

Analysis of China's Fastener Trading Value in 2019

by Naiwen Chang, Fastener World

Source: General Administration of Customs of the People's Republic of China

Items	Export Value (USD)		Import Value (USD)	
	Total Export Value	Proportion	Total Import Value	Proportion
731815 Other screws and bolts	3,060,437,985	47.68%	1,348,254,317	47.49%
731816 Nuts	1,159,136,461	18.06%	548,079,384	19.30%
731814 Self-tapping screws	627,713,389	9.78%	265,685,381	9.36%
731819 Other stainless steel threaded products	552,913,734	8.61%	230,938,274	8.13%
731822 Other washers	410,510,693	6.39%	132,878,348	4.68%
731824 Pins and cotter pins	178,768,119	2.78%	89,098,850	3.14%
731829 Other stainless steel non-threaded products	136,568,159	2.13%	82,537,827	2.91%
731812 Other wood screws	125,604,078	1.96%	71,949,170	2.53%
731823 Rivets	63,552,666	0.99%	61,950,305	2.18%
731821 Spring washers and other anti-loosening washers	56,380,902	0.88%	3,031,703	0.11%
731813 Hook screws and ring screws	32,189,537	0.50%	2,412,494	0.08%
731811 Square head screws	15,514,858	0.24%	2,239,131	0.08%
Total	6,419,290,581	100%	2,839,055,184	100%

According to the statistics by General Administration of Customs of China, China exported USD 6.419 billion worth of fasteners and imported USD 2.839 billion worth of fasteners in 2019. The category with the best trade performance was other screws and bolts (HS 731815) at a total export value of USD 3.06 billion taking up 47.68%, and at a total import value of USD 1.348 billion taking up 47.49%. The category with the 2nd highest trade amount was nuts (HS 731816) at a total export value of USD 1.159 billion taking up 18.06%, and at a total import value of USD 548 million taking up 19.3%.

Most fasteners made in China could satisfy the domestic demand in the country, whereas only spring washers and other anti-loosening washers (HS 731821), rivets (HS 731823), coppers and cotter pins (HS 731824) were higher in import value than export value. The import and export values in February were lower because of fewer workdays during the lunar new year holidays. The values picked up slowly in March and peaked in December.

731811 Square head screws

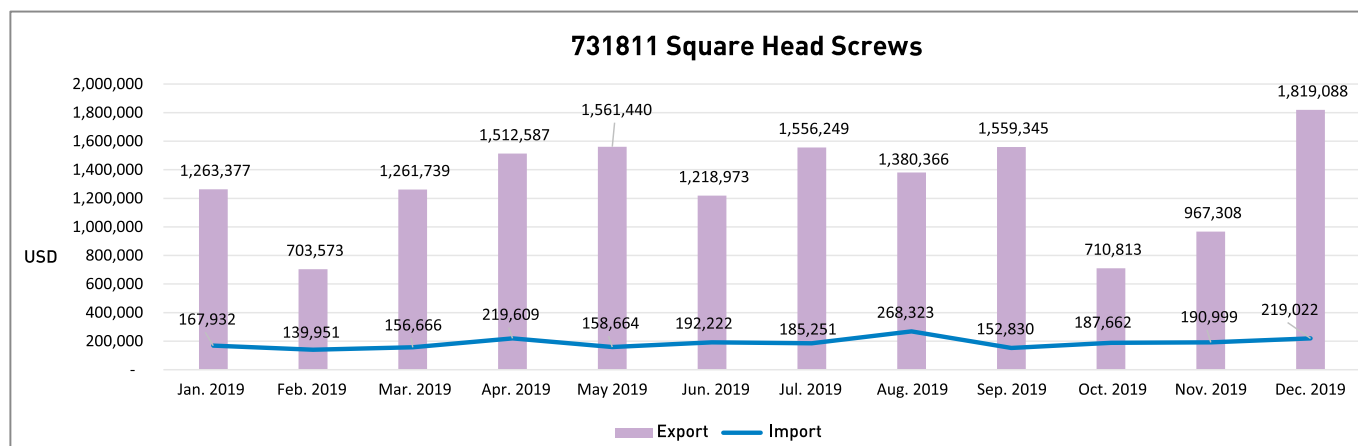
China's export value of square head screws only shared 0.24% of the total export. This product could satisfy the domestic Chinese market and its import value was stable. Note that if we exclude February which had fewer workdays, October had the lowest export value of only USD 71 thousand, just USD 10 thousand more than the export value of February. This could be attributed to the U.S. declaring to increase the tariff from 25% to 30% in the trade war with China. This led to a large slump in export, and later picked up and peaked in December.

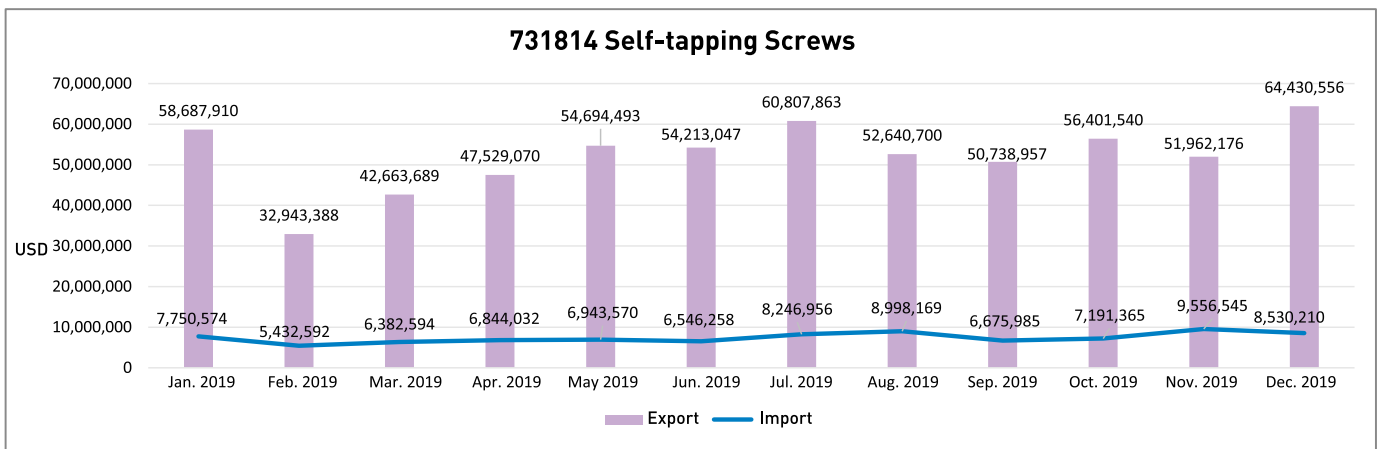
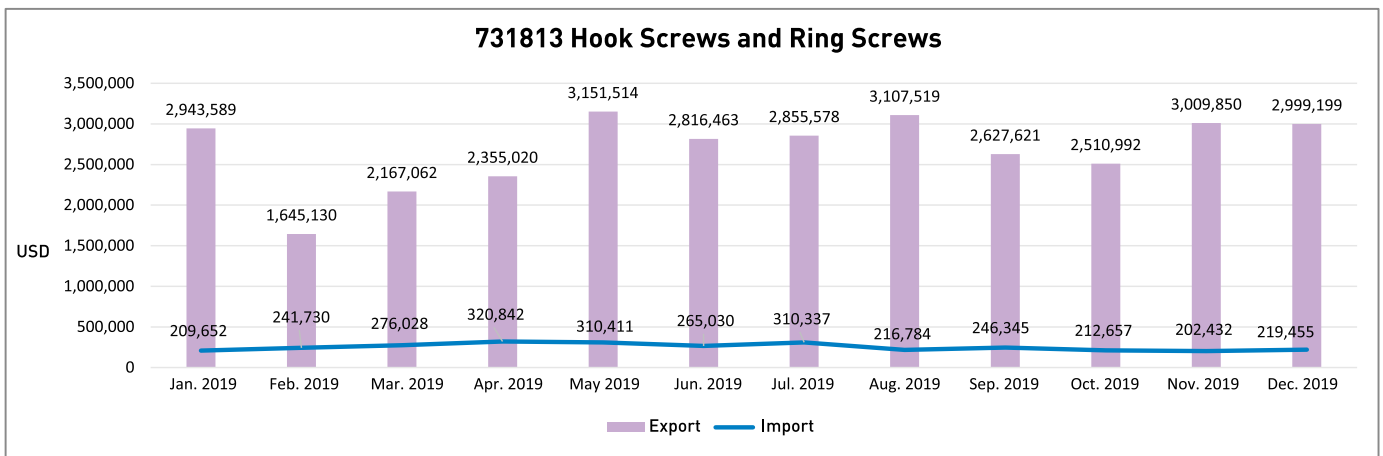
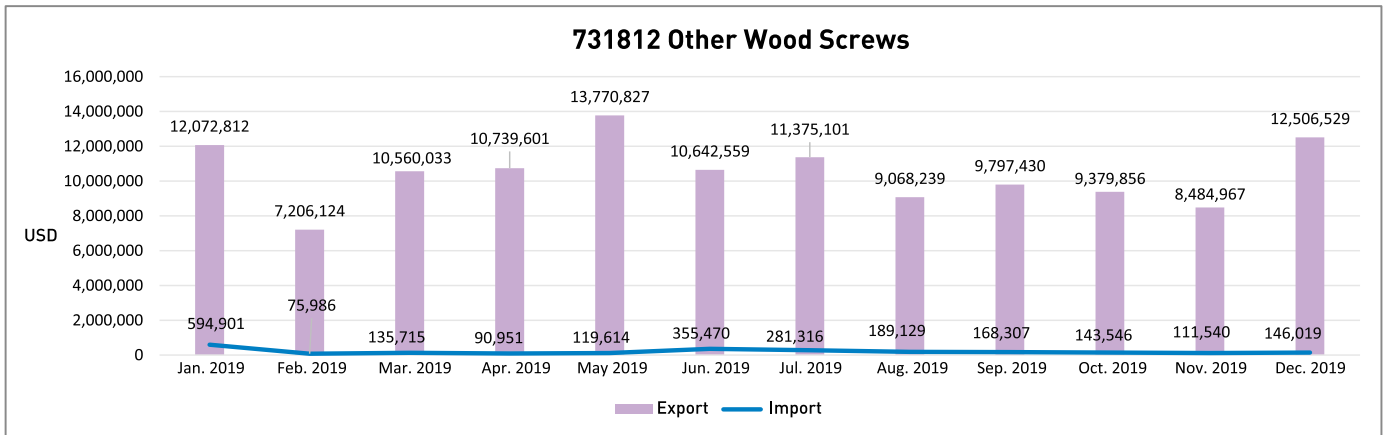
731812 Other wood screws

This product shared 1.96% of the total export value. Excluding February, the export value of other wood screws went below USD 9 million in November and rebounded to over USD 12 million in December. As for import, this product could satisfy the domestic demand. Its import value wasn't much but relatively stable with less fluctuations.

731813 Hook screws and ring screws

This product could satisfy the domestic demand. Its import value wasn't much and at maximum didn't exceed USD 321 thousand in 2019. Its export value peaked in May by growing 33.82% over April and reaching USD 3.151 million. Likewise, there was a larger margin of drop in October but a good rebound in November. There wasn't much drop in December.





731814 Self-tapping screws

Self-tapping screws as the 3rd largest export item shared 9.78% of China's total export value of fasteners. The export value of this product peaked in December and exceeded the USD 64 million mark. It grew 24% over November and could satisfy the domestic demand.

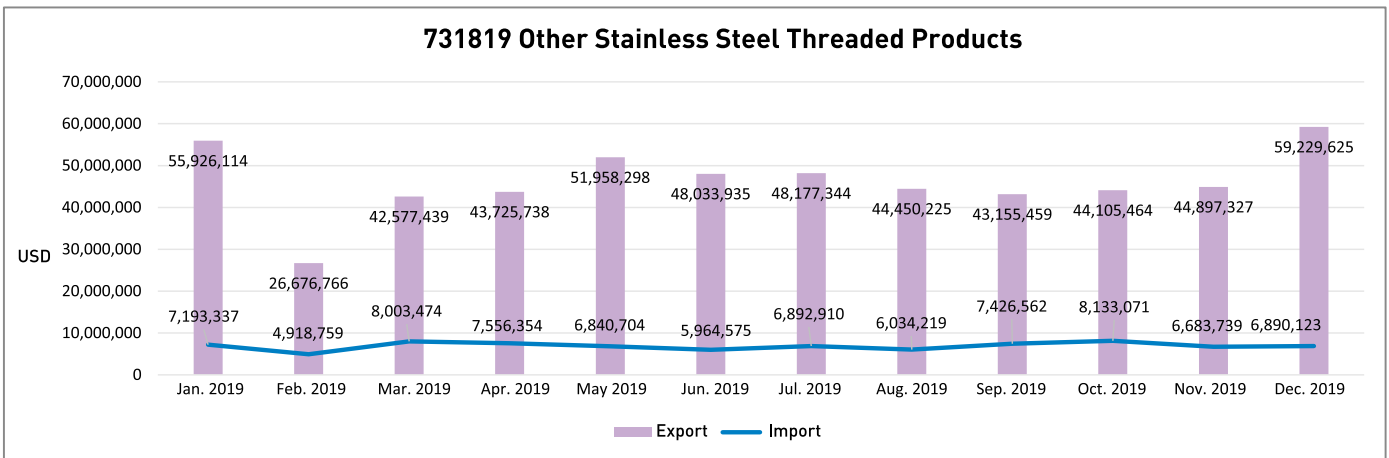
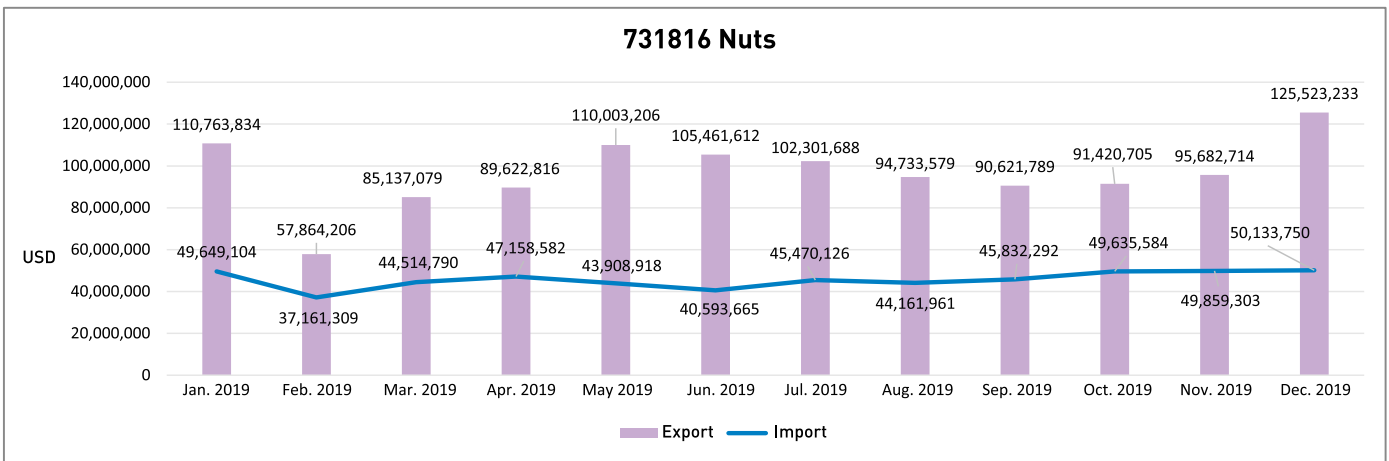
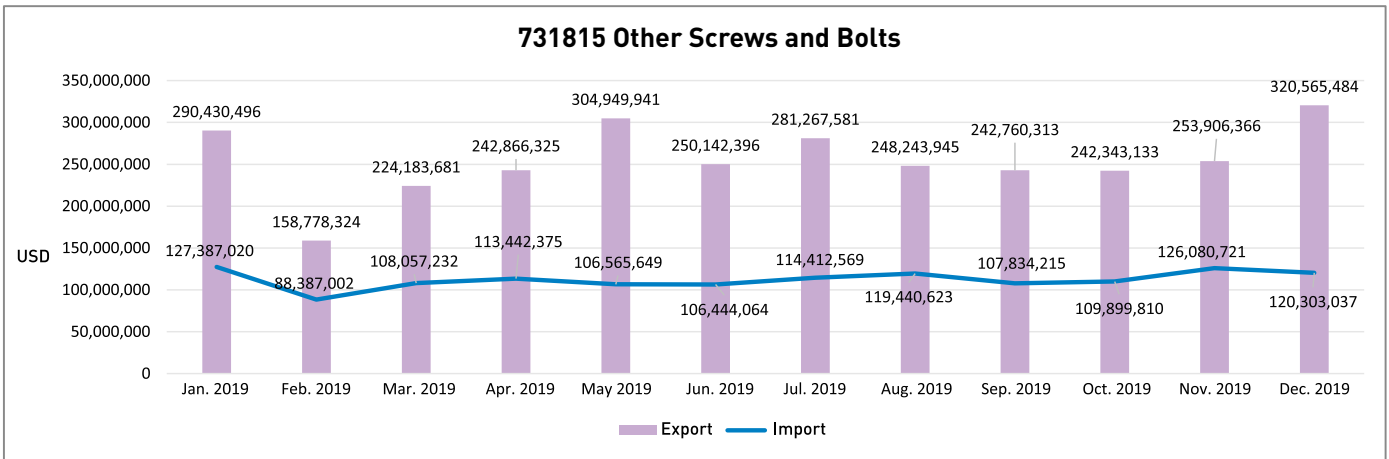
731815 Other screws and bolts

This product topped the proportion of China's fastener import and export value, sharing 47.61% of its total export and 47.69% of its total import. The export value of this product peaked in December, breaking the USD 3.2 billion mark and outgrowing November by 26.25%.

731816 Nuts

This product showed the 2nd highest trade amount in China, taking up 18% of China's total export and sharing 19.17% of China's total import. Its export value peaked in December at USD 120 million, outgrowing November by 31.19%. Its import value peaked in December at USD 50.13 million.





731819 Other stainless steel threaded products

Compared with others, this product had an obvious drop margin due to a drop of 52.3% in export volume in February. It was less affected in the second half of February when the trade war became white-hot. Even if there was a drop, it didn't exceed 8% month-to-month. This product peaked in December 2019 by growing 31.92%, nearing the USD 60 million mark.

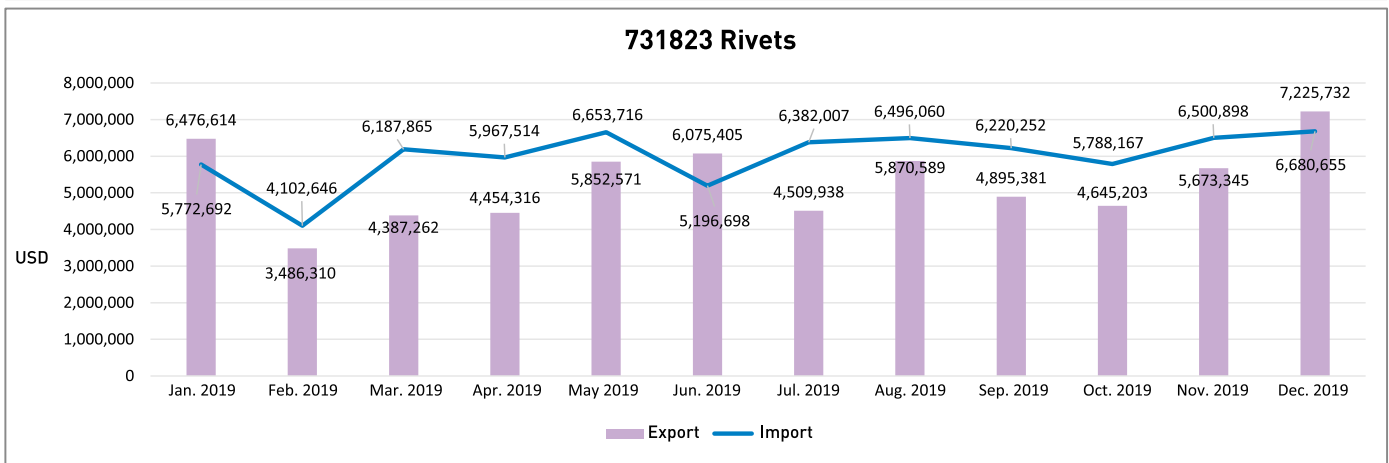
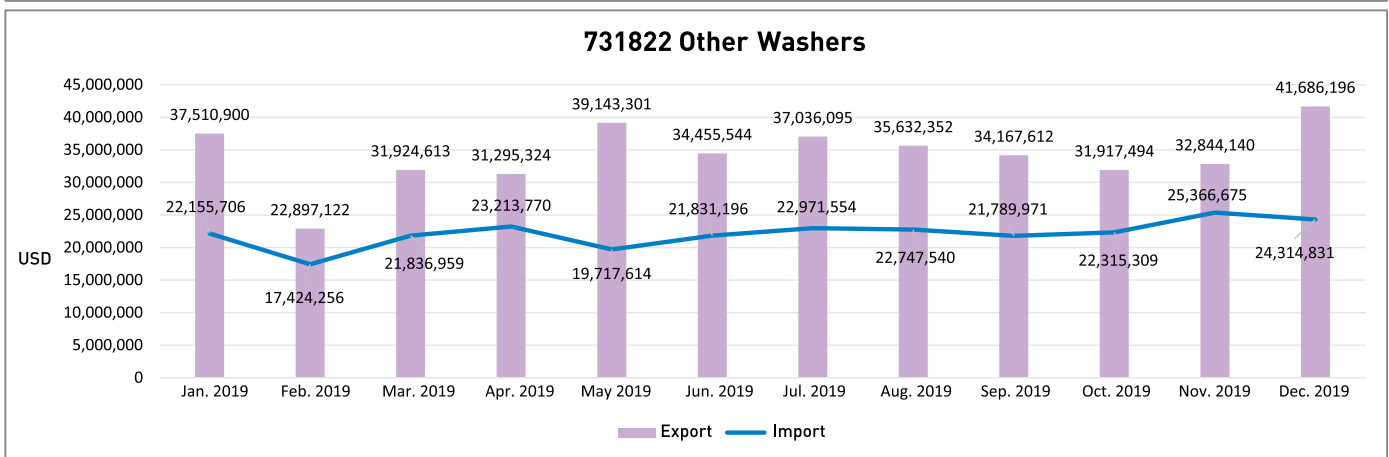
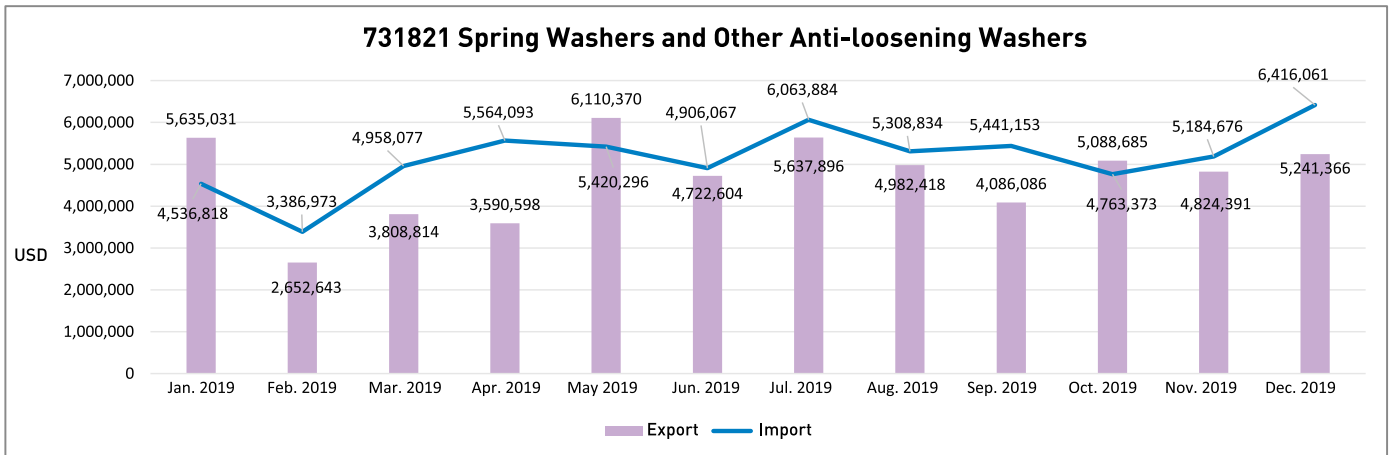
731821 Spring washers and other anti-loosening washers

This product was one of the few with an import value bigger than the export value, but it only shared 0.88% of China's total export and 2.18% of China's total import. We can find that only three months showed the result of "the export value bigger than the import value", while the rest of the year showed the result of "the import value bigger than the export value". The import value in December even grew as much as 24%.

731822 Other washers

This is the category with the 4th highest export amount in China, sharing 6.4% of China's total export. It had an export drop of 52.93% in February, the largest margin among all the other categories. Its export peaked in December at over USD 41.68 million, outgrowing November by 26.92%. Though its import was not as high as its export, it peaked in November by as much as USD 25.36 million.





731823 Rivets

Rivets were one of the products made in China with the import value higher than the export value. Despite the fact that it only shared 0.99% of the total export value, and only 3 months showed the result of "export higher than import," it peaked in December in both import (over USD 7.2 million) and export (over USD 6.68 million).

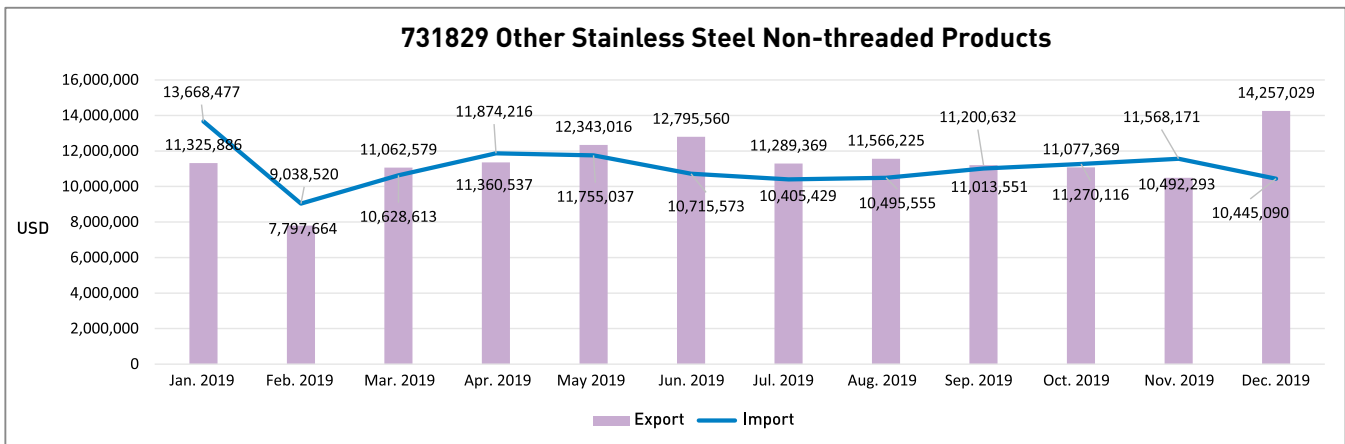
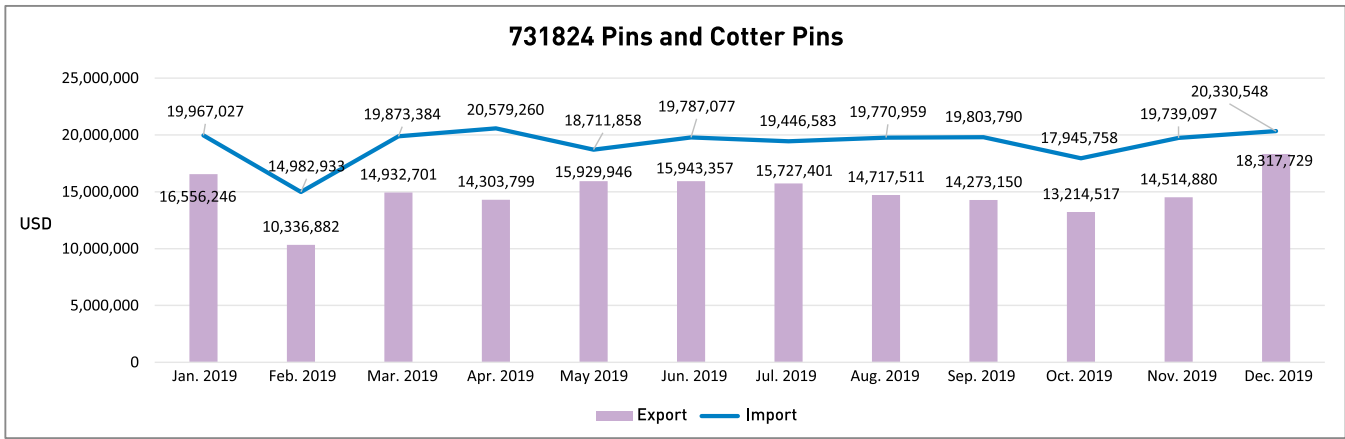
731824 Pins and cotter pins

This product was one of the few with the import value higher than the export value, sharing 8.13% of China's total export. It is the 4th largest category in China's fastener import. What is noteworthy is that although the previous products all showed the result of "export bigger than import", for a few months, this particular product showed the result of "the import value higher than the export value". Its import value peaked in April at USD 20.57 million, unlike other products that peaked in December. The export value of this product was steady with no significant fluctuation.

731829 Other stainless steel non-threaded products

This product shared 2.13% of the total export value and 4.68% of the total import value. The export value peaked in December at USD 14.25 million, up 35.88% over November. What is worth noting is the declining import value despite the significant export value increase in December.





Stainless Steel Fasteners at Reduced Temperatures

by Jozef Dominik

Briefly About Stainless Steels ////

Stainless steel's resistance to corrosion is achieved by dissolving sufficient chromium in the iron to produce a chromium oxide protective film on the surface. To achieve the effect of stainless steel, it needs to contain at least 12% chromium (Fig. 1).

The addition of other elements such as Ni, Mo, Si, etc., will not only increase corrosion resistance, but also other parameters such as:

- Mechanical properties (N)
- Machinability (S, Se, P, Pb, Cu)
- Resistance to corrosion cracking (content reduction of P, As and Sb)

While conventional structural steel corrodes under certain conditions, stainless steel resists corrosion under the same conditions very well (Fig. 2). This is also the main reason for its application in construction practice.

However, as we will see below, it is not just the corrosion resistance that is important for stainless steels. Uncritical adoration of stainless steels as a universal anticorrosive measure does not pay. Regarding how this could have catastrophic consequences, read my article "Latent Corrosion of Screw Connections". Stainless steels are particularly vulnerable in chlorine-containing environments (Fig. 3). The result is a fatal cross-sectional reduction.

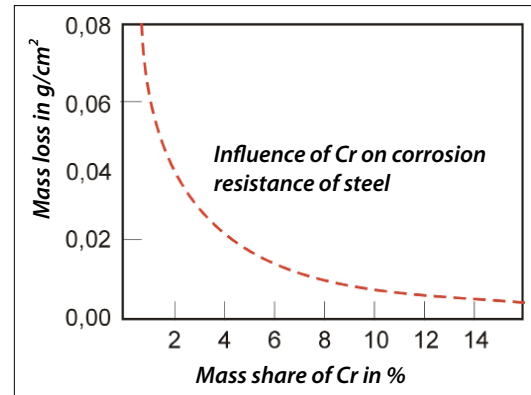


Fig. 1



Fig. 2

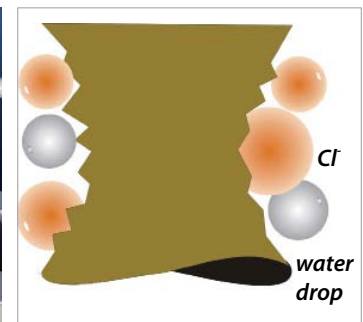


Fig. 3

