

Textiles Intelligence

Profiles of 21 innovative Taiwanese textile companies

by Belinda Carp

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All tons are metric tons unless otherwise stated.

n/a = not available or not applicable

Textiles Intelligence

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Profiles of 21 innovative Taiwanese textile companies

by Belinda Carp

SUMMARY

Taiwan has developed advanced materials and products by investing heavily in research and development (R&D) activities and cutting-edge technology. As a result, it has become one of the world's leading suppliers of functional textiles. The Taiwanese textile industry started to evolve into a leader in innovative textile products around the mid-1990s when it took the decision to invest in R&D and production in order to avoid having to compete in markets for commodity items of low added value. A trade show highlighting the new direction of the industry, the Taipei Innovative Textile Application Show (TITAS), was held for the first time in 1996.

The 2016 edition of the show, TITAS 2016, took place during October 17-19, 2016, in Taipei, Taiwan. Such is the importance attached to the show that delegates were addressed during the opening ceremony by the Taiwanese president, Tsai Ing-Wen. Several Taiwanese companies involved in textiles and dyestuffs exhibited their latest products at the show, including Asiatic Fiber Corporation (AFC), Chia Her, Eclat, Ever Shine Y & F, Everlight Chemical, Evertex Fabrinology, Far Eastern New Century (FENC), Formosa Taffeta (FTC), Four Elements Energy Biotechnology (Four Elements), GrandeTex Development (GrandeTex), Jintex, Kingwhale, Nanpao Resins Chemical (Nanpao Resins), New Wide Group, O.Mosa Knitwear, Paiho Group, Premiere Fashion, Singtex, Tai Yuen Textile, TexRay Industrial (TexRay) and Tri Ocean Textile (Tri Ocean). The innovations presented by these 21 companies are aimed at a number of sectors, including athleisure, outdoor wear, smart textiles and sportswear. In addition, an important aspect of many of the innovations is that of environmental sustainability.

Looking ahead, the Taiwanese government wants to encourage the industry to develop its R&D and production bases for functional and technical textiles. Also, it wants the industry to be a fashion design centre for the Asia-Pacific region. The industry, for its part, is aiming to develop and manufacture premium products and to sell them under Taiwanese brand names which are recognisable and renowned.

INTRODUCTION

Taiwan exported textiles valued at US\$9.7 bn in 2015 which made it the world's seventh largest textile exporter

The textile industry in Taiwan is a significant contributor to the Taiwanese economy. More than 75% of its production goes to foreign markets and in 2015 it exported textiles valued at US\$9.7 bn. This made Taiwan the world's seventh largest textile exporter in 2015¹.

¹ See also "Trends in world textile and clothing trade", *Textile Outlook International*, No 183, December 2016, starting on page 73.

Its most important export products are dyed knitted synthetic fabric and dyed woven fabric while its biggest export market is China

The industry's most important export products are dyed knitted synthetic fabric and dyed woven fabric.

Geographically, its biggest export market is China, followed by Vietnam, the USA, Hong Kong, the EU and Indonesia.

The Taiwanese textile industry has been focusing on functionality and sustainability

The Taiwanese textile industry has been focusing on two important objectives, namely:

- functionality—in terms of wearing comfort, ergonomics, safety and health care; and
- sustainability—by minimising energy consumption and pollution levels while maximising recyclability.

The Taiwanese textile industry has invested heavily in research and development and, as a result, it has become one of the world's leading suppliers of functional textiles

Functionality

The Taiwanese textile industry has developed advanced materials and products by investing heavily in research and development and cutting-edge technology. As a result, it has become one of the world's leading suppliers of functional textiles.

In particular, the industry has focused on the development of functional products characterised by their comfort, ergonomic features, high fashion content and safety features.

Also, Taiwanese textile producers have developed smart textiles

Also, Taiwanese textile producers have developed smart textiles which embrace such features as embedded cameras and sensors to monitor a user's vital signs.

Taiwanese textile producers have sought to lower their environmental footprints

Sustainability

Taiwanese textile producers have sought to lower their environmental footprints by producing recyclable textiles and reducing water and energy consumption and CO₂ emissions.

The evolution of the Taiwanese textile industry into a leader in innovative textile products began in the mid-1990s when the industry took the decision to invest in R&D and production

Evolution of the Taiwanese textile industry into a leader in innovative textile products

The evolution of the Taiwanese textile industry into a leader in innovative textile products can be attributed to a number of factors.

Around the mid-1990s—in order to avoid competing in markets for commodity items of low added value—the industry chose to adopt a leading role in the development of high-tech, high value textiles. In order to do so, it took the decision to invest in R&D and production.

Also, TITAS, highlighting the new direction of the industry, was held for the first time

Also, a trade show highlighting the new direction of the industry, the Taipei Innovative Textile Application Show (TITAS—see page 4) was held for the first time in 1996.

But the cost competitiveness of Taiwanese producers deteriorated around the time of the Asian financial crisis in 1997

However, the cost competitiveness of Taiwanese producers deteriorated around the time of the Asian financial crisis in 1997 as the currencies of several other Asian countries depreciated faster than the Taiwanese dollar. Between the second quarter of 1997 and 1998, the Taiwanese dollar fell against the US dollar by 17% whereas the Indonesian rupiah fell by 76%, the Thai baht by 38%, the South Korean won by 36% and the Malaysian ringgit also by 36%. Also, the Pakistani rupee fell by 17%, the Indian rupee fell by a lesser 13% and the Japanese yen by 9%, while the Hong Kong dollar and the Chinese renminbi remained pegged against the US dollar.

At the time, Taiwan's labour costs were relatively high, its environmental protection plans had not matured and the textile industry was in danger of losing business to China, where unprecedented growth in textile and clothing exports was under way ahead of WTO accession

At the time, labour costs in Taiwan were relatively high, Taiwan's environmental protection plans had not matured and the textile industry was in danger of losing business to China.

Another factor affecting the evolution of the Taiwanese textile industry was a period of unprecedented growth in textile and clothing exports from China as the quotas which had been restricting such exports were phased out in accordance with the Agreement on Textiles and Clothing (ATC) following Chinese accession to the World Trade Organization (WTO) on December 11, 2001².

Taiwan joined the WTO soon after China but, because of its higher costs and its focus on higher value products, its accession brought fewer benefits

Taiwan joined the WTO soon after China, on January 1, 2002. But, because of its higher costs and its focus on higher value products, its exports had not been held back by quota restrictions to the same extent as the Chinese industry.

Consequently, its accession to the WTO brought fewer benefits to the Taiwanese textile industry.

China was in the middle of expanding its industry and increasing capacity which resulted in an increase in productivity and a reduction in costs

Moreover, China was in the middle of its ninth five-year plan, which included expanding its industry and increasing capacity.

Such expansion was resulting in an increase in productivity and a reduction in costs, which made it increasingly difficult for Taiwanese producers to compete.

By 2001 the Taiwanese industry was developing functional fibres for performance fabrics but it faced the challenge of proving the value of such fabrics to global markets. A key role in this respect was played by the TTF

By 2001 the Taiwanese industry was developing functional fibres for performance fabrics—but it faced the challenge of proving the value of such fabrics to global markets.

Whereas consumers were able to see the aesthetic value of fashion apparel, the functional value of performance fabrics had to be proved.

A key role in this respect was played by the Taiwan Textile Federation (TTF).

² For more information on the phasing out of quotas, see **Appendix 1: exchange rates and the phasing out of quotas**, "Trends in US textile and clothing imports", *Textile Outlook International*, No 174, May 2015, pages 224-232.

Testing methodologies were developed and working groups were organised, and the effectiveness of the industry's performance fabrics was demonstrated at ISPO Munich

Testing methodologies were developed and working groups were organised—from R&D to standards to testing.

Another organisation which has played a key role in raising the profile of Taiwanese companies is the TTRI

The TTF started to exhibit its functional fabrics at ISPO Munich³, and it demonstrated to visitors the effectiveness of the industry's performance fabrics in terms of functionalities such as water repellency and breathability.

The TTRI has undertaken research into textile innovations for many applications

Another organisation which has played a key role in raising the profile of Taiwanese companies is the Taiwan Textile Research Institute (TTRI). The origins of the TTRI date back to 1959 when the Technical Department of the Taiwan Cotton Spinners' Association became an independent organisation called the Taiwan Textile Testing Center (TTTC). The TTTC was renamed the TTRI in September 2004.

Looking ahead, the government is encouraging the industry to develop its R&D and production bases for functional and technical textiles

Since then, the TTRI has undertaken research into textile innovations for many applications, including abrasion resistant textiles, antimicrobial textiles, energy saving products and processes, fibres which can store light, smart textiles, sports apparel, water repellent wool textiles, waterless dyeing and finishing, and waterproof and breathable textiles.

Outlook

Looking ahead, the Taiwanese government is encouraging the industry to develop its research and development (R&D) and production bases for functional and technical textiles.

The industry is aiming to establish a global R&D and production base for functional and industrial textiles, and boost the branding and design capabilities of the downstream clothing sector

It is also encouraging the industry to become a fashion design centre for the Asia-Pacific region.

The industry, for its part, is aiming to develop recognisable premium products and to manufacture them under Taiwanese brand names which are recognisable and renowned.

It is also aiming to establish a global R&D and production base for functional and industrial textiles, and to boost the branding and design capabilities of the downstream clothing sector.

TITAS 2016

TITAS 2016 took place during October 17-19, 2016, in Taipei, Taiwan

The 2016 edition of the Taipei Innovative Textile Application Show (TITAS 2016) took place during October 17-19, 2016, at Taipei World Trade Center, Nangang Exhibition Hall, Taipei, Taiwan.

Such is its importance that delegates were addressed by the Taiwanese president

Such is the importance attached to the show that delegates were addressed during the opening ceremony by the Taiwanese president, Tsai Ing-Wen.

³ ISPO (International Trade Fair for Sports Equipment and Fashion) is the world's largest and most diverse exhibition for the sports community. The 2016 edition of ISPO Munich was organised by Messe München and held during January 24-27, 2016, in Munich, Germany.

In her address, President Tsai recognised the importance of the textile industry as a pillar industry in Taiwan's economy and added that textiles made in Taiwan were used in the manufacture of team jerseys for the 2014 FIFA World Cup and the Rio 2016 Olympic Games

In her address, President Tsai recognised the importance of the textile industry as a pillar industry in Taiwan's economy. In particular, she reminded delegates that the industry had generated more than US\$200 bn in foreign exchange since 1996—when the first edition of TITAS took place—and that it now offers a fully integrated value chain.

The president added that textiles made in Taiwan were used in the manufacture of team jerseys for players from at least ten nations at the 2014 FIFA World Cup tournament⁴, and in the manufacture of many team jerseys at the Rio 2016 Olympic Games⁵.

President Tsai further stated that TITAS is an important platform in providing the energy to move the industry forward

President Tsai further stated that TITAS is an important platform for:

- providing the energy to move the industry forward by changing its focus from outdoor textiles to functional textiles;
- using sustainable products and processes in the manufacture of fashion items; and
- producing multi-functional textiles which can be employed in products for a wide variety of end uses.

Several Taiwanese textile manufacturers were presenting their innovations at TITAS

Several Taiwanese textile manufacturers were presenting their innovations at TITAS. In this report, starting on page 6, profiles of 21 of these companies are presented, namely:

- Asiatic Fiber Corporation (AFC);
- Chia Her;
- Eclat;
- Ever Shine Y & F;
- Everlight Chemical;
- Evertex Fabrinology;
- Far Eastern New Century (FENC);
- Formosa Taffeta (FTC);
- Four Elements Energy Biotechnology (Four Elements);
- GrandeTex Development (GrandeTex);
- Jintex;
- Kingwhale;
- Nanpao Resins Chemical (Nanpao Resins);
- New Wide Group;
- O.Mosa Knitwear;
- Paiho Group;
- Premiere Fashion;
- Singtex;
- Tai Yuen Textile;
- TexRay Industrial (TexRay); and
- Tri Ocean Textile (Tri Ocean).

⁴ The FIFA World Cup is a tournament for the men's football world championship. The 2014 FIFA World Cup was held in Brazil during June 12-July 13, 2014.

⁵ The Rio 2016 Olympic Games was held in Rio de Janeiro, Brazil, during August 5-21, 2016.

These innovations are aimed at a number of sectors, and an important aspect of many of the innovations is that of environmental sustainability

The innovations presented by these 21 companies are aimed at a number of sectors, including:

- athleisure⁶;
- outdoor wear;
- sportswear; and
- smart textiles.

Furthermore, an important aspect of many of the innovations is that of environmental sustainability.

A number of buyers who work for international brands were invited to attend TITAS

A number of buyers who work for international brands were invited to attend TITAS, including representatives from the following companies:

- Arc'teryx;
- Colmar;
- Goldwin;
- Mammut;
- Millet;
- The North Face;
- Under Armour;
- Vigilante; and
- Woolrich.

ASIATIC FIBER CORPORATION (AFC)

Asiatic Fiber Corporation (AFC), founded in 1973, claims to be a leader in the field of cleanroom and antistatic products in Asia

Asiatic Fiber Corporation (AFC), founded in 1973, claims to be a leader in the field of cleanroom and antistatic products in Asia.

It specialises in the manufacture of functional materials for a range of products which includes cleanroom textiles, health care goods, outdoor leisure items and surgical barrier clothing.

The company exports to 60 countries worldwide

The company exports to 60 countries worldwide. Major regional and national markets include Asia, Europe and the USA.

AFC has introduced a new brand of smart textile technology called iQmax

AFC has introduced a new brand of smart textile technology called iQmax. The “iQ” in the name stands for intelligence and the “max” means maximum.

The technology combines fibres and electronics and is employed in the creation of innovative products which can be used in garments to enable them to respond to pressure, temperature and touch

The technology combines textiles with electronics to create innovative products for use in apparel for a wide range of markets.

The products incorporate features which are employed to promote safety and comfort, and are designed to be used in garments to enable the latter to respond to pressure, temperature and touch.

⁶ Athleisure apparel is designed so that it is suitable for wearing during athletic activities and for everyday wear.