Quality pays off in Thai starch production

Chok Yuen Yong, Thailand **Case story**

Reliable, cost-effective separation technology from Alfa Laval enables the Chok Yuen Yong group (CYY) in Thailand to improve its premium-quality starch and at the same time increase yields by as much as 1%.

Alfa Laval decanter centrifuges have demonstrated boosted uptime, reduced maintenance burdens and reduced costs as a result of using less water and energy – thus propelling CYY to consistent growth and commercial success.

One of the pioneers in Thailand
CYY is one of the biggest starch producers in Thailand, processing a maximum annual 200,000 metric tons of cassava roots into the form of native starch known as tapioca. CYY production constitutes a significant contribution to Thailand's overall annual production of 1.5 million metric tons of native starch, from a total of approx. 80 starch producers.

Demand for quality = business opportunity
In Thailand, the market price is more-or-less fixed, and modified starch manufacturers abroad are therefore the customers of choice for CYY. Such companies have consistently proven willing to pay higher prices for native starch of better quality.

However, according to the company's founder, owner and president Mr. Tawatchai Yuenyong, the price differential for starch of premium quality is actually only about 1%. For the company, the real commercial advantage therefore lies in the fact that when competing with other producers at the same price point, the customer will normally opt for the CYY product, because it features better quality and because of the cost savings this provides downstream in the customer's production or processing set-up. This commercial advantage paved the way to considerable success for CYY, which has been steadily building market share and is now planning to build its third factory.

Changing the starch processing profile
In the CYY set-up, the Alfa Laval decanter centrifuges are used for fruit water removal.

Removing as many impurities as possible in the earlier stages of tapioca processing makes all the subsequent steps easier and more cost-effective, and also results in native starch of measurably better quality, using fewer chemicals.

80–85% of the soluble impurities, including gums, are removed very early in the process and prior to the starch extraction. With only a small amount of such impurities left, it is much easier to perform starch extraction, with the big additional benefit that starch washing requires less fresh water. This also paves the way to big cutbacks on water consumption. Using less water also means a reduced load on wastewater treatment facilities.

An ample supply of clean water is normally of the utmost importance in processing cassava into starch, but in modern society such supplies are increasingly in limited supply and costs are constantly escalating. Alfa Laval decanter centrifuges have the big advantage of not requiring any additional dilution water, thus alleviating the cost and supply pressure associated with traditional starch processing solutions.

As an overall process, Mr. Tawatchai considers that Alfa Laval decanter separation technology improves CYY yield by as much as 1%, by reducing starch losses during the process.

The Alfa Laval advantage

The very first CYY starch production line employed two Alfa Laval STNX 438 decanter centrifuges. These ran at full capacity until a second processing line featuring three Alfa Laval STNX 944 decanter centrifuges was set up for VP Starch (2000) Co., Ltd, CYY's second plant.

"Alfa Laval decanter centrifuges have played a key role in our success," according to Mr. Tawatchai. "The performance and reliability of the Alfa Laval decanters have been excellent since the very beginning, and Alfa Laval has therefore remained our first choice when we invest in new capacity," he continues.

Local support

As Mr. Tawatchai also emphasized, "One of the key reasons for selecting Alfa Laval equipment lay in the availability of a local sales and service presence, easily accessible in Thailand."

This helps make sure that if any glitches occur, they can be promptly and effectively dealt with by Alfa Laval experts – thus preventing expensive, revenue-guzzling downtime.

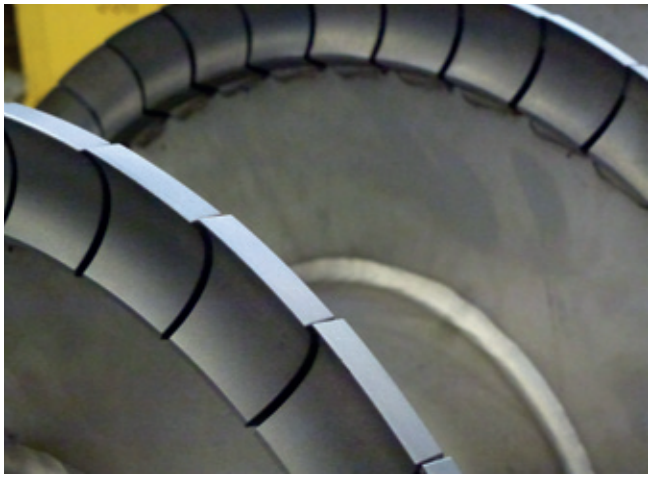
Payoffs from technology advantages

Alfa Laval decanter centrifuges – featuring a range of unique technological details – provide CYY operations with a substantial range of cost-reducing and profit-boosting benefits.

Alfa Laval decanter centrifuges also provide big benefits with regard to operating costs, because they feature the lowest possible power consumption. This is due to them being fitted with two unique Alfa Laval technology breakthroughs – plough tiles and Power Plates.

Patented Alfa Laval Power Plates reduce energy consumption by reducing discharge velocity, making it possible to recover as much as 20% of the overall energy inputs.

Decanter centrifuges in the STNX range are also fitted with2Touch control systems as standard. These make operation easy and safe, improving separation performance and as well as helping provide a remarkable return on investment.



Special erosion-protected plough tiles fitted to the conveyor reduce the torque needed for any given effect, providing greater throughput using the same motor power.

A wealth of revenue-boosting advantages

The Alfa Laval STNX range of decanter centrifuges ensures gentle product handling, high centrifugal separation performance and automatic adjustment to variations in operating conditions.

Decanter centrifuges operate more reliably and efficiently than other technologies and require only minor attention from operators. There is less downtime, and maintenance costs are lower.

The unique Alfa Laval 2Touch control system makes operation easy and safe, improving separation performance and as well as helping provide a remarkable return on investment.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

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