

# The lightweight glass container industry in SOUTH EAST ASIA

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## **L**IGHTWEIGHT CONTAINER GLASS PRODUCTION TECHNOLOGY

New production technologies make it possible to produce thin-walled lightweight glass containers. Instead of the traditional blow-and-blow process, container glass producers have adopted the narrow-neck-press-and-blow (NNPB) process. This technology guarantees that glass containers weigh significantly less while remaining as strong and stable as their heavier predecessors.

NNPB is a revolutionary process that not only controls

The choice for lightweight glass containers has become popular in the container glass production industry over the last two decades. In this issue of Glass Machinery Plants & Accessories, we take a look at how the format started to become popular in Asian countries after having gained popularity in European countries over the first decade of 2000.



## COUNTRY STUDY

the distribution of glass inside the container, but also reduces the weight of glass by 33 percent without having any adverse effects on the performance of the glass containers. A number of container glass producers in South East Asia have adopted the NNPB technology to produce lightweight glass containers.

Adoption of NNPB technology leads to a reduction in the consumption of molten glass per bottle without compromising product strength. Facilitating superior glass distribution, this technology reinforces the bottle's resistance to pressure on the filling line. It also leads to a decrease in logistics cost and an increase in consumer acceptance of the bottles.

### CONTAINER GLASS PRODUCERS IN SOUTH EAST ASIA

Comprising eleven countries, namely Brunei, Myanmar, Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam, South East Asia

is a very diverse area covering a vast geographical spread of 4,545,792 square kilometres and a population of nearly 680 million. It is also one of the most dynamic areas of the world in economic terms - a factor which largely accounts for its growing international significance. The region represents a huge slice of total container glass production in Asia. A few countries, such as Thailand, Vietnam, Malaysia, Indonesia and the Philippines, enjoy the lion's share of container glass produced in the region.

Popularly known as ASEAN 5, the group comprises Indonesia, Malaysia, Thailand, the Philippines, and Vietnam account for about 90 percent of the total container glass production in the South East Asia region.

Thailand's Bangkok Glass Industry, Thai Glass Industry, Siam Glass, Indonesia's OI, PT Mulia Glass, Philippines San Miguel Yamamura Glass, and Malaysia's Thai Malaya Glass are some of the most impor-

tant players in the container glass industry in the region. All the abovementioned container glass producers have adopted the production of lightweight glass bottles to varying degrees in recent years.

### HEALTHY ECONOMIC SIGNALS

Container glass consumption is strongly correlated with economic growth. Indeed countries in the South East region clocked strong economic growth last year, signalling a prosperous period for the container glass industry in the region.

Indonesia's real GDP grew by 5.3 percent in 2022, boosted by strong domestic consumption, investment and exports. Not only. The country's investments are tipped to rebound thanks to recent legislation to stimulate them.

In Malaysia, real GDP grew by 8.7 percent in 2022, led by domestic consumption and services, though net exports made a







negative contribution to growth. In 2023, economic growth is expected to moderate to 4.0 percent due to the global economic slowdown and tighter monetary policy.

The Philippines' real GDP grew by 7.6 percent in 2022, driven by household spending, despite inflationary pressures and elevated interest rates. Exports may slow in 2023 due to the global economic slowdown, and tighter monetary conditions to cope with high inflationary pressures may pose a challenge for private consumption and investment growth.

In Thailand, real GDP grew by 2.6 percent in 2022, supported by private consumption and net exports. In 2023, growth is expected to accelerate to 3.8 percent due to a further rebound of private consumption and increased tourism, despite the global economic slowdown and weaker demand. The Thai

government plans to focus on several industry clusters, such as agriculture and food; bioenergy, biomaterials and biochemicals; medical and wellness; and tourism and the creative sector.

Vietnam's economy grew by 8.0 percent in 2022, surpassing global growth rates, and is expected to continue its strong performance at 6.4 percent in 2023, boosted by foreign investment in manufacturing.

### **BG CONTAINER GLASS COMPANY**

BG Container Glass Company (formerly Bangkok Glass) is the largest container glass producing company in Thailand. With five production facilities across the country, the company can produce 3,495 tonnes of glass containers per day for food and beverage industries.

BG Container glass's sales revenue in 2022 was THB 12,367M, which increased by THB 1,507M as compared to 2021, or 14 per-

cent YoY. The increase came mainly from the domestic sales that increased by 11 percent YoY, which contributed to beer, soda & water, and spirits & wine. The export sales increased by 44 percent year-on-year, driven by soft drinks.

### **THAI GLASS INDUSTRIES COMPANY LIMITED**

Thai Glass Industries Public Company Limited, known as TGI, is the leading glass container manufacturer in Southeast Asia and one of the biggest in Asia. With a combined production capacity of 3,300 tons per day, TGI operates three plants in Thailand, one in Malaysia and one in Vietnam.

Thai Glass Industries Co. Ltd was among the first batch of container glass producers in South East Asia to adopt the production of lightweight glass containers when the company installed an NNPB machine at furnace 4 at Bangplee plant in 2008. Since then, Thai Glass Industries has gradually increased the scale of

production of lightweight glass containers at its two locations.

TGI's products are sold through the Packaging Product Division of its parent company, Berli Jucker Public Company Limited (BJC). BJC is a leading commercial conglomerate, operating on its own behalf and for international principals, in manufacturing, marketing, sales, distribution and services. Through subsidiaries and joint ventures, BJC has some of the most efficient manufacturing operations in the region. TGI obtains full technical support from O-I (Owens-Illinois) North America, which is a global leader in container glass production.

### SIAM GLASS

Siam Glass is Thailand's third largest glass container producer, with an installed capacity of 1600 tonnes per day of glass

containers through four production facilities. Established in 1977, the company has a total of 11 production lines to produce glass containers in sizes from 15 ml to 750 ml.

Siam Glass Industry subsidiary operates a total of six glass melting furnaces at production sites in Rojana, Samutprakarn and Ayutthaya. These production facilities are equipped with NNPB technology to produce lightweight glass containers. The company has technology collaboration with Japanese container glass and technology supplier Nihon Yamamura Glass Co. Ltd.

### PT MULIA GLASS

With an installed capacity of 220,825 tonnes per annum of container glass, PT Mulia Glass controls nearly 50 percent of the Indonesian container glass market. Established in 1989 in

West Java to produce various types of glass products such as float glass, glass container, safety glass and glass block, PT Mulia Glass operates two furnaces and seven production lines.

The company mainly produces flint glass bottles for food and beverage segments. Mulia supplies glass containers to such well-known domestic food and beverage companies as PT Heinz-ABC Food Co; PT. Sinar Sosro, Coca Cola Beverage Indonesia, PT. Indofood, and PT. Unilever, among others.

### OI- INDONESIA

Operating in Indonesia since 1973, OI Indonesia is a major container glass producer in Indonesia. The OI Jakarta plant currently consists of two furnaces and six machine lines, which produces around 2.3 million glass bottles per day for some







of Indonesia's leading food, beverage and pharmaceutical brands. Some of its customers include Multi Bintang, PT Asia Health Energy Beverage, PT Djojonegoro, PT Supra Ferbindo Farma and Ultra Prima Adadi.

Company's product portfolio is complemented by another two container glass manufacturing plants in neighbouring Malaysia and Vietnam.

#### **SAN MIGUEL YAMAMURA GLASS**

With an installed capacity of 1,500 tons per day, San Miguel Yamamura Glass is the largest container glass producer in the Philippines. It has more than 60 percent of the domestic container glass industry market share. The company operates two container glass plants at Cavite and Mandaue for beverage, food and

pharmaceutical industries.

San Miguel Yamamura Packaging Corporation, the parent company of San Miguel Yamamura Glass, was established in 1991 as a joint venture between San Miguel Corporation and Japanese container glass producer Nihon Yamamura Glass. It produces and sells a variety of glass bottles, such as beer bottles, liquor bottles, condiments bottles, and beverage bottles.

Its parent company, San Miguel Corporation (SMC), is one of the Philippines' largest and most diversified conglomerates, with revenues that accounted for about 5.9 percent of the country's GDP in 2018 - all through its highly integrated operations in food and beverages, packaging, fuel and oil, power, and infrastructure.

#### **SAN MIGUEL YAMAMURA HAI PHONG GLASS COMPANY LIMITED**

San Miguel Yamamura Hai Phong Glass Company Limited is a leading container glass producer in Vietnam. With an installed capacity of 380 tonnes per day of glass containers, the company caters to beverages and food industries.

The company is a joint venture between Philippines' packaging company San Miguel Yamamura Packaging Corporation (SMYPC) and Hanoi Beer Alcohol and Beverages J.S Corporation (Habeco). San Miguel Yamamura Packaging Corporation (SMYPC) is a joint venture between two famous Asian groups, San Miguel from the Philippines and Nihon Yamamura from Japan. San Miguel is known as the Philippines' largest group - specializing in producing beverage, food and container glass packaging. ■