

## Book Recommendation:

# R&D of China's Strategic New Industries: Fastener

by T.F. Tsai, *Fastener World*

- authored by Jingyao Feng



From watches to rockets, the applications of fasteners play an integral part of our daily life. Through the honorary president of the Fastener Subdivision of China General Machine Components Industry Association (CMCA) Mr. Jingyao Feng's detailed account, "R&D of China's Strategic New Industries: Fastener" thoroughly depicts the characteristics and trends of China's fastener industry. The book also talks about the future challenges and prospects while the industry is reaching out to the world market. This is a must-read book for readers interested in the Chinese fastener market, as well as those who desire to gain knowledge of the industry's development. Now, let me take you to explore China's fastener industry.

## The Characteristics and Challenges of China's Fastener Industry

Since the implementation of reform and opening-up policy, China has been centering on economic development, including reforming systems and welcoming foreign investment. A number of enterprises from advanced countries, Taiwan, and Hong Kong has entered the Chinese market to set up factories, driving Chinese industry's innovation and transformation. The changes have triggered more competitions that

improved technologies. In addition, numerous fastener companies listed in countries such as the U.S., Japan, Eastern Europe, and Taiwan to observe and acquire new technologies. Fastener companies also worked alongside domestic enterprises and research institutes to design new equipment which increased China's automation rate of fastener production to 90% and largely strengthened production capacity. Apart from quantity, "quality" of fasteners also cannot be ignored. Thus, in the 21st century China's fastener industry started introducing testing equipment as well as obtaining international accreditation in the 21st century, to conform their products conform with international standards. Nowadays the industry still maintains collaboration with global major fastener manufacturers and countries, promoting the common development for global fastener industry by holding association activities.

### About the Author— Jingyao Feng

Vice Chairman of the China General Machine Components Industry Association, Honorary President of the Fastener Subdivision of China General Machine Components Industry Association, Member of China Fastener Standardization Technical Committees, President and Senior Engineer of Shanghai SQB Automotive Fasteners. Former Chairman of Shanghai Technology Institute of Fastener and Welding Material, Chief Engineer of Shanghai Shangbiao (Group) Co., Ltd.

Feng Jinyao is a renowned expert in the fastener industry in China. He has been dedicated to the research of fastener technology, industry and management for over 5 decades and has conducted in-depth researches in fastener industry development and industrial policies.

Although China's fastener industry boasts its production, the unit price is relatively low, which shows the current problems such as low added value and substandard technology quality. Besides, most of the fast-growing fastener companies cluster around coastal areas whereas in the west central regions companies develop slowly. Furthermore, the development of high-end manufacturing requires cooperation with the fastener industry, whose independent R&D capability is still not strong. Only in recent years has the R&D capability drawn more and more attention. The enterprises realize the importance of creativity, and have just started cultivating talents of all kinds.

Enjoying the continuous growth of import and export trade, China is met by more intense competitions from other countries and confronted with increasing trade frictions. Also, with the rise of trade protectionism in various countries, trade protection measures have been applied. The previous "EU anti-dumping duties" imposed on Chinese products is a primary example, causing a huge negative impact on China's trade.

## The Trend of World Fastener Industry's Development

First of all, the "non-defective" fastener will be the ultimate goal of the future development. Technologies and testing facilities will be gradually enhanced to ensure the flawlessness of fastener products. Next, more innovative products will be manufactured, bringing more applications with a wider range of interchangeability, so as to reduce the large variety of products and specifications. The production will also adopt assorted materials to build fasteners with different strengths and functions for diverse market demands. In the future, automation, robotics and IoT technology will be integrated with fastener production to control and monitor the whole process through program settings. Fully-automated management will gain more popularity. The production equipment will also move toward intelligentization to raise the accuracy, productivity and service life of machine tools. On the other hand, the highly-developed

transmission of information and communication today will boost the e-commerce network of fastener trade, which allows transactions to be done online. Finally, the greener development of fastener production will be the goal of the whole industry. Reducing energy consumption and achieving zero emission will enable the industry to maintain sustainability.

## The Prospect and Objectives of China's Fastener Industry

Overall, China's fastener industry will expand markets in the popular industries, such as automobile, high-speed railway, new energy, transportation, construction machinery, and aerospace. However, the industry still requires upgrade to improve technology. Under the influence of the anti-dumping duties, the industry should adjust its export strategies and products with relevant measures to respond to the pressure of cost changes. The industry itself must also have the ability to innovate, research and develop technologies independently to make breakthroughs. Moreover, enterprises in China need to be reorganized, improved, and devoted in specialization. Unprofitable firms should exit out of the market to avoid excessive capacity. In the next 20 years, Industry 4.0 will be implemented industry-wide, and Industry 3.0 will be promoted at a faster pace to upgrade the industry, consolidating the indispensable position of China's fastener industry in the global market.

## Summary

In recent years, China has risen to become one of the world's leading fastener manufacturers, exporters, and importers. As a result, the position of the Taiwanese fastener industry in the global market has shrunk, indicating that the influence of China's fastener industry cannot be underestimated. Readers will learn more about China's fastener industry development and future goals through this book. Along the development, the fastener industry in Taiwan has worked hard to establish and grow business. Currently, the industry is in the transitional phase of transformation and upgrade, and also faces many challenges. Although the scenarios may be different, there are still some good examples where Taiwanese fastener industry can get inspiration. Global fastener industry should also strengthen cooperation and deepen exchanges for common prosperity. □

## Editor's Note



Last year Fastener World's President William Liao attended the pre-show press conference for the International Fastener Show China (IFS China). In order to express gratitude for Mr. Jingyao Feng for the gift book, Fastener World recommends the book on

"Fastener World" Bi-Monthly Edition Issue 168, as well as "China Fastener World" Issue 52.

This book offers a clear account of the development of China's fastener industry in terms of wire rod, heat treatment, surface treatment, testing equipment, packaging, and so on. It also provides a complete introduction to the fastener manufacturing process in China. Lately, Chinese fastener industry is reaching out to the world market, and formulating strategies under the "cooperation" relationship. For fastener professionals, this is a good book worthy of reading. Interested readers are welcome to contact Mr. Feng or China Machine Press directly for further info.



**Professional in manufacturing threaded rods and anchor bolts, full-line hardware and fastener exporter**



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