

### >> Overview

Fasteners are the critical link in the load path of a building structure. They provide structural integrity and are a major point of energy dissipation under seismic and wind loads. Construction fasteners are generally classified as those fasteners that are used to secure building materials and can be classified as commodity fasteners or task-specific fasteners. Typical applications include:

- Roofing (flat, sloped)
- Decks (steel, wood, composite)
- Bridges (ladder deck, multi-girder, suspension)
- Buildings (residential, commercial, skyscraper)

Typical examples include cement-board screws, drywall screws, needlepoint screws, outdoor screws, pole-gripper screws, self-drilling screws and woodworking screws. Steel and stainless-steel fasteners are commonly used in the construction industry<sup>1</sup>.

Construction fasteners have some specific functions that make them important:

- 1. They must be efficient.** Materials play the main role in an entire building. Therefore, fasteners as the fastening part will be vital, if fasteners do not do their jobs correctly (tight seal between materials) then a construction project will be broken easily.
- 2. They must be durable.** When a construction has been built, it will stay there for several decades, so durability of fasteners is a very important factor in the construction industry. Poor quality fasteners not only reduce the life of a construction, but also is a potential danger for lives of people.

Any lack of attention to the quality of fasteners makes the construction unsafe and increases the possibility of irreparable accidents.

### >> Indonesia's Construction Situation

Construction and fasteners always go "hand in hand". For the last few years, Indonesia had put its focus on infrastructure development, however COVID-19 stopped its sharp growth in 2020. Regarding the statistics, **Table 1** shows the GDP growth rate for the construction sector in Indonesia.

GDP from construction in Indonesia decreased to 18.40 USD billion in the 2nd quarter of 2021 from 18.85 USD billion in the 1st quarter of 2021. Thousands of construction companies have stopped their activities in Indonesia.<sup>2</sup>



# The Construction Industry and Its Effect on Indonesian Fastener Industry by Behrooz Lotfian



**Table 1. GDP Growth Rate for the Construction Sector in Indonesia<sup>3</sup>**

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Growth Rate	8.13%	6.74%	5.52%	6.11%	5.18%	6.8%	6.09%	5.76%	-3.26%

## >> The Situation of Construction Fasteners in Indonesia

Indonesia is one of the fastest-growing countries in the world and is developing many industries. The fastener industry is one of the fast-developing industries in this country. The fastener industry in Indonesia can produce more than 300,000 tons of fasteners annually (at the end of 2020). Indonesia imported 69,730 tons of fasteners valued at 333 million USD and exported 15,836 tons of fasteners valued at 76.6 million USD at the end of 2020. Construction fasteners make up 20% of Indonesia's fastener consumption. That means Indonesia produced 60,000 tons, imported about 14,000 tons and exported about 3,200 tons of construction fasteners.

### Top trading fastener partners of Indonesia in 2020:

- Japan with a share of 39% (130 million US\$)
- China with a share of 19.7% (65 million US\$)
- Thailand with a share of 7.37% (24 million US\$)
- Australia with a share of 6.58% (21 million US\$)
- Singapore with a share of 6.1% (20 million US\$)
- USA with a share of 5.04% (16.8 million US\$)
- Other Asian countries, with a share of 4.49% (14.9 million US\$)
- Italy with a share of 1.78% (5.95 million US\$)
- Germany with a share of 1.71% (5.7 million US\$)
- South Korea with a share of 1.67% (5.57 million US\$)

### The import structure of fasteners to Indonesia in 2020 consists of the following main commodity groups:

- 46% (156 million US\$): 731815 - Screws & bolts
- 16% (53 million US\$): 731816 - Nuts of iron/steel
- 12% (39 million US\$): 731829 - Non-threaded fasteners
- 7.57% (25 million US\$): 731822 - Washers
- 5.48% (18.2 million US\$): 731814 - Self-tapping screws of iron/steel
- 5.08% (16.9 million US\$): 731819 - Threaded articles of iron/steel
- 3.25% (10.8 million US\$): 731824 - Cotter & cotter-pins, of iron/steel
- 1.5% (4.99 million US\$): 731821 - Spring washers & other lock washers, of iron/steel
- 1.23% (4.1 million US\$): 731823 - Rivets of iron/steel
- 0.454% (1.51 million US\$): 731813 - Screw hooks & screw rings, of iron/steel

## >> The Future of Construction Fasteners in Indonesia

Nowadays, the governmental subsidies and the vaccination process have lit a glimmer of hope in this industry. Based on focused approach of Indonesian government to the construction industry, it is predictable that in the next quarters the numbers will grow up in the construction sector again. GDP from construction in Indonesia is expected to be 19.41 USD billion by the end of the 3rd quarter of 2021. In the mid-term, Indonesia's GDP in construction is projected to trend around 20.93 USD billion in each quarter of 2022 and 22.18 USD billion in each quarter of 2023. It means that we can predict a 5% growth in the construction fasteners market in Indonesia.

## >> Toward a 138 Billion USD Business

The total infrastructure spending was \$76 billion in 2021. It was projected (before the pandemic issue) to increase to \$138.6 billion by 2025. Indonesia has learnt a lot from the pandemic issue which convinces the experts that the value will surpass 138.6 billion USD in the future. Based on their problems due to the pandemic,

- Indonesia's construction industry has started to make a powerful local supply chain in its sector because it has suffered a lot from too much reliance on importers, which means that there is an opportunity for more investments in the fastener industry of Indonesia.
- On the other hand, the pandemic has developed the concept of remote working, and the construction industry will use robots in its businesses soon, which means that the speed of construction will be higher than before the pandemic in the future. Reaching 138.6 billion USD is possible and this number is likely to be surpassed. Digital transformation is changing the game role in the construction in Indonesia. ■

<sup>1</sup> <https://www.industrialheating.com/articles/92437-fastener-industry-overview-applications-materials-equipment-part-2>

<sup>2</sup> <https://tradingeconomics.com/indonesia/gdp-from-construction>

<sup>3</sup> <https://www.statista.com/statistics/1090479/indonesia-construction-gdp-growth-rate/>

