

Future Vision for Development in Textile Science and Engineering

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The textile industry is one of the three most important needs of mankind. Textile Engineering and Sciences are increasingly evolving to meet these growing and changing needs as time progresses. The textile industry research centers are interested in the future developments of this industry and hold conferences dealing with the new in this sector at the local and international level. Participating in these conferences are experts from countries interested in the textile industry from research centers and universities in order to maximize the role of scientific research and strengthen the links between the scientific research sector on the one hand and industry and the beneficiary on the other hand to promote the textile industries, taking into account the economic and environmental dimension and the quality of the product to increase competitiveness. And focus on the development of human resources capacity in this strategic industry.

Today, in several international forums, research and development activities, technological achievements and future visions are being discussed at the global scientific level in the fields of: fiber science and technology, textile and knitting, environmentally friendly textile processes and products, modern trends in textile preparations, textile technology engineering, Product quality, quality tests, environmental issues, smart and technical textiles, nonwoven fabrics, wet processes, pigments and auxiliary materials, applications of advanced science in textile processes, design, fashion and design Maintenance and care of textiles, composite materials, modern developments and future prospects for textile printing and dyeing.

The main industrial and marketing problems are also presented in addition to the obstacles facing the industry in the stages of the textile industry and the various complementary industries, which makes it possible to develop solutions to various problems and remove obstacles and ways to improve them. The most important issue today is the linkage between the scientific research and textile industries and the integration between them and find an executive mechanism to activate the role of scientific research in the service of this important sector and provide employment opportunities for youth to reduce the phenomenon of unemployment for young people qualified to work in textile industries.

The presentation of human expertise and the potential of the research centers of textile industries, universities and industry enable them to play a distinctive and effective role and to fulfil their mission towards the development of this industry in its economic and social dimensions. The research centers of the textile industries and trade unions such as the Engineers Syndicate play an important role in the development of human resources through the establishment of training courses that can be organized or carried out by the youth in the same research center or in the production sites to develop their abilities. Be the nucleus of successful work.

It is important to hold organized meetings of businessmen from textile factories and related large, medium and small industries, university professors and researchers specializing in the various stages of textile operations, young people trained to work with the skills available to them, representatives of non-governmental organizations concerned with youth employment, and representatives of projects Youth and ministries concerned with the modernization of the textile industry, which is positively affecting the industry.

Modern styles of textile manufacturing add to its many innovative

improvements. The textile industry continues to play an active role in the production of clothing, furnishings, medicine, sports, aeronautics, pollution control, and others. Some of the new manufacturing processes for textiles are of interest such as fabrics, smart and technical garments. Innovations in textile technology continue, and non-traditional products will undoubtedly result.

Practical examples of medical textile products are table top mattresses, surgical masks, and mariols that are also used once. Medical yarns are made up of multiple textile fibers like silk, polystyrene, or nylon and have great role in Manufacturing of industrial vessels, such as pipes made of polystyrene fibers for the treatment of patients with blocked vessels, artificial heart, which is composed of textile fibers by more than 50%.

In the field of space, aviation and transportation engineering, new uses are being found for some applications resulting from laboratory research, such as compound materials, water purification and pollution resistance.

These developments have laid the scientific foundation for the invention of fibers and yarns with greater durability, higher resistance to friction and fire, flexibility and ease of care compared to other fibrous materials.

The fiber industry has recently developed, such as the Kevlar fiber, which is highly resistant to fire, which has made it a choice for the manufacture of bulletproof shirts, fire fighters' coats and protective tools.

Carbon fiber is a high quality fiber, which bears high temperature with structural stability, high self-strength and hardness, and can be used in several kinds of products. High-strength polyethylene fibers are one of the current developments and are five times stronger than nylon and twice as strong as clavars. Non-woven fabrics of commercial products that helps in preparation of wide range of products starts with children's towels, filters and floor coverings. All non-woven materials have high features and superior materials. They are more solid than woven fabrics.

Traditional fabric structures and non-woven networks can be mixed with a wide range of flexible and plastic materials to form composite mixtures. The use of fibers with a high degree of rigidity leads to the production of alloys with high hardness coefficient. Such as golf bats, tennis, and others.

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Performance of Current Textile Techniques

Mutations in the evolution of society over the twentieth century XX, especially in recent decades, have stimulated the development and implementation of new textile technologies to ensure the appropriate solution of consumer requirements under the new circumstances, taking into account the following:

- Extend varieties of fabrics, including new types of raw materials.
- Make a series of short string fabrics, which means flexibility, availability and specialization.
- Fabrication of technical and special fabrics;
- Make more fabrics in line with the demographic upward evolution.

These requirements are met by modern textile technologies, capable of delivering diverse, high-quality, high-productivity products, low cost, low labour and low energy consumption. This is why the improvement of unconventional textile techniques in the last twenty years is not a coincidence.

On the one hand, the motivation for the preservation of fabrics as the main textile product, on the other hand, must be sought in a wide range of possibilities offered by non-traditional technologies.

The development of textile techniques has improved the manufacturing process, in terms of increasing the productivity and flexibility of textile machinery, improving the quality of the fabrics made, and ensuring better working conditions for machine service workers. In the current period, there are two trends in the construction of non-conventional textile machines around the world.

The first trend is to maintain the principle of fabric production on the traditional loom, with significant changes to the method of inserting the weft, using instead of the shuttle rafter clutch, shell, propulsion, and water propulsion, thus increasing the input speed and this trend is consistent with needle weaving techniques, shells, water extruders and jet air.

The second trend involves changing the principle of manufacturing

and building some machinery for the textile machine, by introducing multiple weft threads simultaneously, a significant increase in productivity is obtained. This trend has been reflected in the completion and development of multi-stage textile techniques.

Improvements in textile techniques have been reflected in different stages of their development in the performance of textile machinery. There is still room for further innovation and development in the textile sector in terms of materials and machinery. Greatly affect the future of the textile industry. Respect and apply the International Organization for Standardization (ISO) international management regulations with more than 80 standards. Recent trends in sustainable fashion and textile production will have a great deal of research to be presented at many future scientific conferences. The International Textile Conference, to be held in Aachen, Germany, from 29-30 November 2018 under the title: Converting fiber to value.

In this conference, experts from the fields of textiles, textile chemistry, finishing processing, manufacturing and vehicles will meet to discuss the latest developments in textiles and new technologies; new trends and markets in the field of construction, medical textiles; research and development in small and medium-sized enterprises.

The future of development and modernization in the textile field is also linked to policies, objectives and plans for the future of engineering, science and the textile industry, and to determine where we are, for example the Silk Road Restoration project. China's 2015 Strategic Development Initiative (BRI), aimed at increasing economic cooperation between countries along the economic belt of the Silk Road and the Silk Road of the 21st Century linking Asia, Europe and Africa, and its implications for the future of the textile industry. Known as: "The One Belt, One Road (OBOR) initiative, also known as the Belt and Road Initiative (BRI)".

How can they strengthen their role in this project? By facilitating sustainable trade and development in the textile and garment industries and others, and making significant gains from early preparation to take their position as a key player in this project and participate in making profits from it.