



The T-Man Robot designed by the Taiwan Textile Research Institute symbolises the power of integration. It incorporates fully-operational flat knitting, circular knitting and weaving technologies.

## Taipei topics

Taiwan's knitting industry has bounced back in 2010, with a recycling and fine fibre lead resulting in some formidable new knits. Adrian Wilson reports from Taipei.

The Taiwan Textile Federation signed a historic trade co-operation agreement with European textiles and apparel body Euratex during the 2010 TITAS – the Taipei Innovative Textile Application Show – which took place from October 13-15 at the Taipei World Trade Centre.

It took place just a month after the signing of the ECFA – the Cross-Strait Economic Cooperation Framework Agreement – between China and Taiwan.

“The ECFA means many Taiwan-made textile end-products can be exported to the Chinese mainland duty free – a big boost to their competitiveness,” said Mr Justin Huang, secretary general of the Taiwan Textile Federation. “More products will be added to the list in the coming years. This is very significant when you consider that of the \$2.7 billion sales of Taiwan textile products to China in 2009, 69% of the value was swallowed by duty.

In the first six months of 2010 Taiwan's

export sales have soared, with fibres worth US\$600 million up 51% on the first half of 2009, yarn worth US\$1,087 million up 33% and fabrics worth US\$3,256 million up 59%.

The country's key export markets are now China (22% of the total), with growth of 22% between January and June this year, Vietnam (13%) up 32%, Hong Kong (13%) up 19% and the USA (9%) up 17%.

So far, exports to Europe account for just 5% of the total, but were also up 28% between January and June this year.

In another major boost for the country, both Adidas and Nike kitted out their sponsored teams in football strips made from Taiwan's recycled performance polyester fabrics at the 2010 FIFA World Cup in South Africa.

Taiwan is a leader in recycled fibres – 90,000 tons of PET bottles are reclaimed in Taiwan every year – almost double the amount achieved in Europe.

Among other highlights at this year's

TITAS were knitted garments made from recycled polyester, polypropylene and nylon filament fabrics down to as fine as 5 dtex developed by a number of Taiwan companies, most notably Formosa Taffeta.

These extremely lightweight products have very interesting handles, and in some cases shape memory, and are being widely adopted by sports and activewear companies across Asia. The ultra-thin fabrics are waterproof, breathable, anti-bacterial and can also be made flame retardant.

Far Eastern New Century meanwhile – one of the companies responsible for the 2010 World Cup success – also displayed its 100% recyclable laminate membranes for sportswear made from Topgreen recycled PET fabrics and FETretch and FETex breathable and waterproof films.

Other specialised knitted fabrics were demonstrated by Fabric King, including the PulPush quick-drying and moisture management ranges, CliMAte waterproof and water-permeable materials and ESSE fabrics, which are highly resistant to not only fire, but UV, static electricity and electromagnetic waves too.

Fabric King is also among the companies actively promoting LED-embedded yarns and light emitting fabrics developed at the Taiwan Textile Research Institute. The company showed articles ranging from night riding jackets for cyclists and bikers to elaborate wedding dresses featuring the company's LED technologies.

Spiral Light, meanwhile, is a patented, soft-glowing piping marketed by another Taiwanese company, Paiho, which can be used in everything from backpacks and trainers to cycles and helmets. As an easy to sew or velcro attach accessory, PU-coated Spiral Light can be integrated into designs as piping and in strips and is powered by a simple, snap-on attachment button battery and connector.

The Taiwan Textile Research Institute also showed its own range of lighting products, extending to umbrellas and roofing illuminations, as well as bags, backpacks, dresses and promotional merchandise – all powered by yarns with an average width of 2.5mm and powered by 5 volt batteries.

These were part of a host of new materials which have been developed at the institute, which receives backing from both the Taiwan government and its leading companies. **KTJ**