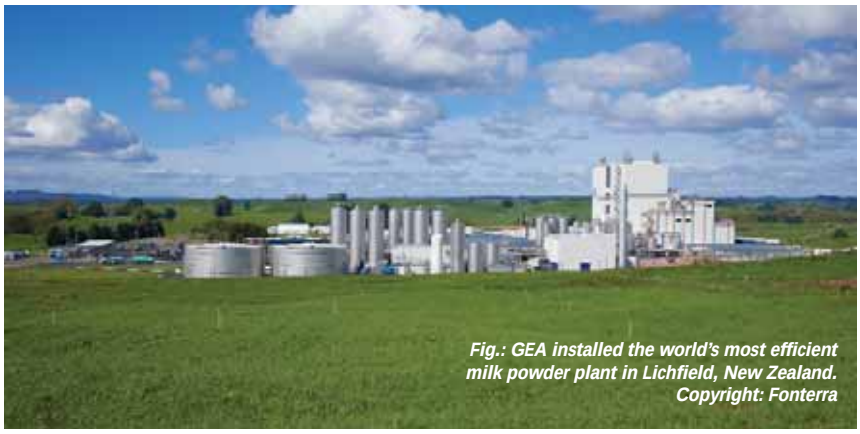

Fig.: GEA installed the world's most efficient milk powder plant in Lichfield, New Zealand. Copyright: Fonterra

Newest milk powder plant with GEA technology inaugurated in New Zealand

After a two-year construction period and initial commissioning in September, Fonterra inaugurated its state-of-the-art, high-efficiency milk powder factory at Lichfield, New Zealand.

The expansion included a new milk powder processing plant, services, wastewater plant and distribution centre. The centrepiece of the facility is the largest milk powder spray dryer currently available on the market, which was built by GEA.

In terms of material usage, energy consumption and waste, the milk processing plant is now the most efficient facility of its kind in the industry.

GEA constructed the milk powder plant as a turnkey solution, providing all the process technology from reception of the milk tanker and evaporation, to drying, powder handling and packaging. The drying chamber weighs around 200 tons and has a diameter of 18 meters.

The processing capacity of 30 tons of high-quality milk powder per hour equates to over 4.4 million litres of milk a day. This corresponds to the volume of almost two Olympic-standard swimming pools.

The spray dryer is the second of its kind built by GEA. Its sister plant Darfield II, which is also operated by Fonterra in New Zealand, has been producing high-quality powdered milk reliably since December 2013.

For Lichfield, the GEA experts developed several innovations to improve sustainability and further reduce the total cost of ownership to the customer. In particular, energy efficiency was a key focus for the project team. For instance, the plant requires very little process water as the evaporator condensate is filtered in a specific way and, thanks to GEA technology, can then be re-used during processing. As a result, Fonterra has reduced its demand for ground water for the site.

Fonterra is one of the world's major milk producers. Its Chairman of the Board of Directors, John Wilson emphasizes the strategic importance of powder production to the co-operative's overall asset mix: "This new plant will help us to strike a balance in our processing that allows us to switch between products quickly to meet demand changes in global markets, push the pace on production when milk volumes dictate, and ultimately deliver the best product mix to generate returns."

"This project is testament to the high degree of trust leading global food producers place in GEA's reliable process technology. High-performance, efficient spray dryers like the one in Lichfield play a key role in the industry because demand for milk in expanding markets such as China can only be met by easily transportable, stable milk powder which needs to be imported into these markets.

"For the processing of milk and subsequent production and packaging of high-quality dairy powder products, GEA offers its global customers comprehensive process know-how spanning all stages of production," says Niels Erik Olsen, Member of GEA's Management Board and responsible for the Business Area Solutions. ◆

Sidel launches PET drinks bottle designed for harsh and humid climates

Sidel has made a new carbonated drinks bottle for production in the tropics.

The StarLite Tropical base is designed for manufacture in harsh and humid climates. It can hold various levels of carbonation and will better withstand distribution in hot countries.

Sidel says the new PET bottle offers improved resistance in terms of stress cracking and creeping, as well as better stability throughout the supply chain. It also avoids waste in storage and maintains safety of drinks.

An enhanced base standing surface improves the bottle's stability with more surface contact assuring easier bottle transportation.

In-house scientists have tested the base and reported that it successfully completed a demanding creeping test conducted over 72 hours at 38°C and 50 % moisture conditions.

Sidel designers have redrawn the bottle's geometry to reinforce zones vulnerable to stress cracking due to mechanical constraints. This avoids breaking of PET bottle walls and bases caused by contact with chemicals during the conveying stage.

Sidel Tropical bottle Vincent LeGuen, Vice President of Packaging, said: "The Sidel StarLite Tropical base is already in production in far-eastern countries by Sidel customers who have trialled the base and achieved great performance results, including significant improvements in resistance to stress cracking. ◆