

Tanzania Breweries: a giant in the country

October 2015



Reliable solutions by dedicated people



Tanzania is one of the world's most varying and unique geographical locations. Here you will find the highest point in Africa: Mount Kilimanjaro, the Serengeti National Park, the Olduvai Gorge, where many of the world's oldest fossils have been discovered, and part of Lake Victoria. And when it comes to beer, SABMiller holds a 76% market share.

SABMiller is the 2nd largest Group of breweries in the world. With origins in the Johannesburg gold rush of 1886, the brewery was founded the same year. Today, SABMiller produces more than 200 different beer brands in over 80 countries, and in Africa, the Group operates a host of breweries and soft drink bottlers, taking up the No. 1 position in the continent.

Imbalance in CO₂ levels

At the Tanzania Brewery in Dar es Salaam, a member of the SABMiller Group, they produce both beer and soft drinks and have their own CO₂ recovery plant for purifying the CO₂ extracted from fermentation. However, due to the mix of several different products, an imbalance has occurred between the level of CO₂ from the fermentation recovery and the actual need for CO₂.

Extremely limited space

Mr David Middleton, Group Chief Engineer of Tanzania Breweries Ltd. explains: "From our fermentation, we can extract enough raw gas for producing CO₂ for overall beer production. But since we are also producing soft drinks and sorghum beer, we were in need of additional CO₂. On the upside, we already owned steam boilers from which to utilise the flue gas. On the downside, we faced the challenge of extremely limited space for implementing additional technologies. The solution was an extraction-based solution in which the gas from the steam boilers was captured and purified, and we needed a supplier who could come up with a fitting design and deliver the right quality of CO₂."

CO₂ Extraction Plants (EBU) are based on the extraction of CO₂ from flue gas generated in the customer's steam boiler system.

If steam and flue gas supplies are continuously available, significant energy savings (up to 45%) can be achieved using a CO₂ extraction plant, compared with traditional combustion-based CO₂ plants.

Employing the latest amine plant technologies and appropriate scrubbing, stripping and separation technologies, including the NO_x flash system avoiding the use of potassium permanganate (PPM), the CO₂ extraction plants meet the strictest CO₂ quality requirements.

"Finding a solution to allow room for service technicians was crucial"
-David Middleton

Due to the limited space in the existing building, finding a solution to allow room for service technicians was crucial.



Utilizing existing flue gas

Mr Peter Toftegaard, Sales Manager of Union was on site, commenting: "Utilising existing CO₂ rich flue gas, which would otherwise be vented to the atmosphere, is a sustainable solution. Now, we just had to figure out how to build the extraction plant around the existing plant equipment."



We worked closely together with the brewery staff and stayed close to the project, before and during project completion, and we are pleased with the cooperation and the result."

Avoid unplanned downtimes

Thanks to the skilled technical staff at the brewery supported by a Union service contract, the CO₂ plants at Tanzania Brewery are running smoothly, eliminating unplanned downtimes.

For further information, please contact Union Engineering a/s at union@union.dk or learn more on www.union.dk.

-/BBA