reinforced Soil Retaining Structures" and "Specification for Geogrids used as Soil Reinforcement in Reinforced Soil Retaining Structures" were discussed and comments to be incorporated.
3. Working draft on "Geosynthetics in Bitumen Layers for flexible pavements" to be developed and circulate to panel members.
4. Few changes were made in the Draft Test methods on Installation Damage of Geogrid during the meeting & sent to BIS, Delhi.
5. Preliminary drafts to be prepared on following topics- Geotubes, Geosynthetics Clay Liners (to be checked with BIS, Delhi), Geo-composite drains and Prefabricated Vertical Drains.

INNOVATIONS AND TECHNOLOGY

GEOTECH - Geogrid

Geogrid Made From 100 % Recycled Pet

Huesker has introduced the world's first Geogrid - ecoLine - made from 100 per cent recycled PET. The natural resources of the earth are limited. Therefore, it is all the more important to develop solutions that sustainably reduce consumption for example, in the form of waste and close material cycles. This is where the ecoLine concept comes in. As the first manufacturer of geotextiles worldwide, the Huesker Group, with headquarters in Germany, is now producing one of its most popular geogrids, the asphalt reinforcement HaTelit C, ecoLine from 100 per cent recycled polyethylene terephthalate (PET) yarns.

HaTelit C has been used successfully for more than 40 years as reinforcement in the rehabilitation of asphalt pavements. Different from the classic HaTelit reinforcement grids, which consist of conventionally produced PET, the ecoLine replaces one hundred per cent of the PET yarns with recycled yarns.

"The responsible and careful use of energy and resources is part of our sustainability strategy and is predominant throughout the entire value chain," stressed Dr. F- Hans Grandin, Managing Director of the Huesker Group. In addition, it has always been our aim to replace conventional construction methods with the use of innovative products and applications made of geosynthetics where they are a better alternative due to their many positive properties in terms of quality, safety and reliability and especially sustainability.

The recycled material is produced from disposed PET bottles, which can be fed back into the

production cycle in the form of granulate. "The recycled PET we use is an equivalent substitute for the original PET yarn. It has the same high quality and the same properties," says Mr. Sven Schroer. This was the prerequisite for the product launch of the eco version in order to be able to cover the full range of applications of the classic HaTelit C and at the same time offer a resource-saving alternative. Every kilogram of recycled PET yarn saves around 4.3 kg of CO₂ emissions if conventional PET yarn is avoided.



Huesker geotextiles are used worldwide in a wide variety of projects. These include earthworks and foundations engineering, roads and pavements construction, hydraulic engineering, environmental

engineering and mining. They often carry enormous loads, are exposed to heavy stress and must perform to high standards in their fields of application, such as slope protection, sealing for groundwater protection, flood protection or reinforcement in road construction.

"We test our products very carefully. They are only made available to the market when all the necessary evidence has been provided and they meet our high requirements. As is the case with the recycled PET yarns we use," Schröer points out. "HaTelit C eco is the first step. We are aware of our responsibility and will continue our ecoLine with further products in the near future," says Mr. Schröer.

[Source-<https://www.technicaltextile.net/news/huesker-unveils-geogrid-made-from-100-recycled-pet-251011.html>]

COMPOSITES - Aerospace Textiles

SGL Carbon extends Prepregs Supply to Elbe Flugzeugwerke

SGL Carbon and Elbe Flugzeugwerke, a German aircraft manufacturer, have extended their contract to supply prepregs (impregnated carbon fibre textiles) for use in the Airbus A350 cabin's floor panels by another year, to the end of 2020. SGL Carbon has been supplying Elbe Flugzeugwerke with carbon fibre prepregs for floor panels since the A350 was launched.

The panels are produced in a sandwiched technology using several prepreg layers. The composites used must be safe and reliable under extreme conditions. The material is highly flame-resistant and complies with the aerospace industry's fire protection regulations for interiors. Due to its low weight and its excellent strength and rigidity, the material is particularly well suited to the lightweight construction required by the aerospace industry. Carbon-fibre-reinforced plastic is significantly lighter than traditional materials such as aluminium or titanium.

The materials are produced at the SGL Carbon site in Willich, near Düsseldorf. The plant has state-of-the-art facilities for manufacturing pre-impregnated carbon fibre and glass fibre materials, and specialises in producing prepregs for the aerospace industry.

"We are delighted to be signing this contract with a longstanding customer, thereby further strengthening a constructive working relationship based on trust. The extension of the contract also underscores our expertise regarding the technology and materials involved in the aerospace sector," Mr. Andreas Erber, head of the aerospace segment of the business unit composites – fibres and materials at SGL Carbon said.

[Source-<https://www.compositesworld.com/news/sgl-carbon-and-elbe-flugzeugwerke-extend-contract>]

COMPOSITES - Automotive Textiles

Graphene-Enhanced Prepreg in Race Car

UK based Haydale, the global advanced materials group, announced that its graphene-enhanced prepreg has been incorporated in the composite tooling and automotive body panels in the new BAC Mono R. Briggs Automotive Company (BAC), working alongside both Haydale and Pentaxia, built the light-weight BAC Mono R body using Haydale's graphene-enhanced carbon composite materials.

The component parts have been formed using Haydale's graphene-enhanced tooling materials. The outcome of the process for manufacturing the body parts is a full visual carbon material which can be lacquered or painted as required. Graphene-enhanced tooling materials offers the potential for significant improvements in the coefficient of thermal expansion (CTE), a key issue with the use of metal tooling, the need for superior quality and higher dimensional stability, and the potential to increase the life of the tools.



Keith Broadbent, CEO at Haydale, commented that "In the development of this project, Haydale has improved the supply chain whilst enabling BAC to increase performance of the material. Whilst this outcome has focused on the automotive sector, the

knowledge and improvements made provide a wider opportunity for tooling materials across several markets, particularly where there are throughput constraints.”

Ian Briggs, Design Director at Briggs Automotive Company, added “BAC is forever an innovator, and being able to release a new car fully incorporating the use of graphene is just another example of how we’re pushing the boundaries. Niche vehicle manufacturers are of paramount importance in the automotive industry, acting as stepping stones for

mass-market production technology – and after the overwhelming success of our R&D project with Haydale and Pentaxia, Mono R could well be a stepping stone for graphene-enhanced composite body panels and tooling reaching the wider automotive industry in the near future.”

[Source-<http://haydale.com/2019/07/12/haydale-graphene-enhanced-composite-tooling-and-automotive-body-panels-showcased-on-new-bac-mono-r/>]

Lightweight rear seat shell in composite design-

The Tepex continuous-fibre-reinforced composites from Lanxess, Germany are used in large-scale production for various structural components for

Henrik Plaggenborg, head of Tepex automotive at the Lanxess high performance materials (HPM) business unit said.



“In the hybrid moulding process, by contrast, a ready-to-install component is created in a single process step. The pre-contoured and heated semi-finished composite product is formed directly in the injection moulding tool for this purpose, and equipped with numerous functions by means of injection moulding. This simplifies subsequent assembly and leads to considerable savings in production costs,” Mr. Tilmann Sontag, project manager at the Tepex automotive group of HPM said.

lightweight automotive design. It is currently used in the Audi A8 car. This sedan car is also offered with two electrically adjustable individual rear seats, the shells of which have been developed by Faurecia automotive seating and are manufactured using the hybrid moulding process. The polyamide-6-based Tepexdynamite 102 RG600 (2)/47 per cent is used for this purpose. The short-glass-fibre-reinforced Durethan BKV30H2.0 polyamide 6, also from Lanxess, is used as an over-moulded material.

“The reason that our composite material was chosen for this structure was the fact that it is around 45 per cent lighter than a comparable metal design but can also be produced cost-effectively, thanks to the high degree of functional integration. It can also withstand the high mechanical loads in a crash,” Mr.

In addition to reinforced ribs, the piping groove for securing the seat cover in place as well as numerous holders and guides (e.g. for seat ventilation and cable holders) are integrated into the component. The clips to attach the seat shell are also directly injected. “The shell can be assembled easily and quickly without screws using the clips, and disassembled again for servicing purposes. The clips are highly stable and meet all relevant safety requirements,” continued Mr. Sontag.

[Source-<https://lanxess.com/en/corporate/media/press-releases/trade-technical/2019-00052e/>]

New Laboratory and Materials Testing Facility in Shanghai

USA based Hexcel, Progen, Germany and Future Aerospace based in China celebrated the official opening of their new joint venture laboratory and materials testing facility in Shanghai, China.

Future Aerospace Hexcel Commercial Composite Testing Limited (FAHCCT) will provide China with a world-class aerospace standard materials testing laboratory that provides technical services including support with materials qualification for commercial aircraft programs. Planned activities at the site will include mechanical and chemical testing of composite laminate specimens (including fatigue performance), material qualifications, and provision of support for customer supply chains in China.

This extensive new laboratory, with more than 1,000 square meters of floor space, will be fully operational in the coming weeks, employing 18 technicians to perform highly reliable testing of composite materials for commercial aerospace



customers in China and the wider Asian region.

The new laboratory was awarded AS9100 certification and will work on existing and future aerospace customer specifications using state of the art equipment and standards that are already in use at other Hexcel facilities worldwide.

[Source-<https://www.compositesworld.com/news/sgl-carbon-and-elbe-flugzeugwerke-extend-contract>]

MEDITECH - Wipes

Plastic free and eco-friendly Body Sized Wipe

Outdoor enthusiasts, sports fans, festival-goers and campers can now take a refreshing shower whatever their location with the utterly refreshing new whole body wipe, Mammoth Wipes. A cutting-edge design which offers a hygienic and eco-friendly whole body refresh when traditional facilities aren't available, Mammoth Wipes make it easy to clean up quickly without polluting the planet.

Created using a sustainable, fully biodegradable bamboo material Mammoth Wipes are 25 times bigger than a regular face wipe and an absolute essential for anyone spending a night under the stars, getting back to nature or roughing it out at a Tough Mudder or



Spartan type event. With no palm oil, and no harsh chemicals, each super large, super soft wipe is completely paraben-free and safe for sensitive skin.

Ideal for festivals and other outdoor events where showers and running water is limited or non-existent, the giant bamboo material wipes are easy to use and easy to pack. Each skin-friendly wipe is infused with a water-based antibacterial liquid, wild lemon-fresh scent and a soothing aloe leaf juice skin conditioner. Simple pull out, wipe on and refresh to leave skin feeling clean and cleansed.

Mammoth Wipes are also completely plastic free, have recyclable packaging and are fully

biodegradable. Each wipe measures 120 x 80cm (47.24" x 31.50") with two in each pack, making them the ideal size for full-body cleaning. The wipe gently removes dirt, grime and sweat easily, they also incredibly lightweight and easy to pack, making

them ideal for off the grid adventures. They are totally unique, give a full body clean, can be used anywhere and aren't harmful to the environment.

[Source-<https://mammothwipes.com/>]

HOMETECH - Masks for cosmetics purpose

Bamboo-based masks feature natural ingredients

Petitcomo, a Korean cosmetic brand, has launched two types of Bling Light Up Masks which contain EWG green grade natural ingredients. These new sheet masks, Ampoule Mask Black Edition and Aqua Mask White Edition, infuse elasticity and vividness into skin affected by hot weather. They are also effective for improving skin tone.

Ampoule Mask Black Edition contains a variety of ingredients such as propolis extract, royal jelly extract, lavender oil, and orange peel oil which are great for skin nourishment and elasticity improvement. Meanwhile, Aqua Mask White Edition soothes heat-affected skins by infusing a rich and comfort watery feeling with its ingredients including Lactobacillus fermentum, purslane extract, and chamomile oil.

The masks' triple-layer-embossing Bella soft sheets are made of bamboo which enables high adherence and low irritation to the skin. These mask products are made by the renowned cosmetic brand, featuring high-quality natural ingredients and advanced technology. Users will recognize its moisturizing effects immediately after using this product. The products also make their makeup more effective.

[Source - https://www.nonwovens-industry.com/contents/view_breaking-news/2019-07-11/petitcomo-launches-sheet-masks/15304]



ITTA SIGNED MOU WITH TAIWAN TECHNICAL TEXTILE ASSOCIATION (TTTA)

Taiwan Technical Textiles association (TTTA) is the leading technical textile association in Taiwan, having membership consists of cross field manufacturers, distributors, industry groups, R&D units and academic experts. At present TTTA have over 200 members. The objective of MOU is:-

1. To jointly organise International workshop, seminar or symposium for technical textile companies of both the countries.
2. To jointly promote development of product testing standards
3. To support the major events on Technical Textiles/Nonwovens and related industries organized by ITTA & TTTA members.

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For more information contact: 'A' Block, BTRA, L.B.S. Marg, Ghatkopar (W), Mumbai 400086
Tel: 022-25003098; Mob: 9769464616 Email: officeed@ittaindia.org

Members' Forum

STRATA GEOSYSTEMS (INDIA) PVT. LTD.

STRATA get GAI-LAP Certified for Geosynthetic Laboratory

Strata has been awarded the Geosynthetic Accreditation Institute - Laboratory Accreditation Programme (GAI-LAP) certification for manufacturing of StrataGrid (flexible PET geogrids) and StrataWeb (geocell) at its new manufacturing facility in Daheli, India, which opened in early 2019. The company produces geosynthetic products and engineering solutions.

The GAI-LAP accreditation designates that the products and services meet the needs of customers through an effective and consistent quality management system. Strata is one of the few companies in India whose laboratories are GAI-LAP accredited, according to a media statement by the company.

Geosynthetic Accreditation Institute confers accreditation to laboratories proving compliance with equipment and documentation for specific standards (ASTM and / or ISO) test methods. In addition, GAI-LAP verifies that an effective quality system exists by way of proficiency in testing. The programme's goal is to accredit geosynthetic laboratories for performing consensus standardized test methods for equipment, documentation, and testing protocol. With the onset of Strata's new manufacturing facility, they have invested in new-generation equipment along with improved testing mechanisms. There are approximately 100 labs across the world with GAI-LAP accreditation.

SYSTEM 5S PRIVATE LIMITED

Inspiring Business Icon Award for SYSTEM 5S

SYSTEM 5S based in Chennai, focused on the need for protective equipment for those working in hazardous environment such as electric arc suits, flame and heat protective workwear, clean room garments and others. They have research and technical division which continually strives to provide top-quality high-tech products which ensure safety and protection.

Their innovative ideas and untiring efforts paid off as Mr. Sudhir Takker & Mrs. Bhavna Takker have been recognised as INSPIRING BUSINESS ICON OF THE YEAR. They are addressed the need for personal protective equipment (PPE) for employees working in hazardous environment like fire and power industries.

"Till 2003, most fire fighters in India

used cotton uniforms, whereas the developed countries used inherently flame and heat resistant, lightweight fire fighting suits. That way, we began our journey in 2003. We designed an in-house, world class product but with no buyers from India," explains Mr. Sudhir. "Though our unique idea took shape it faced lot of hurdles all through journey before it reached its destination which in other words is success and profitability".



Mrs. Bhavna said that, “The biggest challenge initially was customer’s limited knowledge and budget. It was a totally new concept in India. Some people wondered why there should be a different dress code altogether. We understood that educating the customer was prime on our agenda and that if we created awareness in them the desire to procure the product will ensure that budgets are provided for. Hence, after several years of educating the customers on the benefits of the product we

broke ground in 2008 and then over the next ten years we equipped each metro city in India with our world class firefighting suits. One can view the firefighting suits designed by us whenever you watch firefighting activity in major cities like Delhi, Mumbai, Chennai and Kolkata”.

ITTA PUBLICATIONS

Name of the Publication	Price*	Type of Publication
International Conference on “Technology & Machinery Innovations for Technical Textiles” held on 19th January, 2019	₹2000	Seminar Proceedings (CD-ROM)
3 rd Defence-ITTA Joint Exhibition cum Seminar on Technical Textile held on 22 nd & 23 rd May 2017	₹2000	Seminar Proceedings (CD-ROM)
2 nd Defence-ITTA Joint Exhibition cum Seminar on Technical Textile held on 15 th & 16 th June 2016	₹1000	Seminar Proceedings (CD-ROM)
First Indian Navy-ITTA Seminar on Clothing and Footwear held on 7 th & 8 th January 2016	₹1000	Seminar Proceedings (CD-ROM)
Symposium on Medical Textile - Applications & Opportunities held on 14 th July 2015	₹1000	Seminar Proceedings (CD-ROM)
Symposium on Hi Tech Application Areas of Nonwoven held on 30 th Jan 2015	₹1000	Seminar Proceedings (CD-ROM)
Handbook on Geosynthetics case studies of ITTA Members (2013)	₹750	Handbook

* Courier charges extra

For Copies Contact

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New Members

WELCOME TO NEW MEMBERS

Following companies are the manufacturers and exporters of warp knitted fabrics i.e. all kind of Agro Shade nets for agriculture, horticulture and construction having Raschel warp knitting machines-

1. **AGRONET INDIA**
2. **RAD GLOBAL PRIVATE LIMITED**
3. **SURAJ AGRO TECH**
4. **MOHINI TRADELINK**
5. **NANDINI AGRO SHED NETS PVT. LTD.**
6. **PLASTICA INDUSTRIES**
7. **HARSIDDHA AGRO NET**
8. **GREEN AGROPLAST PVT. LTD.**
9. **SHREE SHYAM INDUSTRIES**
10. **KISAN AGRONET INDUSTRIES**
11. **DEV INDUSTRIES**

Following companies are the manufacturers and exporters of different types of agro shade nets of various sizes & quality having facilities of warp knitting machine and extrusion plant-

1. **VRUNDA VITTHAL POLYNET LTD**
2. **AGROCARE INDIA**
3. **PLENTY PLASTICS PVT. LTD.**
4. **SHUBHAM SALES**
5. **YOGESH PLASTIC INDUSTRIES**



ITTA SIGNED MOU WITH NISSENKEN QUALITY EVALUATION CENTRE (NQEC)

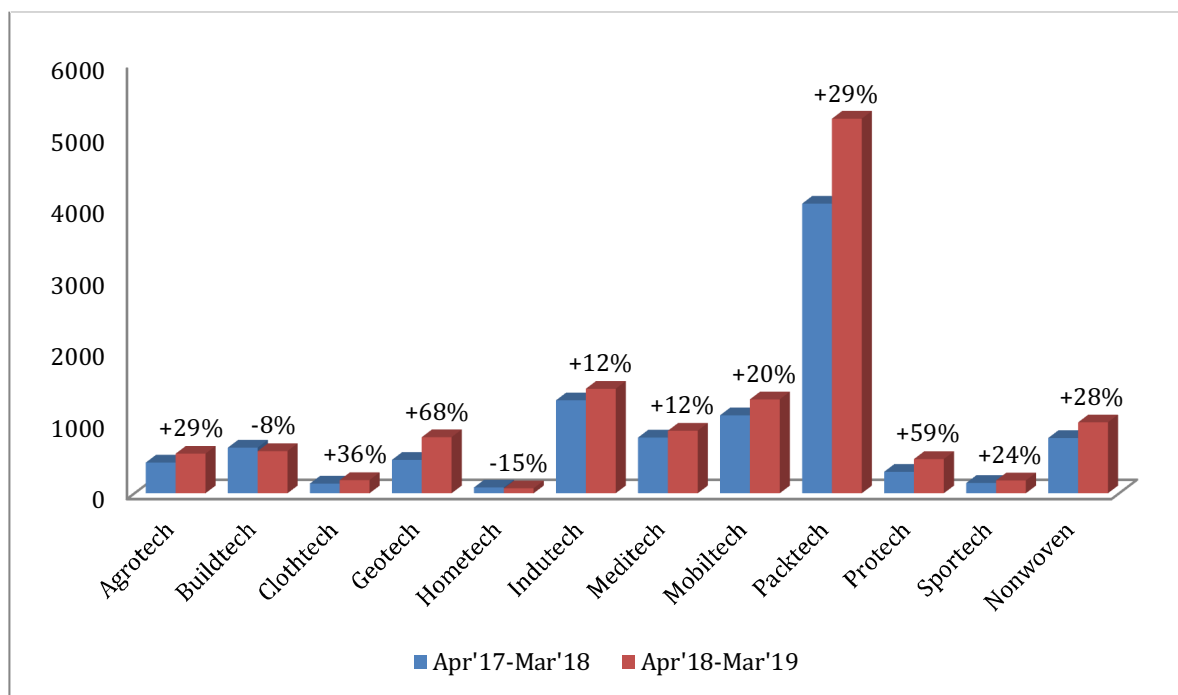
Nissenken Quality Evaluation Centre having its head office at Tokyo and India representative office in Jaipur- is Japan's leading quality evaluation institute in the field of textiles. It has been serving the textile industry with its testing and inspection services. Additionally NQEC has been conducting research and development works for the textile industry world over. Benefits of the MOU are:-

1. Visit of a High level delegation to Japan for exploring investments and collaboration.
2. To promote development of testing standards and getting product certification for acceptance of products in International market for members.
3. To jointly organise International workshop, seminar or symposium for technical textile companies.

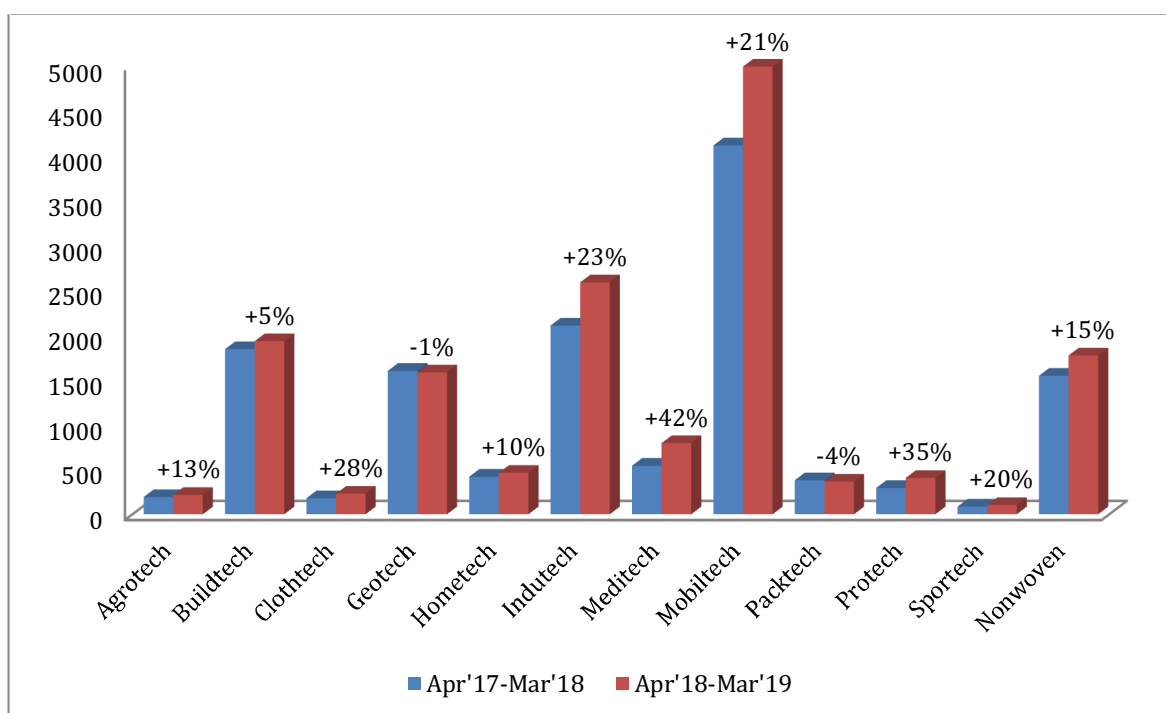
EXPORT-IMPORT PERFORMANCE OF TECHNICAL TEXTILE PRODUCTS

YEARLY EXPORT-IMPORT PERFORMANCE OF TECHNICAL TEXTILE PRODUCTS - FY2018-19

EXPORT PERFORMANCE



IMPORT PERFORMANCE:



MONTHLY EXPORT-IMPORT PERFORMANCE OF TECHNICAL TEXTILE PRODUCTS

The data on export and import of 207 technical textile products/items is published as an indicator of foreign trade performance of technical textile industry in India.

EXPORT PERFORMANCE

(Value in INR Cr.)

Sr. No	Segments	Apr 2018	Apr 2019	% Change	Apr'17-Apr'18	Apr'18-Apr'19	% Change
1	Agrotech	58	71	21%	487	569	17%
2	Buildtech	69	75	6%	658	591	-10%
3	Clothtech	12	19	50%	158	196	24%
4	Geotech	52	73	73%	467	785	65%
5	Hometech	9	7	-13%	95	72	-24%
6	Indutech	129	145	26%	1296	1465	12%
7	Meditech	85	91	5%	771	862	12%
8	Mobiltech	104	118	18%	1092	1342	20%
9	Packtech	410	448	13%	4051	5231	29%
10	Protech	57	81	85%	302	489	49%
11	Sportech	15	21	31%	154	180	24%
12	Nonwoven	85	96	13%	785	987	26%
	GRAND TOTAL	1035	1251	21%	10307	12723	23%

Data Source: ITTA Analysis on Ministry of Commerce and Industry (at 8 digit level of HSN Codes)

ITTA Analysis on data (Apr'17-Apr'18 vs. Apr'18-Apr'19) of Top Three Growth Sectors-

- a) **Geotech (+65%)** - Key Products: Woven geotextile, Non-metallic gabions, geo-grids and geo-composites
- b) **Protech (+49%)** - Key Products: Industrial Gloves, Wind Cheater and Rain Coats, Fire Retardant fabrics, NBC Suits & Chemical Protective Clothing and Bullet Proof Jacket
- c) **Packtech (+29%)** - Key Products: Jute Hessian & Sacks and FIBC

IMPORT PERFORMANCE*(Value in INR Cr.)*

Sr. No	Segments	Apr 2018	Apr 2019	% Change	Apr'17-Apr'18	Apr'18-Apr'19	% Change
1	Agrotech	17	26	53%	201	245	5%
2	Buildtech	169	179	8%	1868	1957	5%
3	Clothtech	17	25	47%	198	258	30%
4	Geotech	108	131	15%	1589	1578	-1%
5	Hometech	39	41	6%	445	468	10%
6	Indutech	185	202	7%	2101	2595	23%
7	Meditech	98	85	-13%	539	796	57%
8	Mobiltech	401	426	6%	4155	4981	21%
9	Packtech	48	51	-2%	385	362	-6%
10	Protech	39	52	33%	305	457	50%
11	Sportech	21	16	-17%	96	108	13%
12	Nonwoven	154	165	6%	1584	1745	10%
	GRAND TOTAL	1280	1374	7%	13348	15551	17%

*Data Source: ITTA Analysis on Ministry of Commerce and Industry (at 8 digit level of HSN Codes)***ITTA Analysis on data (Apr'17-Apr'18 vs. Apr'18-Apr'19) of Top Three Growth Sectors-**

- a) Clothtech (+30%)** -Key Products: Umbrella cloth, Taffeta and Elastic Narrow Fabrics
- b) Meditech (+57%)** - Key Products: Surgical dressing, Compression Garments, Sanitary Napkins, Tampons, Baby Diapers, Incontinence diapers and Adult diapers
- c) Protech (+50%)** - Key Products: Industrial Gloves, Wind Cheater and Rain Coats, Fire Retardant fabrics, NBC Suits & Chemical Protective Clothing and Bullet Proof Jacket

UPCOMING EVENTS

JULY 2019

TEXWORLD USA

22-24 July 2019 at Javits Center, New York, USA
Web: <https://texworld-usa.us.messefrankfurt.com>

ITTA & NISTI jointly organizing Conference and Exhibition on "OPPORTUNITIES IN HIGH GROWTH SEGMENTS OF TECHNICAL TEXTILES"

12th July 2019 at Silver Oak Room, India Habitat Center, New Delhi.
Web: <http://www.ittaindia.org>

AUGUST 2019

Gartex India 2019 - Garment & Textile Industry Exhibition

10-12 August 2019 at Pragati Maidan, Delhi, India
Web: www.gartexindia.com

4th edition of Source India - Reverse Buyers Sellers Meet organized by SRTEPC

21-23 August 2019 at Mumbai
Web: www.sртеpc.org

Technotex 2019

29-31 August 2019 at Bombay Exhibition Centre, Goregaon, Mumbai
Web: www.technotexindia.in

Sport India 2019- 7th India International Sporting Goods Show

29-31 August 2019 at Pragati Maidan, Delhi, India
Web: www.iisgs.com

OCTOBER 2019

IFAI Expo 2019

1-4 October, 2019 in Orlando, Florida
Web: www.ifai.com

OUTLOOK™ 2019

9-11 October, 2019 at InterContinental Athenaeum Hotel, Athens, Greece
Web: www.edana.org

NOVEMBER 2019

Techtextil India 2019

20-22 November, 2019 at Bombay Exhibition Centre, Goregaon, Mumbai
Web: <https://techtextil-india.in.messefrankfurt.com>

8th OSH India (Mumbai) 2019

28-29 November 2019 at Bombay Exhibition Centre, Goregaon, Mumbai
Web: www.oshindia.com

MARCH 2020

Geosynthetics Conference 2020: Case Studies

8-10 March 2020 at Charleston, SC USA
Web: www.ifai.com