



Made in Taiwan



Torque's Hayley Everett was recently invited out to Taiwan to visit the production facilities of some of the companies exhibiting at TAITRA's International Fastener Show in April, whilst getting a handle on the Taiwanese market.

The Taiwan International Fastener Show, organised by TAITRA, is set to return to Kaohsiung for the 21-23 April next year, showcasing the best of what the Taiwanese fastener industry has to offer.

I was invited out to the mini but mighty manufacturing island for TAITRA's pre-show media tour, where myself and other journalists hailing from around the world visited the

production facilities of 10 companies set to exhibit at the show next year.

The busy tour schedule gave a comprehensive overview of Taiwan's fastener industry and the current opportunities and challenges present within it. Spanning Kaohsiung to Taichung, here is a closer look at some of the manufacturers paving the way at the forefront of Taiwan's fastener industry...

King Point Enterprise (Patta)

Established: 1982

Specialisms: Blind rivets, self-drilling screws & tools

Currently in the midst of getting its Initial Public Offering (IPO) approved, Patta Group has been keeping busy over the past year building a new manufacturing plant in Vietnam, implementing a new R&D business model and integrating Industry 4.0 practices into its production processes. Patta sells into 120 companies globally, with Europe making up 17% of the company's exports.

David Huang, Chairman, said: "This year we will spend more on product range and development, and on adapting our model for the future. We are putting a lot of resource into our R&D practices, product, storage and packaging improvements."





Taiwan Shan Yin International

Established: 1984

Specialisms: Construction & automotive screws

Boasting over 100 global patents, Shan Yin Int'l produces around 24,000 tonnes of screws each year from its factories in Taiwan and Malaysia. Patents are a particular focus for the company right now, producing as many patented products as it does standard products.

Shan Yin Int'l has been implementing Industry 4.0 practices such as automation and big data for the past couple of years, and is also looking to improve its environmental practices after identifying that many customers now want responsible and less polluting products.

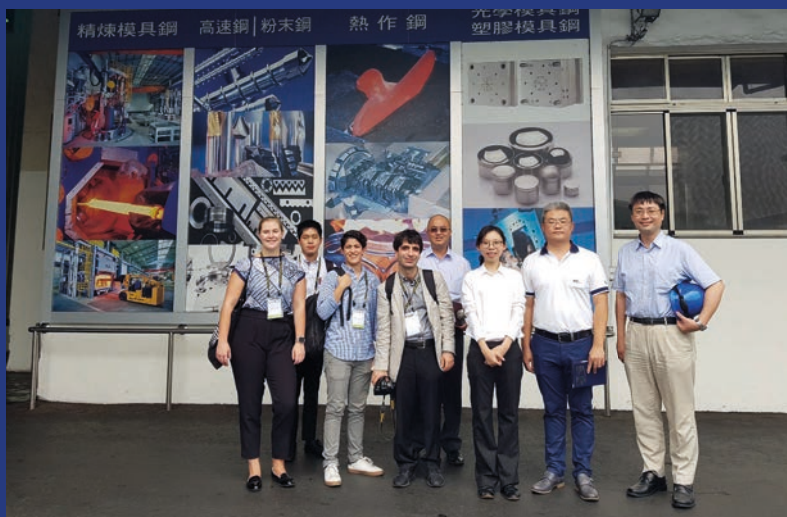
Wu Jii Industry

Established: 1988

Specialisms: Cold, hot & plastic mould steel

Wu Jii is the largest supplier of mould steel parts in Taiwan, with 330 employees based in nine different locations on the island. Wu Jii has paid particular attention to its ERP management and stock systems to significantly improve production processes and is particularly proud of its fully equipped laboratory which enables greater quality control, such as microstructure examination.

While Wu Jii sells to domestic clients only, it does export small quantities to Thailand and Vietnam.



Shuenn Chang Fa Enterprise

Established: 1984

Specialisms: Long length & special screws

Having recently built its fourth expansion plant spanning some 16,000 m² and three floors, Shuenn Chang Fa is looking to the future with the implementation of 3D-printing facilities and a greater focus on speeding up R&D processes.

With an eye firmly fixed on increasing its clients in Europe and the UK, which make up 40% of the firm's export business, Shuenn Chang Fa is emphasising the custom screw side of its production capability, able to design products to a customer's exact specifications.





Super Nut Industrial

Established: 1975

Specialisms: Rivet nuts, cold forming parts and clinching parts

Family-run business Super Nut Industrial is bringing through its ranks the next generation equipped with a focus on improving global communication, R&D flexibility and quality control processes. Having purchased its second plant this year, there is a definitive emphasis on growth and expansion within the business.

The US and European markets are currently of equal importance to Super Nut, and the firm hopes to increase exports with the building of its new production plant (to be completed in around nine months) and the development of three to four new products for the automotive market each year.

Homn Reen Enterprise

Established: 1985

Specialisms: Small & specialty screws

Producing around 1,300 tonnes each month out of its factory in Taiwan, Homn Reen achieved a turnover of \$39 million last year, and that's before you factor in its 100,000 m² factory in Vietnam, constructed in 2010. The European market accounts for over a third of Homn Reen's exports, with the manufacturer looking to increase customers in the continent, especially within the UK, who will avoid tariffs importing from Vietnam.

Homn Reen's main products include drywall, chipboard and wood screws amongst others, as well as offering an in-house Zinc electroplating service. It is currently focused on developing its Bi-Metal screw, made from a combination of carbon steel and stainless steel and a stainless steel cap screw.



Ray Fu Enterprise

Established: 2000

Specialisms: Screws, bolts, nuts & washers

Currently in the midst of building its new factory, Ray Fu is a big player in Taiwan's fastener industry, exporting around 2,500 tonnes of fasteners a month to its customers around the globe. The firm also offers heat treatment, electroplating and other coating processes and its own packaging processes. The company has a particular focus on the automotive sector, having received the latest IATF 16949 certification for its automotive parts.

Ray Fu is also looking to grow the special parts side of its business and its construction screw production. Ray Fu exports to Europe, US, Australia, New Zealand, Asia Pacific and the Middle East.



Ching Chan Optical Technology (CCM)

Established: 1992

Specialisms: Optical sorting machines, parts forming machines & screw/bolt formers

Equipped with a 50-person in-house R&D team, CCM has been granted several patents for its sorting machines designed for screws, nuts and bolts. The company's ultimate aim is to achieve zero-defect tolerance, with technicians positioned both at home and overseas to integrate, fix and upkeep machines for its customers. The European market is key for CCM, which exports 79% of its machines to customers in the automotive industry and is looking to increase forming machine exports.

According to the company's President Alex Wu, the key to successful and sustainable business is quality: "We are implementing Industry 4.0 through robots, automating our processes and completing our own software and hardware development. Sustainability is also key; the solar panels on our Thailand factory roof power over 500 nearby homes."

Lu Chu Shin Yee Works

Established: 1965

Specialisms: Hex nuts, nylon insert lock nuts, wing nuts & cap nuts

Lu Chu Shin Yee Works (LCSYW) was the first producer of stainless steel nuts in Taiwan and now spans four production plants throughout the island, as well as another two overseas in the Philippines and China. 90% of what LCSYW manufactures is exported, and the firm is keen to further expand its global reach into the European market, which currently makes up 40% of LCSYW's export business.

The manufacturer is a keen implementer of Industry 4.0, having integrated automation into its CNC and packing machines, as well as the use of robots. Referred to by many in Taiwan as the 'nut specialist' the firm also started manufacturing micro-screws in 2008 in order to offer something a little different to the market.



Taiho Tool/OSG Corporation

Established: 1938 (OSG) 1969 (Taiho Tool)

Specialisms: Taps, rolling dies, gauges & cutting tools

Taiho Tool, a subsidiary of the global OSG Corporation, manufactures its fastener products out of its Kaohsiung-based factory in Taiwan, spanning 35,286 m². While Taiho's main market is China, it is looking to grow its European customer base which makes up around 10% of the firm's exports currently.

Taiho offers heat treatment for rolling dies and has an onsite cutting technology application centre to help customers improve their product knowledge. The firm's main markets include the automotive sector, machine tools, aerospace and the bike industry.



Tariffs, automation & sustainable practices

It would be fair to say the global political and economic landscape has been somewhat tumultuous in recent times, what with trade wars, new technology pressures and even the climate emergency landing as problems to be solved in the fastener industry's lap.

The story seemed little different while travelling between the factories of the companies I visited in Taiwan. Naturally, the resultant tariffs of the ongoing trade spat between the US and China was a hot topic of conversation, and while some saw this as an opportunity to spread their wings in the US market at China's expense, others with production facilities tangled up in its east Asian neighbour were certainly feeling the effects.

Super Nut Industrial saw a slower-than-usual Q2 due to its US-based customers ordering an excess of stock in the fear of being hit with increasing tariffs last year. Several customers still have this stock in their warehouses so sales have been slower in the first half of 2019, although the firm is optimistic business will pick up again towards the end of the year. Other companies, such as Shan Yin International, haven't felt much of an impact from the tariffs themselves, although several of their customers have been affected. The firm divulged it has also seen some production and investment moving back into Taiwan, while companies such as Shuenn Chang Fa believe people will still buy from China regardless of the tariffs.

The majority of companies did agree, though, that they were eyeing the US fastener market with a heightened interest as a result of the ongoing trade war, seeing it as a prosperous opportunity to increase their customer bases there.

Perhaps unsurprisingly, on the lips of nearly every company spokesperson I met during the tour were the words 'Industry 4.0'; in essence a trend towards automation and data exchange in mechanical and industrial technologies and processes.

A move towards automation was certainly on Patta Group's agenda, with the implementation of a new IoT system expected to reduce labour costs by around two thirds. There

have also been improvements to product, storage and packaging processes due to an upgraded production system linking the newly automated procedures together. Lu Chu Shin Yee has also been busy automating its production facilities in order to achieve Industry 4.0, installing robotic arms, automated CNC machining and a semi-automatic packing machine.

Another priority for many of the companies participating on the tour was the environment, and the growing need to implement sustainable, green business practices in factories, warehouses and other areas.

Ching Chan Optical Technology (CCM) uses solar panels on its factory roof in Thailand which can provide power to up to 500 homes in the surrounding area, while at its Taiwan headquarters it operates a no-waste policy; there was even talk of using Teslas for transport. And a number of other Taiwanese companies are following suit too, with Shan Yin International identifying growing environmental concern as an increasing trend among its customers. The firm believes that, along with good quality and price, customers want their products to be responsible and less polluting too.

The Taiwanese fastener industry seems to be growing from strength-to-strength at the present time, compounded by the growth of the island's International Fastener Show organised by TAITRA, due to take place 21-23 April in Kaohsiung. More than 420 manufacturers are set to exhibit at the event, which attracted 2,193 international buyers from 73 countries last year, and in excess of 30,000 domestic and foreign visitors. Each of the companies visited on the tour will be exhibiting at the show next year.

TAITRA provides a pre-registration service to any visitors interested in the Taiwan International Fastener Show, offering a free-entry badge with fast-track access. In addition, a limited number of travel subsidies are available for eligible buyer companies to attend the show. For more information please contact london@taitra.org.tw.