

Morocco is among the countries intent on cutting out its share of this market.

Ismael Daoudi, founder of Platform and Design, is hoping to increase revenue for his ready-to-wear company on the US market by 25%.

Working with European companies in the past years, Moroccan manufacturers have learned to be more flexible and deliver faster. Crucially, they have learned to diversify.

“When you visit a Moroccan factory today, they don’t specialise in a single product, you’ll find jackets, shirts, dresses, trousers, etc... something that’s not available in Asia or in countries like Turkey for example,” he says. Another advantage for Morocco is a 2006 free trade deal with the United States. At one condition: the clothes must be 100% made in Morocco. This has even become a selling point.

“We have decided to make it a strength. So I had this Casablanca 1987 embroidery made especially, because there’s no reason why we shouldn’t say we’re based in Morocco, so we make a point of showing it clearly, it’s a reference,” explains Martin L Neuman, stylist, Manufacture Marocaine de Confections.

This edition also saw a number of B to B meetings between Moroccan manufacturers and American buyers, in the hope of increasing sale figures from the January edition of Premiere Vision New York, which totalled more than 3 million dirham.

### Nonwovens dominate the hygiene market and are projected to grow at twice the rate of wovens/textiles

The global hygiene market is projected to consume 6.0 million tonnes of nonwovens and wovens/textiles with a total value of \$23.1 billion by 2021, and a projected annual growth rate of 6.4% from 2016-21, according to Smithers Pira.

The hygiene market, as defined in *The Future of Global Hygiene Markets to 2021: Wovens vs Nonwovens*, includes traditional hygiene (diapers/ nappies, feminine hygiene and adult incontinence), medical and wipes markets. This report includes market data for products used in these markets based on both nonwoven and woven/textile substrates.

Based on sales and consumption data, nonwovens dominate the hygiene market and continue to grow at two times or more the rate of wovens or textiles. Still, the wovens market in hygiene is over \$1.3 billion in 2016. One of the key trends driving the global hygiene market is the growth of disposables

versus reusables, each of the three major segments of the hygiene market has a segment where disposables are replacing or continue to replace reusable products.

The major battle in traditional hygiene markets is in baby and adult diapers, nonwovens versus where decades ago reusable cotton cloth textile diapers were replaced by disposable wovens diapers. In most developed regions today, disposable diapers have a large majority. In developing countries and regions, disposable penetration is much lower, but the alternative varies from no diaper to a ‘many use’ textile ‘diaper’.

Spunlaid is the largest forming process used in the global hygiene market, dominating two out of the three major segments of the hygiene market (traditional hygiene, medical). Only in wipes is spunlaid a small player. In 2016, spunlaid is the leading web forming process with about 42% of all nonwovens consumed, or 1.9 million tonnes consumed. Spunlaid has grown so fast and is so large that it is projected to slow in growth significantly from 2016–21, to only 6.3%. By 2021, consumption of spunlaid is projected to reach 2.5 million tonnes.

### VDMA promotes German textile machinery in Vietnam

About 600 decision-makers and experts from the textile and textile machinery industry attended two VDMA conferences themed German Technology meets Vietnamese Textiles on 5 July in Hanoi and on 7 July in Ho Chi Minh City. In addition, a VDMA training seminar for 200 students took place on 8 July at the HCM City University of Technology.

The participants came from various countries, such as Vietnam, Germany, France, China, Hong Kong, Taiwan, Korea and Turkey. They received information about state-of-the-art technology from 24 participating VDMA member companies representing the entire textile chain, including spinning, knitting, weaving, nonwovens, dyeing and finishing.

Higher productivity, sustainability (energy, water, and material efficiency), new textile applications, quality improvements, as well as Industrie 4.0 - opportunities for the textile industry were some of the topics discussed in the lectures, during the panel discussion and at the B2B Matchmaking.

See more at: <http://www.innovationintextiles.com/vdma-promotes-german-textile-machinery-in-vietnam/#sthash.9XDxRdDQ.dpuf>



# World Textile News

## NASA Sensor Technology in Fabric to Revolutionize Textile Industry

US researchers and entrepreneurs developed “clever” textile that can detect moisture in the air, gauge the outside temperature and even send health alerts. When an ambitious businesswoman, Susan Bernard, attended the NASA Technology Days in Cleveland, Ohio, and learned about the latest NASA sensors, the idea of creating Textile Instruments was born. The project was about integrating a novel sensor technology into a fabric that would be able to monitor the condition of living beings. The technology called SansEC, which is short for “without electrical connection,” is a sensor that functions using electromagnetic vibrations in the air and does not need to be plugged in or use batteries. Originally developed by NASA Langley researcher Stanley Woodard, SansEC can simultaneously measure different physical phenomena, like temperature and fluid level, and functions even when badly damaged. A remote antenna “interrogates” the sensor and collects the measurements. At the beginning Woodard imagined using the sensor on space systems such as inflatable habitats or the Mars airplane. However, Textile Instruments is now a NASA licensee for the promising technology. With various embroidery techniques and a multitude of fabrics, the sensors can be virtually added to existing materials, uniforms or weaved directly, creating a highly resonant sensor at a low cost with no additional weight, NASA said in a statement. Textile Instruments has already made a prototype blanket. “We’re able to detect moisture, temperature and movement,”

Bernard said, “and we recently know how to interrogate the sensor to read heart rate. We’re still very much in the research and development on the heart rate.”

“The challenge is to find uses for the sensors, creating viable products we will use daily as consumers. Our recent communications with venture capital firms indicate they are clamoring for real prototypes. There is a demand for hardware and we have a viable path to produce them,” Bernard added. This detection system can be used to test for water levels, iron or salinity, blockages, leaks or pipe integrity. The sensors can also be helpful for home security when placed in the floors to provide motion detection. They could detect spoiled food, like milk and meat. The technology is also applicable in the healthcare, sportswear, and military markets, according to Robert Donley, Chief Technology Officer at Textile Instruments.

## Morocco cuts share of US fashion market at PremiereVision New York

More than 350 exhibitors have been displaying their products to some 4,500 buyers from across the United States in a New York warehouse for the July edition of the Première Vision New York. Their choices will determine next year’s trends when it comes to fabrics, textile design and accessories. “Première Vision New York helps companies working in the textile, accessories, but also leather and manufacturing industries to target the American market, which is strategic because it’s the second fashion market in the world after Europe,” explains Première Vision manager, Gilles Lasbordes.



seeking investment opportunity said that Kenya is particularly leveraging on Iran's expertise in the textile and oil and gas sectors to develop strong local industries and seeks to enrich trade ties between the two countries.

The meeting is a follow-up of a memorandum of cooperation signed between the two countries during the 10th ministerial meeting of the World Trade Organization.

The bilateral partnership comes a time when Kenya has ramped up its business environment, proposed tax incentives for Export based industries like special economic zones in Mombasa, Lamu and Kisumu.

Kenya and Iran will look to build their trade portfolio in agro-processing, textiles, leather, management and constructive materials.

Mr. Reza said that through these discussions they can explore alternative industries to expand their trade ties like ICT, textile and leather among others. They look forward to increased interaction in the coming months and years.

Iran is currently a large importer of Kenyan tea, horticulture and a major exporter of oil to Kenya as it has plans to expand its reach in East Africa.

According to the Iranian trade minister, Iran is targeting better relations with Africa and Kenya competitive positioning in Africa is crucial in this agenda.

#### Iran's hand-woven carpet exports up 8.39% in spring

Iran exported more than 2,000 tons of hand-woven carpets worth above \$66 million in spring 2016, indicating a 120 percent rise in volume and 8.39 percent growth in value compared with the corresponding season last year.

Exports of hand-woven carpets stood at 900 tons worth \$47 million in spring 2015, the report said.

As Mehr news agency reported in early June, head of Iran National Carpet Center (INCC) confirmed acceleration of Iran's hand-woven carpet exports to world market by return of traditional customers including the U.S.

"Despite unfavorable export figures for the Iranian hand-woven carpet last year, a significant growth

was perceived at the beginning of the new Iranian calendar year (began March 20, 2016) promising a better future for economic activists," Hamid Kargar said at the time.

#### Iran reports huge rise in exports to US

The latest official figures show that there has been a whopping rise in Iran's exports to the United States in the second quarter of 2016.

Figures released by Iran's Customs Administration show that Iran exported Rials 300 billion (about \$8 million) to the US over the period. The figure marks an 80-fold increase compared to the same period last year when it stood at only Rials 3.8 billion (\$0.1 million).

The total weight of Iran's exports to the US has been registered at above 250 tons and the main products have been cited as wool carpet floorings and food products.

The value of Iran's imports over the same period stood at Rials 430 billion (\$12 million). The weight of the imports has also been registered at 2,500 tons.

The main items imported are food supplements, wood paste, and livestock feed.

The weight of last year's exports of Iran to the US over the second quarter of 2015 stood at 24 tons at a total value of Rials 870 billion (\$1 million). The imports over the same period weighed 9,000 tons with a total value of Rials 870 billion (\$24 million).

Iran's Customs Administration has announced that the balance of trade between Iran and the US is negative by Rials 110 billion (\$3 million).

Earlier, figures previously released by the US Department of Commerce showed that the collective level of trade between the two countries dropped by 17 percent in the first half of 2016.

The overall level of trade between the two countries over the same period last year stood at above \$112 million. This, however, has now dropped to as low as \$93.1 million over the period which is specifically marked by the removal of sanctions against Iran in January.

# Iran Textile News

## MoU makes India largest textile exporter to Iran

In a significant development for Indian garment exporters, Iran has agreed to slash import duties on Indian textile products by 20-25 % in two years and signed an MoU that would make New Delhi the largest textile exporter to Iran.

An MoU to this effect was signed between Apparel Export Promotion Council (APEC) and the powerful Teheran Garment Union (TGU) on July 18 at the 57th India International Garment Fair (IIGF) in Delhi.

TGU is an influential manufacturers and retailers association with legislative power in terms of Garment Commercial affairs in Iran.

India exported RMG worth \$ 21 million to Iran which constituted a minuscule 2.5% of the \$ 825 million worth of RMG that Iran imported from the world in 2015, according to UN Comtrade data 2016.

It is learnt that the MoU would remain in effect till July 18, 2017, according to a press release of APEC, which had been in talks with TGU for several months before the inking of MoU.

It was signed by APEC chairman Ashok G Rajani and TGU Vice-President Mohamad Javad Sedghamiz on behalf of their respective organisations.

As per the MoU, APEC and TGU would make efforts to promote bilateral trade and industrial cooperation in the textile and fashion sectors by sharing experiences and knowledge, actively cooperating to provide relevant information for enhancing bilateral

trade and facilitating and supporting trade relations between AEPC and TGU.

"The MOU is a result of persuasions and convincing that was undertaken by the delegation AEPC had sent to Iran in the month of April. The delegation had invited TGU leaders to visit the IIGF so that they could get a firsthand experience of the quality and diverse range of Indian apparel," Rajani said.

The 3-day IIGF played host to 416 Indian exporters, who got opportunity to exhibit their products to foreign clients. More than 1500 international buyers and 1000 plus buying agents kept the atmosphere pulsating at the fair.

Union Minister of state for Textiles, Ajay Tamta, who inaugurated the IIGF, such events provide domestic exporters an opportunity to exhibit their products, which meets the international quality and technology standards.

"Events like these give a boost to the Make in India programme as the platform encourages smaller player and debutants to work towards making it a reality," he said.

## Kenya, Iran seek to enrich trade ties and develop strong local industries

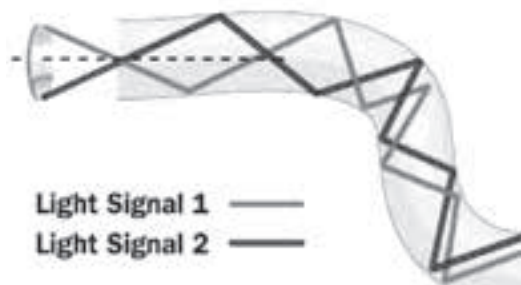
Trade and Industry Cabinet Secretary Adam Mohamed during a meeting with Iranian minister of Trade and Mining Mohammed Reza who is in Kenya



### 1.1. The Relationship between Light and Fiber Optics

Suppose you want to shine a flashlight beam down along, straight hallway. Just point the beam straight down the hallway and light travels in straight lines, so it is no problem. If the hallway has a bend in it, you can place a mirror at the bend to reflect the light beam around the corner. And if the hallway is very winding with multiple bends you may line the walls with mirrors and angle the beam so that it bounces from side-to-side all along the hallway.

This is exactly what happens in an optical fiber.



Scheme 2 total internal reflection in an optical fiber

The light in a fiber-optic cable travels through the core (hallway) by constantly bouncing from the cladding (mirror-lined walls), a principle called total internal reflection (Scheme 2). Because the cladding does not absorb any light from the core, the light wave can travel great distances. However, some of the light signal degrades within the fiber, mostly due to impurities in the glass. The extent that the signal degrades depends on the purity of the glass and the wavelength of the transmitted light.

### 1.2. A Fiber-Optic Relay System

To understand how optical fibers are used in communication systems, let's look at an example from World War II. Suppose that two naval ships in a fleet need to communicate with each other while maintaining radio silence. One ship pulls up alongside the other. The captain of one ship sends a message to a sailor on deck. The sailor translates the message into Morse code and uses a signal light to send the message to the other ship. A sailor on the deck of the other ship sees the Morse code message, decodes it into English and sends the message up to the captain. Now, imagine doing this when the ships are on either side of the ocean separated by thousands of miles and you have a fiber-optic communication system in place between the two ships.

**Fiber-optic relay systems consist of the following:**

- Transmitter - Produces and encodes the light signals
- Optical fiber - Conducts the light signals over a distance

-Optical regenerator - May be necessary to boost the light signal (for long distances)

-Optical receiver - Receives and decodes the light signals

#### - Transmitter

The transmitter is like the sailor on the deck of the sending ship. It receives and directs the optical device to turn the light "on" and "off" in the correct sequence, thereby generating a light signal.

#### - Optical Regenerator

Some signal loss occurs when the light is transmitted through the fiber, especially over long distances (more than a half mile, or about 1 km) such as with undersea cables. Therefore, one or more optical regenerators are spliced along the cable to boost the degraded light signals.

#### - Optical Receiver

The optical receiver is like the sailor on the deck of the receiving ship. It takes the incoming digital light signals, decodes them and sends the electrical signal to the other user's computer, TV or telephone (receiving ship's captain). The receiver uses a photocell or photodiode to detect the light.

## 2. Fiber Optics In Sport Textile

### 2.1. Smart Shirt

Smart Shirt is a computer t-shirt woven with fiber optics and electrically conductive thread that can monitor the health of soldiers, rescuers, the elderly and others who are medically vulnerable. The main advantage of Smart Shirt is that it provides a very systematic way of monitoring the vital signs of humans in an undisturbing manner. To use this new technology; first sensors are attached to the body, then the shirt is pulled on and sensors are attached to the shirt.



### 2.2. smart sport equipment



In the next number magazine read: smart fiber in sport equipment

# FIBER OPTICS IN SPORT TEXTILE



## Smart Textiles for Sportswear:

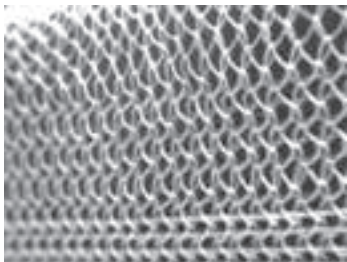
In accordance with the advancement of the Soldier Warrior Systems Technologies, this project is investigating and developing the methodology and the manufacturing processes for integration of electrical and optical conductive networks, miniature sensors, and electronic devices into clothing, webbing or other textile based materials that are worn by soldiers.

The Soldier Warrior Systems are equipped with several electronic communication and display devices that provide essential information and awareness to the ground soldier.

Currently traditional conductors made of heavy cables with multiple copper wires are draped over the soldier's body to connect his weapon, computer, and other devices. Integrating lightweight wires and fiberoptic conductors into the soldier's clothing or selective equipment will not only provide cost savings but will also provide a tremendous weight savings, an advantage of great importance to the soldier.

The developed technologies will form the basis for future optoelectronic textiles that can be used in many industrial, biomedical, aerospace, and military application.

The figures below illustrate examples on how fibers are integrated in textiles.



The structure includes six optical fibers and four fine ropes. The ropes match with the size of electric wires

Article



Dr. Farnaz Nayeb morad

Dear audiences hereby, we inform you the amendment to author of the bellowing article, replaced it by **Farnaz Nayebmorad**

**"Textile Technology in Sport and Medicine"**, published in NassajiEmrouz monthly issue 162

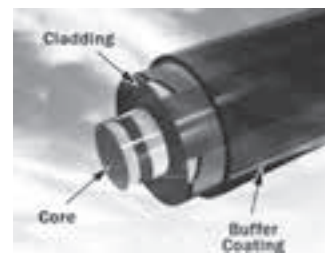
## Fiber Optics

Fiber optics are long, thin strands of very pure glass about the diameter of a human hair. They are arranged in bundles called optical cables and used to transmit light signals over long distances.

Core -Thin glass center of the fiber where the light travels  
Cladding- Outer optical material surrounding the core that reflects the light back into the core  
Buffer coating -Plastic coating that protects the fiber from damage and moisture  
There are two types of optical fibers:

- Single-mode fibers
- Multi-mode fibers

**Single-mode fibers** have small cores (about  $3.5 \times 10^{-4}$  inches or 9 microns in diameter) and transmit infrared laser light (wavelength = 1,300 to 1,550 nanometers).



Scheme 1 Parts of a single optical fiber

Multi-mode fibers have larger cores (about  $2.5 \times 10^{-3}$  inches or 62.5 microns in diameter) and transmit infrared light (wavelength = 850 to 1,300 nm) from light-emitting diodes (LEDs). Some optical fibers can be made from plastic. These fibers have a large core (0.04 inches or 1 mm diameter) and transmit visible red light (wavelength = 650 nm) from LEDs.

# EXCLUSIVE ATTENTION OF IRANIAN



## MANUFACTURERS FOR QUALITY IMPROVEMENT OF PRODUCTS

### INTERVIEW WITH FABIO SCOTTON SELLS MANAGER OF STALAM COMPANY

►Please introduce the company and explain more about activities.

The company established in 1978. At debuts, the activities concentrated on radio frequency technology for textile industries, in drying process of fibers and yarns after active dyeing process. As the radio frequency technology is applicable in many industries so we entered other areas like food industry, technical textiles and other special application...but our main focus is already textiles. Stalam Company is a member of general confederation for Italy industry (Confindustria) and ACIMIT and also in long time corporation with leading European machinery manufacturers intended for development. The company has 40 employees in Italy office and 70 employees in China office where the company has productions for china local market. Total turnover of the company is 20 million Euros annually and 95 percent of production export to various countries.

As you may know drying is the most important stage in dyeing process so attention to reliability of machineries is an exigency then we apply high quality parts from renowned brands in our machineries. To give further assistance to the customers, now Stalam Company has set up 20 after sell service centers in India, Pakistan, Bangladesh, China, etc.

►Please describe the Stalam activities in Iran.

We are present here since many years and recently we recognized positive changes in Iran market, which encouraged the company to start over the efforts. At the moment, we have some clients in Iran who purchased Stalam machineries while expect to increase the number of current clients.

We see great potentials and incredible abilities for Iran textile

industries, the manufacturers looking for advancements in their products so need to use high quality machineries.

► To which extend leaving sanctions from Iran would affect on Iran and Italy relations?

Absolutely, removing the international sanctions from Iran will raise the relations and this procedure has already commenced. For instance, Iran president of republic traveled to Italy in accompany with a delegation and Italy Prime minister also traveled to Iran to boost up mutual political, economical, industrial and trade relations. These are all promising in diplomatic relations between the two countries.

From the economical aspect, removing the sanction would ease up money transfer through banking system which impress on development of commercial relations between Iran and Italy and industrialists of both regions.

Considering all points mentioned, Stalam Company decided to participate in ACIMIT forum in Tehran. In my opinion, schedule defined accurately to introduce machineries and technologies to current customers in Iran, meanwhile the representative company Mana TEX Pars (under the management of Bahram Hariri) do the best to make known Stalam and assisting Iranian clients.

We insist that our attendance in ACIMIT forum in Iran is not for purchasing goals and indeed our priority is to present Stalam productions to the industrialists seek for high quality products.

►how you assess the feasibility of Stalam machinery manufacturing in Iran factories?

No, because manufacturing needs modern and complicated technologies that makes it impossible manufacturing abroad. But Stalam Company has a manufacturing site in China for China market while the quality is not equal to Italian made machineries. Reproduction in other regions is difficult while it is not the matter of designing but experts as the production principle brains behind the textile machineries don't exist.

