



Riding India's beer boom

Singapore-based Asia Pacific Breweries is working to be part of India's booming beer market. In January 2008 it opened its second brewery in the country – a highly automated greenfield brewery.

TEXT: **SONYA DUTTA CHOUDHURY** PHOTO: **RAJAT GHOSH**



BEER IS QUICKLY becoming a great success in India. With the increase in consumer incomes and the gradual liberalization of government policies, the demand for this beverage is booming. Beer sales in the year ending March 2007 grew by 30 percent to 150 million cases. And with more than half of the population in the 21-to-59 age group, future growth in the region is estimated by CMIE (Centre for Monitoring the Indian Economy) to be around 18 percent per year.

Little wonder then that the past few years have seen the entry of as many as five international beer majors into India. One such early entrant is Asia Pacific Breweries (APB).

This Singapore-based brewer, with operations in more than 12 countries, has been in the beer business since 1931 and has a portfolio of more than 40 beer brands, including Tiger Beer and Heineken. Expanding worldwide into areas such as China, Mongolia and Sri Lanka, APB realized as early as 1995 that India had great long-term growth potential. Although plans at the time stalled, the company returned 10 years later. In 2005, APB bought a brewery in the beer belt of Aurangabad in western India.

A year later APB decided to expand operations by establishing a new brewery, this time in the south of the country. To buy an existing brewery that met APB's high




Vivek Chhabra,
regional director
for APB in South
Asia.

quality standards wasn't easy. The company therefore decided to expand by building a "greenfield" brewery – i.e., a brewery that is built from scratch by its owner on previously undeveloped land. In consultation with the Jaipuria Group, its local partner and one of India's largest bottling companies for PepsiCo, APB selected the Sangareddy area in Hyderabad for the greenfield site. "We chose Hyderabad because it is located in one of the two largest beer markets in India,"

explains Vivek Chhabra, regional director for APB in South Asia. "It has abundant electricity and a plentiful supply of water from the nearby Manjira River. It is also close to the main highway."

Land was acquired with the assistance of the Jaipuria Group. These local partners also introduced APB to Alfa Laval's expertise. "We knew about Alfa Laval because we had bought lots of equipment from them over the past 25 years," says K T Lalwani, executive director of the Jaipuria Group. "Also, when we visited another brewery in Rajasthan that we had wanted to take over, we saw what a good job Alfa Laval



The Hyderabad brewery has the capacity to brew 50 million litres of beer per year.

had done there. Visiting their factory and that of competitors was like night and day.” He says the assembly of equipment in the Alfa Laval brewery was superior, as was the level of automation.

Explaining the choice of Alfa Laval, APB India Technical Director Johan De Deyn elaborates: “We evaluated the various suppliers in the market on practical knowledge and on cost. We chose Alfa Laval because they had the best value for money.”

WORK ON THE BREWERY at Hyderabad began in 2006, with APB and partners Heineken and Alfa Laval collaborating to set up a state-of-the-art enterprise. At a maximum capacity of 50 million litres per year, the Hyderabad brewery was the first in India to employ a new, energy-saving technology – the high gravity brewing line. This technology was able to ensure a quality consistent with the Heineken standards as well as with the famous Tiger beer brand.

The first run in this greenfield brewery took place in January 2008. The brewery produces two different brands – the Tiger brand, a smooth, medium-bitter lager, and Cannon 10000, a strong beer brand acquired from the Chowgule Group along with the Aurangabad brewery.

A third brand, the strong Barons beer, is scheduled to be produced in autumn 2008.

Ensuring the quality of these separate brands can be challenging. Good beer, like most other good things, comes from high-quality raw materials and processes that work well. The raw materials for beer are simple: malt, hops, yeast, sugar syrup and water. All the ingredients – malt, yeast and hops – for Tiger Beer are imported to match the quality of the Tiger Beer produced in other parts of the world. Water is treated in a special Alfa Laval Aldox system.

As for the processes, Alfa Laval was able to help here as well. The brewery layout was finalized in consultation with Alfa Laval, from the brewhouse to the final packaging system. “We were very impressed with their degree of

► Facts

ASIA PACIFIC BREWERIES

- Founded in Singapore in 1931 as Malayan Breweries
- Joint venture between Fraser & Neave and Heineken of Holland
- Renamed Asia Pacific Breweries in 1990
- Brewery operations in 12 countries in the Asia-Pacific region, including the main markets: Singapore, Malaysia, Thailand, Vietnam, Mongolia, New Zealand, Sri Lanka and India
- Portfolio of 40 beer brands including Tiger, Heineken and Barons
- Group revenue for 2007–2008 was USD 1.1 billion.

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The Hyderabad brewery is Asia Pacific Breweries' first greenfield brewery in India.



► The high gravity line

When quality counts

– Numerous advantages to high gravity brewing

Asia Pacific Breweries' greenfield brewery at Hyderabad features a special technology – the high gravity line. The system is based on the Alfa Laval Aldox HGB (high gravity brewing) module for producing deaerated and carbonated high-quality water. In this method, beer is brewed at a higher concentration and diluted later on in the process with the addition of deaerated water.

This process has several advantages. For one, it reduces the number and size of tanks used in the mixing process. The brewery is able to generate more output from a smaller-sized brewhouse and fewer fermentation tanks. This results in huge savings. "Fixed costs are reduced, due to the smaller and smaller number of tanks required to generate the same output," says APB Plant Manager Vinay Reddy. "Besides, there could be savings of

up to 15 percent in water and energy costs. There are also many indirect savings, such as using less water to clean tanks and having shorter downtimes between different runs."

The high gravity system also has another advantage, explains APB India Technical Director Johan De Deyn. "Beer is a combination of many parameters," he says, "and you have to try and get all of these right. But you do it step by step. The most important parameter in the high gravity process is the water quality. Here is where the Aldox system is good. Given that in India the incoming water quality is not very consistent, the hot system in the Aldox module sterilizes the water, thus ensuring a better beer."

The other benefit of this new technology impacts the longevity of the beer beverage. "Adding

"There could be savings of up to 15 percent in water and energy costs."

deaerated water at the last stage of the process also helps to control the oxidation levels in the beer," says Reddy. "With the new deaerated water-mixing system, DO [dissolved oxygen] levels at 0.01 ppm [parts per million] are way lower than the industry average here in India. With beer brewed in the older system, you are stuck with whatever level of oxygen the beer may have picked up. This, depending on the tanks and transfer systems, could be higher than acceptable levels. However, with the high gravity system it is possible to reduce the oxygen levels simply by adding completely deaerated water at the dilution stage, thus

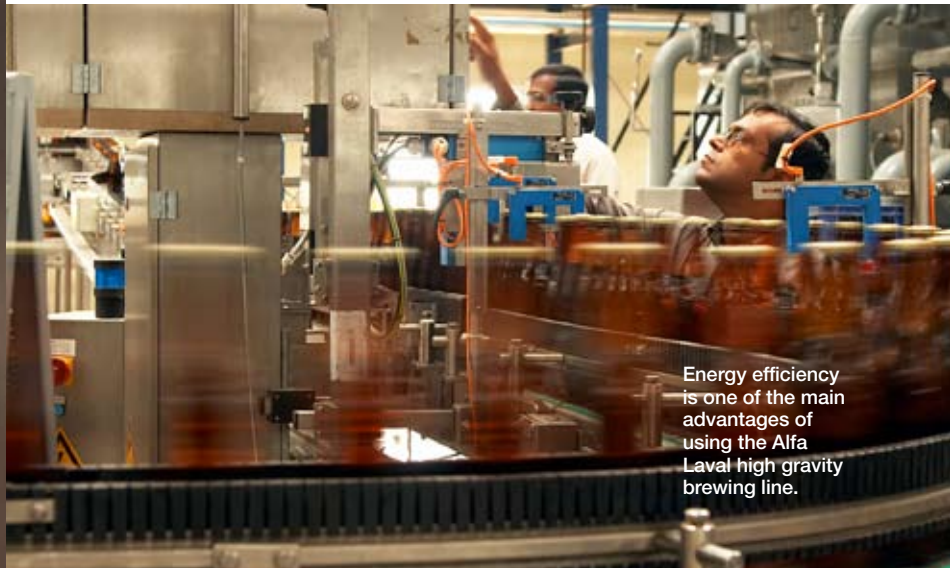
bringing down the overall amount of oxygen in the final brew."

Oxygen, as brewers will tell you, is the enemy of good beer. It causes beer to lose flavour. "Low oxygen content ensures better beer and a longer shelf life," says Reddy.



Pankaj Maheshwari,
Alfa Laval.

Alfa Laval's national sales manager in India, Pankaj Maheshwari, says that from now on brewery customers in India can expect even better support from Alfa Laval. In spring 2008 Alfa Laval opened a new module manufacturing set-up in India that allows local production of the Aldox and Carbonation modules. ■



Energy efficiency is one of the main advantages of using the Alfa Laval high gravity brewing line.

▶▶ www.alfalaval.com/here/brewery/apbindia

>>> commitment,” says Chhabra. Hyderabad Brewery Factory Manager Vinay Reddy agrees. “Alfa Laval is an expert in this field,” says Reddy. “They know what kind of machinery to use for what kind of brewery. We set up this brewery with their technical know-how. Even though we placed orders for auxiliaries for process and utilities directly with suppliers,

the inputs for finalization of technical specifications and coordination during the project execution coordination were done by Alfa Laval. The entire team was here.”



Vinay Reddy, plant manager at APB.

The brewhouse is particularly important, because this is where the various materials are mixed in the right proportions and at the right temperatures.

APB’s Hyderabad brewhouse is automated to ensure the right combination of temperature for different profiles of beer. From here, the mixture is filtered and fermented and filtered again before deaerated water is added and online carbonation takes place.

AGAIN THE PROVISION of a modern Aldox system with an excellent deaerating and online carbonation system, with a 95 percent carbon dioxide-absorption efficiency, ensures high beer quality. The Hyderabad brewery presently has a processing capacity of 15 million litres. However, the installed capacity has built-in flexibility so that, with the addition of just few fermenting tanks, the capacity can be expanded to up to 50 million litres.

Still it is not always easy to match production with sales. Beer may be a fast-growing commodity, but it is not without its hiccups. Annual beer consumption in India, at one litre per capita (compared with 30 litres per capita in China, 80 in Australia and 160 in the Czech Republic) is woefully low. Also, beer in India, due to historically high taxes, turns out to be very expensive. “A big bottle of Tiger, for instance,” explains Chhabra, “costs 70 rupees [almost two US dollars] in India, whereas the same size of bottle in China costs you two renminbi [0.25 US dollars].”

“We have had a phenomenal run in the past six months, growing in triple digits.”

VIVEK CHHABRA, regional director for APB in South Asia

Then there are large areas where the government is still slow to liberalize – on advertising and, in some states, on distribution and on retailing. “In India, nationwide, there are just 80,000 retail outlets, as compared to 55,000 in Vietnam’s Ho Chi Minh City alone,” says Chhabra.

STILL THERE IS LIGHT at the end of the beer bottle, and some of these restrictions are slowly lifting. It’s a slow state-by-state process, Chhabra explains. Nevertheless the trend is positive. “In Maharashtra, for instance, the government has already liberalized regulations,” Chhabra says. “It allows special retail outlets called ‘beer shoppes’ that can stock beer for the fraction of the cost of a normal liquor licence.”

The northern states of Punjab and Haryana have also relaxed restrictions. They have allowed private retailing and distribution of beer in the past couple of years, resulting in enormous growth figures for this beverage.

To cater to such burgeoning demand, APB plans to explore new breweries in a combination of acquisitions and greenfield projects. “While acquisitions come with a running business, they may need extensive modifications to bring them up to our standards,” explains Chhabra. “Greenfield projects may be more expensive and more tedious initially, but they enable us to set up a brewery to our own standards.”

Although more and more beer majors are entering India, APB, with its first-mover advantage and international brands such as Tiger and Heineken, seems confident of gaining market share. Says Chhabra, “We have had a phenomenal run in the past six months, growing in triple digits. We are looking to move nationwide with Tiger and Barons and to expand our production network in the next three to five years.” ■



Asia Pacific Breweries has two breweries in India’s “beer belt” – in Hyderabad in Andhra Pradesh state and in Aurangabad in Maharashtra.