

Packaging solutions for Thailand's growth markets

Widespread flooding has caused severe problems for the people of Thailand in recent months, impacting individual households, local industries and key elements of the country's infrastructure. Bangkok Glass Industry Co Ltd (BGI) is among the businesses affected, the company's latest production facility in Ayudhaya having been forced temporarily to cease production last October. Despite this setback, BGI maintains its position as one of South East Asia's leading glass container producers.

Since entering Thailand's glass container business in 1980, BGI has expanded significantly in line with the local economy and now operates five separate manufacturing facilities. Approximately 2800 tonnes of glass is melted daily in 11 furnaces, with a twelfth planned for installation in Ayudhaya during the first half of 2012.



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The original factory in Pathumthani Province now houses four furnaces and accounts for approximately 30% of BGI's production, with a melting capacity of 900 tons/day and 13 production lines. At one stage, six furnaces were operated at the site, before the decision was taken to create satellite facilities in different regions of the country and thereby, enhance manufacturing flexibility. A second operation was opened in 1996, approximately 200km away from Pathumthani, in the Province of Rayong, located in the east of Thailand. This facility includes 10 production lines and three furnaces with a combined melting capacity of 640 tons/day, while Khon Kaen (approximately 400km north east of Bangkok) houses two furnaces (735 tons/day) and five lines.

Opened in 2008, a fourth plant in Prachinburi is a single furnace operation (180 tons/day, serving two lines) and BGI's latest facility, at Ayudhaya, was commissioned in 2010. Representing 12% of output, this advanced production facility currently features a Sorg 320 tons/day melting furnace, a Zippe batch plant and three production lines from Emhart Glass and GPS, including advanced inspection equipment from IRIS Inspection Machines. A second furnace is scheduled to be commissioned in April 2012.

With its headquarters at Pathumthani, the group has a total workforce of 3100 people. This includes approximately 1600 at the Pathumthani site, 800 in Rayong, 300 in Khon Kaen, 200 at Prachinburi and 200 in Ayudhaya. It is estimated that on average, there are 70 people working on a typical 12-section production line in Thailand. Thirty years ago, labour costs were comparatively low at approximately 6% of total production costs, compared to roughly 20% in Germany. Today, however, the situation is understood to have changed markedly, with its total personnel costs representing over 11% of the total, emphasising the growth of the Thai economy in recent years and the escalating pressures faced by local manufacturers.

When recruiting staff for its different plants, BGI is able to take advantage of 30 years of >

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FACTORY SPOTLIGHT

experience in the business and starts the process of training newcomers between eight and 12 months before a plant start-up. For the Ayuddhaya factory for example, approximately 50% of the workforce were existing BGI employees, relocated from other sites.

PRODUCTION FLEXIBILITY

According to BGI President, Surasak Decharin, an immediate benefit of operating five factories is that production from Ayuddhaya could be reallocated while simultaneously managing the challenges created by the flood waters. Located on a state-of-the-art industrial complex, the problems encountered at Ayuddhaya have shocked everyone. "The industrial estate has a flood barrier of more than 4m above the mean sea level but nobody expected this degree of flooding" Mr Surasak comments. "This really should have been the safest place, with the latest logistics but it is a terrible situation and will take several months to recover."

As flood waters rose, it was decided to start draining the furnace in an effort to protect the structure from even greater damage. It is too early to say for certain but when interviewed last October, Surasak Decharin was hopeful that production could be restarted by the first quarter of 2012.

In the long-term, it is anticipated that BGI's original Pathumthani plant will be closed, hence the policy to expand the group's other factories. Having been built on a greenfield site more than 30 years ago, Pathumthani now finds itself at the heart of a residential community, with no possibility of further expansion. Instead, BGI will continue to develop its other sites and in particular, Ayuddhaya, where the benefits of natural gas can be exploited. "We will evolve and react as necessary" said the BGI President. "The recent flooding at Ayuddhaya is a good example of how we have to remain flexible... our priorities are to be located as close as possible to our customers, while undertaking the fewest possible job changes."



BGI's strong market presence is further reinforced by its ownership of the Bangkok Glass Football Club.

VALUED PARTNERS

Today, BGI is one of Asia's most technically advanced glass container manufacturers, competing with Thai Glass Industries for domestic market leadership. The joint venture company's principal shareholder is Boon Rawd Brewery Co Ltd (best known internationally as the brewer of Singha beer since 1933 and BGI's largest customer), together with Oberland Glas AG (part of Saint-Gobain/Verallia) and other glass container users.

Boon Rawd Brewery maintains a shareholding in excess of 63%, while Saint-Gobain is the group's largest foreign shareholder at 3%. Oberland Glas was selected as a partner because of the German glassmaker's proven expertise in the industry and the technical assistance that could be provided. "Anyone can start up a glass plant but you need expertise to make it sustainable" indicates Surasak Decharin. "When the first plant opened in 1980 in Pathumthani, there was just one furnace and no glass plant can survive with one furnace. We were too rigid - when something happens, you face liquidity problems, so we needed to find a strong partner to expand." At that time, Boon Rawd Brewery controlled between 80% and 90% of the local beer market and was keen to invest in its own glass plant.

This partnership was to enable BGI to expand its operations to 12 furnaces by mid-2012, providing the business with essential production flexibility.

Boon Rawd Brewery is still the glassmaker's largest customer at around 40%, with products including soda and drinking water, in addition to beer. Other important customers include Pepsi and Coca-Cola, as well as energy drink suppliers such as Red Bull. >

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BGI President, Surasak Decharin (left) with Glass Worldwide's Dave Fordham at the 35th ASEAN Glass Conference in Phuket last October.

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BGI's strong market presence is further reinforced by its ownership of the Bangkok Glass Football Club. Representing an important part of the group's community activity in Pathumthani Province, the team plays to a high standard in the Thai Premier League. In response to popular demand, the stadium's capacity will gradually be increased to more than 10,000 people.

Different plants supply the needs of different sectors, with Ayudhaya for example, concentrating on the needs of Boon Rawd, while Prachinburu specialises in glass packaging for energy drinks. Because of its close proximity to a sea port, approximately 40% of food production from Rayong is exported, for example to Malaysia as well as Europe, with such products as small jars. Separately, beer bottles are exported to Amcor in Australia and across the BGI glass group as a whole, high value exports represent 10% of total tonnage, with the remainder of output being sold to domestic customers.

STRONG SUPPLIER RELATIONSHIPS

As Surasak Decharin explains, the main supply areas for BGI involve the melting furnaces, batch plants, forming machines and inspection equipment. "Wherever possible, our policy throughout the plants is to involve more than one supplier, an exception to this rule being the Zippe batch plants, which are considered the best. We do not take this selection for granted and other leading suppliers make the specification process competitive. We are of course looking for high quality and the best price from all suppliers."

Historically, Sorg melting furnaces have been specified for their energy consumption and performance features, although at Khon Kaen, an Asahi Glass Ceramics furnace has been installed, a good relationship having been established with this organisation as well.

In the forming area, approximately 40% of lines are equipped with IS machines sourced from Emhart Glass, with another 40% featuring GPS equipment. According to Surasak Decharin, although BDF equipment has also been used in the past, Heye International IS machines have been ordered for BGI's latest >



Eleven furnaces and 33 production lines are currently operated across BGI's five glassworks.



Automated inspection is an essential part of every Bangkok Glass production line.

expansion at Ayudhaya this April. "We are still very good friends with existing suppliers like Emhart and GPS but on this occasion, the best match for Ayudhaya furnace 2 were Heye International machines and the company's glassmaking expertise, backed up by the Ardagh Group" he confirms.

Previously, MSC (now called MSC & SGCC) has been BGI's main inspection machine provider, with almost 65 machines installed. In recent times, however, approximately 40 machines have also been sourced from IRIS Inspection Machines. "IRIS has completed some good work with Vetropack in Europe and we have a strong relationship with Vetropack's Technical Director, Günter Lubitz, who formerly worked for BGI, initially providing technical assistance when employed by Oberland Glas in 1985."

Since using the turnkey construction services of Continental Glass

Engineering (CGE) for its first factory in 1980, BGI has developed its own knowhow, with the help of Oberland Glas. These skills have been used to good effect for the glassmaker's subsequent greenfield projects in Thailand.

IPGR MEMBERSHIP

Last October, BGI officially joined International Partners in Glass Research (IPGR), becoming the organisation's ninth member. "Nine is a lucky number in Thailand, so I think it will be a good relationship!" comments Surasak Decharin. "Seriously, we had to qualify in terms of size, knowhow and commitment but the benefits of being a member include valuable networking opportunities and the exchange of information." According to the BGI President, in situations where problems are encountered and no conflict of interest exists, IPGR provides important benefits in working together, as well as useful benchmarking opportunities. "We have plenty to share for the good of the industry" he says. "We learnt expertise from Saint-Gobain Oberland a long time ago but now we have our own expertise and knowhow, in the field of printing on glass, for example... we are the experts now."

REGIONAL CONTACTS

Events organised by the ASEAN Federation of Glass Manufacturers are also considered important forums to make and reinforce valuable contacts. "I have only missed one or two AFGM events since 1985 and there are other glassmakers in attendance who I have known for 30 years – we have exported to some of them and imported from others, so such events help the creation of relationships when looking at the big picture" Mr Surasak observes. The recent addition of Vietnam as a member country is expected to broaden opportunities further.

"AFGM events are equally important for suppliers to meet customers from this region in one place, a scenario that benefits glassmakers as well" he suggests.

According to Surasak Decharin, *Glass Worldwide* is also extremely interesting to BGI's plant managers and technicians. "By the time I see a copy, it has already been circulated thoroughly throughout our plants!"

PACKAGING SOLUTIONS OFFERED

Glass containers currently represent 83% of BGI's US\$330 million annual turnover, although the group also offers alternative packaging solutions, including PET bottles and standard box packaging for beer and drinking water. "We were the first to make PET bottles in Thailand in 1988" the current BGI President recalls. "Our Managing Director at the time was German and he took the approach that if you cannot beat PET producers, then why not join them (!), complementing the range of services provided to bottle users, where such customers as Pepsi are using our PET bottles as well as glass." Also available are plastic caps and aluminium crown closures, further enhancing the organisation's range of packaging solutions and helping to maintain price competitiveness.

While glass packaging remains the company's core business, opportunities for further diversification continue to be explored. Every BGI division is operated as an independent profit centre, with different partners owning different percentages of individual businesses. "We provide packaging solutions" comments Surasak Decharin. "Glass is our priority but providing solutions to our customers is the main focus. These are interesting times, both for our company and for the glass industry." ■

FURTHER INFORMATION:

Bangkok Glass Industry Co Ltd, Bangkok, Thailand
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