



Nampak Glass puts its faith in BIS

South African glass manufacturer Nampak Glass recently invested in a second BIS machine from Bucher Emhart Glass. We find out why BIS is making so many waves in the container glass industry.

Container glass manufacturing is a fantastic industry to be in, but most would agree that it's also a fairly conservative one.

New technologies don't come along every day – and when they do, glass producers can be slow to adopt them, often preferring to stick with what they know. On top of that, the present economic conditions are hardly conducive to bold capital expenditure outlays.

So when a leading glass plant buys two machines from a new line in quick succession, it's time to sit up and take notice. And that's exactly what has happened at Nampak Glass of Roodekop, Gauteng, South Africa, where the second of two Bucher Emhart Glass BIS machines recently began production.

Quality demands

Nampak Glass was founded in 1984 and produces glass for industries including beverages and food, serving customers throughout South Africa and Africa.

"We've recorded growth over the last few years, despite a challenging economy and pressure from alternative packaging such as PET and aluminium cans," stated Stoney Steenkamp, Nampak Glass' Managing Director.

"As a growing business in a tough market, also dealing with an ever-declining skills base, we needed a machine that could meet our customers' increasing requirements in terms of quality, while still remaining flexible. We're a diversified firm, and we need to produce a range of glass containers across the industry."

Enter BIS

As Nampak reviewed the market, BIS soon emerged as the front-runner that could put a tick in all those boxes. It's the latest addition to Bucher Emhart Glass' range of IS machines, and the first new machine type since NIS was introduced in 2000.

Like NIS, it offers the precision of a fully servo-controlled machine, but is designed to handle many container designs, sizes and weights, in smaller quantities and with quicker job changes. BIS is ideal for manufacturing containers for every industry, from beverages and baby food through to pharmaceuticals.

BIS was originally announced in 2010 and successfully prototyped in 2011. It uses the parallel mould open/close technology pioneered on Bucher Emhart Glass' AIS machines and is available in six-, eight-, 10- and 12-section configurations. The first machines

handled double- and triple-gob production is now available. Going forward, a quad-gob version will follow.

Built for the modern world

Throughout its long history, Bucher Emhart Glass has made it a priority to understand the needs of glassmakers, then create the machines and technologies that can meet them. BIS is no different – it's a machine developed specifically for the demands of today's industry and the economic climate in which it operates.

The decision to invest in a new forming machine is one of the biggest and most difficult that a glass-plant manager will face. Internally, they need to be sure that the new machine will fit in the available floor space and interface with their existing furnace and inspection lines. The skills of the workforce are another factor.

The key question is how to invest, based on the specific business case in order to deliver the maximum benefit. For glass-forming machines, the time horizon of that decision is as long as ten or even 15 years, making considerations of whole-life cost particularly important.

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Decisions taken now will have to sustain the business, both operationally and commercially, through whatever happens over the next decade or more.

Meanwhile, the external pressures on plant managers continue to mount in every area: Cost, performance, flexibility, quality and safety. Brand owners want greater differentiation in terms of the packaging for their product, and they want their new products to reach the market more quickly than ever.

But they're naturally unwilling to compromise on quality – and are always looking for the most competitive cost per container too.

Best way forward

For Nampak Glass, BIS was the only way to solve this challenging equation. "We chose BIS not just because it could deliver everything we wanted, but also because the initial capital investment required was relatively affordable," explained Stoney.

"In fact, it's not an exaggeration to say that BIS represents a revolution for us. Previously, this level of technology would have been beyond our reach because of the high capital cost, as well as the inflexibility in terms of options available. BIS has changed everything."

Having instantly seen the benefits of the new technology, Nampak was the first company in the world to purchase a BIS machine, and began operating its 0-batch line in May 2013.

"The installation went really well, with relatively few problems and a very smooth startup," recalls Stoney. "That was the result of the careful planning carried out by Bucher Emhart Glass, as well as their detailed reviews prior to installation. The support from both operational and senior personnel was outstanding, and the training provided for our local people was fantastic too."

The machine was unveiled at an open house event last October, attended by more than 20 Bucher Emhart Glass customers interested in seeing the machine in production, inspect manufactured wares first-hand and hear from Nampak's staff about their positive experiences with the technology so far.

For those involved directly in production, the benefits include higher performance, a more stable production, faster and easier job changes, easier cleaning, ergonomic operation, improved operator safety and reduced noise. Owners and managers, meanwhile, are likely to appreciate BIS'

improved speed and reliability, superior precision and process control, reduced energy intake and overall lower cost of ownership.

For example, BIS' faster job changes and workouts alone could deliver a saving of around €70,000 per year as compared with a similar IS line, while increased mould lifetime could save as much as €200,000 per year.

Real benefits

Stoney is clear about the benefits delivered by Nampak's new BIS machine. "It has brought us improved flexibility alongside a new level of product quality," he stated.

"It is now much easier for us to optimise our production process, and we've also reduced our energy consumption. Mould lifetime has improved substantially, and we've been able to de-skill our bottle-making to some degree too."

In March 2014, Stoney made the trip north to Bucher Emhart Glass' Sundvall manufacturing plant, where the firm was hosting a 'BIS Day' dedicated to giving current and future customers more information about the young technology. The event was attended by a total of 41 guests, including delegates from leading names in the glass-container world such as Gerresheimer, O-I, Allied and Verallia.

Guests were welcomed by Werner Gessner, Bucher Emhart Glass's VP Sales, before Site Manager Catrin Forsberg introduced the Sundvall operation. Stoney then gave a presentation sharing his thoughts on Nampak's first ten months of production using BIS.

Over the rest of the day, delegates enjoyed a range of demonstrations as well as additional presentations on BIS and its benefits from Bucher Emhart Glass staff. The complete BIS 12 section DG 140mm running at 20 cycles, and the fully equipped prototype section in TG 95mm working at 24 cycles, demonstrated the impressive BIS capabilities.

The time has come

"We feel very strongly that BIS is a technology whose time has come," stated Leo Diehm, Director of Product Management.

"If we look at the history of IS machines since 1925, development falls into three clear phases. First we had pneumatic motion controlled by a timing drum, which lasted a long time

but finally faded out, and was succeeded by electrically controlled pneumatic motion, which originated around 1980. The new servo IS standard has started to replace pneumatic IS machines, as happened in the past with the good old timing drum. Within a few years, servo IS machines will become the standard."

Servo control opens up levels of accuracy that couldn't be achieved before. With pneumatic motion, each individual IS section was a 'personality' that had to be coaxed to peak performance by a skilled operator.

With servo mechanisms controlled by modern technologies such as Bucher Emhart Glass's FlexIS system, the motion of the IS line is repeatable, precise and controlled – and the benefits are clear. "BIS easily outperforms pneumatic IS machines built on 5" section frames," stated Leo.

"It allows glass-container



manufacturers to cut container cost without compromising on quality or ware range."

Based on the success of its first BIS purchase, Nampak quickly decided to purchase a second machine, which was delivered this Spring.

As Stoney Steenkamp explains, the decision wasn't difficult once the results of the first installation were clear.

"BIS fully delivered on the original brief we gave Bucher Emhart Glass. On top of that, the ongoing support has been of a high standard. Even one year after installation, the after-sales support is still excellent. Overall, it was an easy decision to make!" ■

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