

# Feature: Stainless Steel Screws, Bolts, Nuts, Washers

arranged by *Fastener World*

## Introduction

The family of stainless steel materials has been extended to include at least over 180 categories. Fasteners made of stainless steel can be applied to a vast range of industries, based on their respective properties and environments they are going to be used. With over 11% containment of chromium, stainless steel is able to form on its surface a layer of chromium oxide featuring great rust-proof performance. Such alloys are widely used in manufacturing fasteners for automotive and construction applications in which high corrosion resistance is required.

Considering the “ductile” property of stainless steel, some companies have developed new types of stainless steels with the hardness of up to A2-100, offering the civil engineering industry a new option for corrosion-resistant applications, and some others have also developed bi-metal screws (a stainless steel head + a carbon steel drilling point) that best suit the needs of applications. The cost for manufacturing a piece of stainless steel screw is on average 5-10 times that for manufacturing a piece of carbon steel screw, but its durability and corrosion-resistance outperform those made of carbon steel.

Stainless steel products can be fully recycled and will still possess surplus value at the end of their service life.

The development of stainless steel fasteners in Taiwan has been more than 4 decades. In early days, most Taiwanese small screws companies (Rodex, Header Plan, and A-Plus Screws, for example) were located in Taoyuan or in the suburbs of New Taipei City. Many years later, however, many leading companies (such as Tong Hwei and Ming Hwei) determined to set up plants in Kaohsiung or Tainan, due to proximity to the well-established fastener manufacturing supply chain and material sources. Today, southern Taiwan has become one of the world’s pivotal fastener manufacturing hubs, providing very competitive products through a complete production and supply chain. In addition to the headquarters in Taiwan, some companies also began to expand their factories to China and southeast Asian countries after 1995 with good profit returns.

In this feature, we’re very pleased to have **SHEN CHOU FASTENERS** joining us to share its experience in dealing with properties



of stainless steel and the successful development of a new super long screw and the “hard” stainless steel used to manufacture products for outdoor extreme applications, which immediately caused a sensation in the Japanese and European markets upon released. We are also very pleased to have **SAIMA CORPORATION** joining us, which dedicates itself to offering stainless steel fasteners for high security requirements and applications, available in all sizes and ready in stock for shipments.

## SAIMA CORPORATION- Meeting Your Small Quantities Demands

by *Gang Hao Chang, Vice Editor-in-Chief of Fastener World*

Always gifted at tackling tough challenges faced by many industries and turning them into its remarkable strengths, the Japan-headquartered and worldly recognized SAIMA CORPORATION has once again consolidated its position and proved its irreplaceability on the minds of its loyal clientele with the three new innovative series currently added into its product portfolio.

### Best for Tamper-Resistant Purposes- TRF

Tamper-resistant Fasteners (TRF) offer an ideal option to users who are seeking small quantities supply but still require high security features at the same time. These fasteners can be used for multiple applications, such as public areas (incl. parks, train stations, buses, airports, etc.), handy phones, and traffic signals. According to CEO Tak Saima, Saima’s main customers usually request products in small quantities, so Saima offers the option of 100pcs per standard pack and has currently 13 different kinds of design in stock with available sizes from M2 to M12 and materials in stainless steel and steel.



## Best for Thin Plates Fastening- SLIM HEAD SCREW

The nearly flat and space-saving Slim Head Screws, on the other hand, are quite a simple and efficient way for users particularly from the human robot industry and the drone industry to meet their respective demands for fastening several joint parts in limited space and weight reduction. In order to cater to such various requests of different customers, Saima is currently able to offer the options with standard 6-lobe recess heads, Phillips recess heads for maintenance, and even QUA OSG patent recess heads featuring great performance for tightening torque control.



## Best for Plastics Fastening- NON-SERT

The NON-SERT thread forming tapping screws have evolved into the 4th generation. The RoHS compliant series are with 30 degrees thread angle & low driving torque and can be repeatedly used. "Nonsert has great performance to help plastic recycling," says Mr. Saima, "as Nonsert can be fastened and un-fastened on the same female thread for more than 50 times, without the addition of metal inserts."



## Synergy of Cross-border Operations for Enhanced Technical Support

As a typical blue-ocean player and with the focus on web marketing, Saima has established a synergetic collaboration with its overseas operations in China, Malaysia, Singapore and India to service its target customers- small innovative engineering companies. For fulfilling its corporate social responsibility and getting new inspirations from the outside, it has also launched the internship program for students from Japan and other countries.

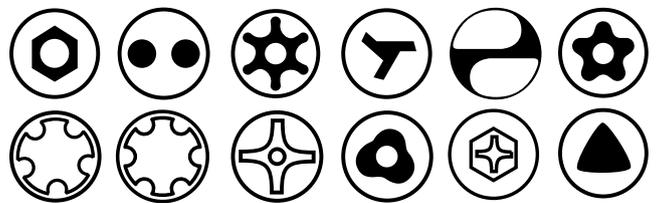
In an interview with Fastener World Magazine, Mr. Saima stated "We are always interested in expanding our business; however, we also need to be very strong in our field," which clearly shows the DNA of Saima to be 100% well-prepared before any challenges are close at hand.

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# Security Fasteners



# Tamper Resistant Fasteners



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# Shen Chou Fasteners Industrial Co., Ltd.

by Naiwen Chang, Fastener World

**The Leading Fastener Manufacturer with a 99% On-time Delivery Rate**



## Topnotch Special Drilling Screws Manufacturer

By far Shen Chou has 16 sets of pointing machine which could support the capacity of self-drilling screw (SDS) up to 10 million pcs per month. These SDS products are mainly supplied to Japan, Europe and USA. Catering to various customers' design of special pointer or the other part, Shen Chou is always dedicating to realizing these customized needs from no matter drawings or samples. Additionally, R&D consulting service is also available.

## SS Long Size Screws Popular Among European Users

Long SS screws for construction, another featured product of Shen Chou, successfully arouse many leading European companies' interest. The longest available length could be up to 300mm in size M10. In order to improve long size SS screws quality stability, Shen Chou did great investment in facility upgrade and relevant processing research. "Stainless steel material is quite soft by comparing with regular steel when forming; especially in long size screw production, the risk of bending is very likely to happen. However, by unremitting efforts, we have successfully solved the various obstacles. The final results are also quite satisfying," says Shen Chou's Special Assistant Ms. Elaine Chen.

## Perfect Guaranteed Quality

Shen Chou knows everything about stainless steel, adheres to its mission statements, continues to improve product quality and enhances manufacturing technology. Apart from being certified to ISO 9001, it was also certified to CE 14592 in 2018, showing its eagerness to connect to international admission of quality.

Shen Chou has fully equipped QC lab, which has introduced several optical sorting machines, torque measurements, hardness tester, salt-spray machine as well as tensile strength testers for testing tensile strengths of wire. According to Ms. Chen, the "QC" in general enterprises is always conducted after production, but this is not enough for Shen Chou, as it should be conducted from the very beginning of production (incl. material control, manufacturing quality) and must be well-monitored in every manufacturing stage. To provide satisfying products, Shen Chou always requires the best quality from the very beginning.

Founded 30 years ago, Shen Chou has been a specialized manufacturer of stainless steel (SS) screws and has possessed extensive manufacturing experience in processing stainless steel. In fastener industry, it is quite rare to have consistently specialized in stainless steel screw manufacturing since its inception. Till now, Shen Chou capacity of each month could reach 150-250 tons in SS screw production. With superior quality, active service attitude, and the spirit of "Excellence, Stability, Profession and Innovation," Shen Chou continues to make improvements and achieve technological breakthroughs.



## Developing High-strength Stainless Steel for More Applications

The hardness of A2 or A4 stainless steel is not as hard as carbon steel. Unlike carbon steel, A2 or A4 stainless steel cannot be hardened by heat treatment, which cause stainless steel material limit to the particular corrosion-resistant application due to its material trait. However, Shen Chou has put great emphasis on developing high-tensile SS screws (incl. A2-90, A2-100 and even higher tensile). Also, Shen Chou has successfully developed a new type of 18-8SS screw for steel plate application. According to its outstanding performance, brings 18-8SS screw to apply to steel plate directly without pre-drilling hole needed, which successfully widen the application to thin steel plate (0.6~0.8mm) or the other combination board like sandwich board, or multiple layer board of steel plate and wood. The stainless steel screw application is becoming more comprehensive in outdoors, humid, or offshore environments.

## Focusing on Manufacturing Stainless Steel and Expanding Overseas Markets

Shen Chou, holding the practical core spirit, always dedicates to fulfilling customers' needs, delivery punctuality, and high quality service. Over the past 3 years, Shen Chou had achieved the on-time delivery rate to 99% and extremely low customer complaint rate, which fully indicates spectacular control of each production procedure, lead time and quality. Therefore, these efforts reflect great reaction about the repetitive orders from customers. Nevertheless, Shen Chou gradually grows over 80% of customized orders and successfully entering the Japanese DIY wholesale market with its rich experience and unbeatable quality. These faiths have enabled Shen Chou to expand its factories for 3 times and continue to evolve.

Shen Chou will continue to focus on the development of SS products and will also begin to map out its future sales and R&D proposals, for developing a more complete series of SS fasteners. ■

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