



The glass industry in Indonesia

Indonesia has by far the largest economy in South East Asia. In recent years steady progress has been made in terms of addition of new capacity and total output in both major sub-segments of the glass industry. Sunder Singh presents an overview of the latest developments in the country's production of flat and container glass.

Catered for by two flat and four container glass producers, the Indonesian glass industry is slowly emerging out of the shadows of Covid-19-induced slowdown. There has been a significant capacity increase (actual and on the cards expansion) in the country's flat glass production capacity. In addition to the two established flat glass producers, the entry of South Korean flat glass producer KCC Corporation is expected to make [Indonesia] one of the largest flat glass producers in the South East Asia region by the beginning of 2024.

In the container glass sector, PT Muliaglass and PT Schott Igar Glass have undergone capacity expansion exercises over the last three years. PT Muliaglass increased its installed capacity by nearly 40%, while PT Schott Igar Glass added a new machine to increase its installed capacity of vial production.

At more than 278 million, Indonesia's population is greater than the combined total of inhabitants in Thailand, Malaysia and Vietnam – the three other major economies in the region. A population of this size offers immense opportunities for Indonesia's glass producers. Low per capita consumption in the container glass sector is both a concern and opportunity for the Indonesian container glass industry.

On the economic front, there was good news in the first quarter of the current year for Indonesia. The country's economy grew by 5.01% in the first quarter of 2022 year-on-year (YOY), compared to the same period in 2021, due to the recovery in economic activities, according to Statistics Indonesia (BPS – Badan Pusat Statistik – the Central Bureau of Statistics).

However, in April 2022 the World Bank has lowered its projection for Indonesia's economic growth to 5.1%, from the previous estimate of 5.2% in October 2021, due primarily to the ongoing Russia-Ukraine conflict. In addition to this war, the slowing of Chinese growth and America's

monetary tightening will weigh heavily on this year's growth prospects in all the major economies, including Indonesia.

Flat glass industry

Flat glass consumption, production and exports from Indonesia have been robust over the last few years. There has been huge domestic consumption in the construction and automotive sub-segments, while a significant part of Indonesia's flat glass output is exported to other ASEAN countries, Australia and India.

Barring 2020, the Indonesian construction sector has been the major driver of float glass demand. The country's construction sector is the third-largest contributor to the economy, providing around 11.6% of GDP in 2021, having grown from 6.5% in 2013 and 9.96% in 2016. This growth was likely triggered by the promotion of infrastructure development by the government under President Joko Widodo, who tripled Indonesian infrastructure project funding in 2015. In 2018, the Ministry of Housing, which is responsible for providing affordable housing for low-



Indonesia's population of more than 278 million offers immense opportunities for the country's glass producers.

income households, received 26% of the infrastructure budget. Around 820,000–920,000 new housing units are needed annually in the country to meet the demand of a growing population. Each year 500,000 units are built by the private sector and 220,000-260,000 are built through public sector initiatives, leaving a deficit of about 160,000–200,000 units per year.

The construction industry in Indonesia is expected to record a growth of 7.2% in real terms in 2022, surpassing



Flat glass consumption in Indonesia has been boosted by the construction and automotive sectors.



pre-pandemic output levels. This would be a notable increase compared to the growth rate of 3.1% recorded in 2021, when large-scale social restrictions and pandemic-related uncertainty deterred new construction investment – which consequently impacted construction progress, according to GlobalData, a leading data and analytics company.

The emergence of Indonesia as a major automotive manufacturing hub has resulted in a steady demand for automotive glass in the country. This sector is expected to play a key role in total flat glass consumption in the coming years. Car sales in 2021 exceeded 850,000 units; a significant increase compared to 2020's sales. The Association of Indonesian Automotive Manufacturers (Gaikindo) predicts car sales in 2022 to reach 900,000 units, supported by a stronger economic recovery. Domestic car sales plunged by more than 51% YOY, to around 532,000 units in 2020 and were far lower than average sales of 1 million units sold in the last four years.

PT Multiaglass

PT Multiaglass is the second-largest producer of flat and container glass in Indonesia. In March 2020 the company completed expansion of its production facility for container glass and glass blocks. Multiaglass installed a new furnace with 155tpd capacity for container glass and increased its installed capacity of glass blocks by 80tpd, taking installed capacity to 220,825 tonnes per annum (p.a.) for container glass and 96,725 tonnes p.a. for glass blocks. By June 2020, the company's glass block capacity was at 100% while its new container glass furnace was operating at 50% capacity. The remaining 50% capacity was hindered by the Covid-19 induced lockdown, which delayed the arrival of technicians tasked to install a specific machine. In November 2020, the machine was successfully installed.

Commenting in the company's 2021 annual report, Eka Tjandranegara, President Director of Mulia Industrindo, stated, "Net total sales of glass products in 2021 was [...] IDR 4.45 trillion, increasing from IDR 3.73 trillion in 2020. Gross profit grew from IDR 823.83 billion to IDR 1.54 trillion. The gain in gross profit was a result of the efficiency strategy implemented by the company, which consistently managed to stabilise costs of sales at IDR 2.91 billion."

Domestic sales amounted to IDR 3.32 trillion, a sharp increase from IDR 2.73 trillion in 2020. Export sales increased from IDR 1.09 trillion to IDR 1.27 trillion. This accomplishment indicated the property sector revival amidst the ongoing yet subdued Covid-19 pandemic.

Flat glass accounted for total sales of IDR 2.80 trillion, while container glass and glass blocks registered total sales of IDR 1.46 trillion. In 2020, flat glass generated total sales of IDR 2.36 trillion, while container glass and glass blocks sales was IDR 1.25 trillion. Value-added glass accounted for total sales of IDR 175.79 billion as compared to IDR 115.34 billion in 2020.

New entrant in float glass

Leading South Korean flat glass producer KCC Glass is constructing a new flat glass plant in Indonesia with an installed capacity of 428,000 tonnes p.a., with a completion target of 2024.

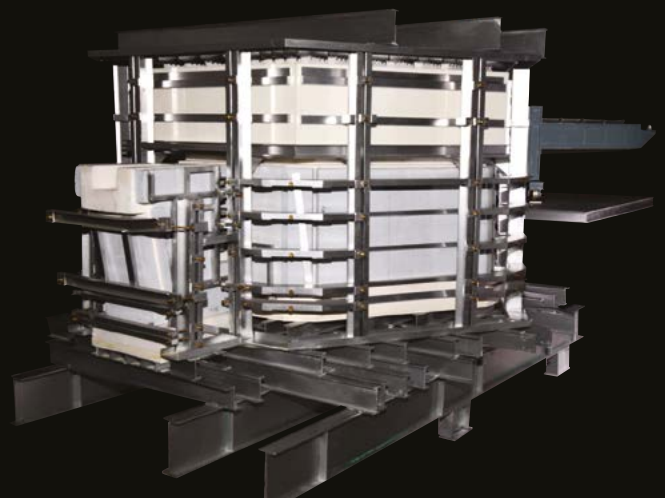
Spread over an area of 49 hectares in Batang Industrial Park, Central Java, this is the first overseas venture by the South Korean glassmaker. At a ground-breaking ceremony for the new plant held in May 2021, CEO of KCC Glass Ne-Hwan Kim stated that the Rp 5 trillion investment will be made until 2028.

A press release from KCC Glass announcing the Indonesian plant reads, "The establishment of glass factory in Indonesia is expected to serve as a turning point for KCC Glass to leap into a global glass company. The construction market in Southeast Asia is a lucrative market recording nearly two times higher growth rate than that of the world construction market. KCC Glass will sell ▶



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Company	Location	Installed capacity	Remarks
PT Asahimas	Cikampek (2 lines) and Sidoarjo (2 lines)	720,000 tonnes p.a.	
PT Mulia Glass	Bekasi	620,500 tonnes p.a.	
PT KCC Glass Indonesia	Batang Industrial Park, Central Java	428,000 tonnes p.a.	Under construction
PT Tossa Shakti	Kendal	900tpd	Currently closed (declared bankrupt and put up for auction)

Flat glass producers in Indonesia

architectural float glasses produced from its glass factory in Indonesia to the local and Southeast Asia markets and [will] expand the factory in stages to develop it to an integrated glass cluster for overseas market. Upon commercial start, the new plant would generate flat glass sales of around 150 billion South Korean Won (flat glass basis). In the second stage of operations, KCC will produce coated glass and automotive glass using the flat glass produced at the plant.”

Overcapacity?

With both steadily expanding capacity from existing flat glass producers and the entry of South Korea’s KCC Glass, Indonesia will have a huge excess capacity in flat glass segment.

Demand for flat glass in the country is growing steadily, but it will be difficult to absorb the sudden spurt of production output when KCC Glass will commence its commercial production. Overcapacity in the domestic market will lead to pricing pressures in the domestic and export markets.

PT Asahimas

PT Asahimas is the largest flat glass producer in Indonesia, operating four float glass lines across a plant in Cikampek (West Java) and two in Sidoarjo. In January 2019 the company closed its 120,000 tonnes p.a. facility in Jakarta and installed a new 210,000 tonnes p.a. capacity furnace in Cikampek. With the commercial start of this new furnace, PT Asahimas’s total flat glass capacity has increased from 630,000 to 720,000 tonnes p.a..

In April 2019, the company commenced operations of a new mirror line and magnetron sputtering coater at the Cikampek plant. The new magnetron coater with AGC-Interpane Europe technology has a total installed capacity of 3.6 million m² per year and facilitates products for solar control, high performance and spectrally selective glass up to 6m in size.

PT Asahimas has a licensing agreement with AGC Glass Europe, Belgium under which the company manufactures and sells CVD [chemical vapour deposition]-coated glass products. Under this agreement, the company pays royalties at 1% to 4% of total net sales. This agreement will expire in January 2023.

The new mirror line is a big step forward for AMG as it enhances its product line-up with the launch of Mirox MNGE (Mirox New Generation Ecological Mirrors), manufactured with patented AGC Europe technology.

Manufacturing plant	Location/ Region	Installed capacity	Products
Cikampek	West Java	420,000 tonnes p.a.	Float glass
Cikampek	West Java	3,600,000 m ²	Coated glass
Cikampek	West Java	5,800,000 m ² of tempered and laminated glass	Automotive glass
Sidoarjo	East Java	300,000 tonnes p.a.	Float glass

PT Asahimas’s flat glass manufacturing locations

Company	Location	Installed Capacity
PT Mulia Glass	Bekasi	220,825 tonnes p.a.
Owens Illinois Indonesia	Cakung	2.4 million bottles/day or 131,400 tonnes p.a.
PT Iglas Presario	Surabaya	340tpd (will be liquidised by mid 2022)
PT Schott Igar Glass	Bekasi	576 million vials; 775 million pieces of ampoules and 50 million pieces of pipettes per year

Leading container glass producers in Indonesia

With its integrated float glass furnace, magnetron coating line and mirror line, PT Asahimas posits itself as a single source for a wide variety of specialty glass products and solutions across the Asia-Pacific region.

PT Asahimas is also the dominant automotive glass producer and processor in Indonesia. The company’s automotive glass factory in Cikampek produces both tempered safety glass and laminated safety glass. Current total annual capacity is 5.8 million m² – equivalent to 1.7 million cars sets.

Container glass

The container glass industry in Indonesia has registered modest growth in comparison to the vibrant growth of the flat glass sector during the last few years. Global container glass manufacturer O-I has not increased its installed capacity recently. As previously mentioned, Mulia Glass added a new container glass furnace in early 2020, which become fully operational by the end of 2020. Ailing state-owned company PT Iglas (Presario) received a nod from Indonesian authorities to wind down its operations. An email sent to the company by the author was not answered. The Indonesian government has decided to liquidise PT Iglas by mid 2022.

PT Schott Igar Glass

In 2019 pharmaceutical glass producer PT Schott Igar Glass invested US \$100 million in equipment to raise its production capacity for vials by 36 million pieces per year.

“Our vial production capacity has increased from 540 million pieces per year to 576 million pieces per year,” said PT Schott Igar Glass President Director Abelardo Rafael Riveron Mora during the inauguration of the new



Over the last few years container glass production in Indonesia has registered modest growth in comparison to flat glass.

production line. PT Schott Igar Glass has a production capacity of 775 million pieces of ampoules per year, while its installed capacity for dropper pipette products is 50 million pieces per year. The company has a more than 60% share in the domestic pharma glass market. Schott imports about 4,800 tonnes of glass tubing annually for processing into vials and ampules at its Indonesian plant.

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