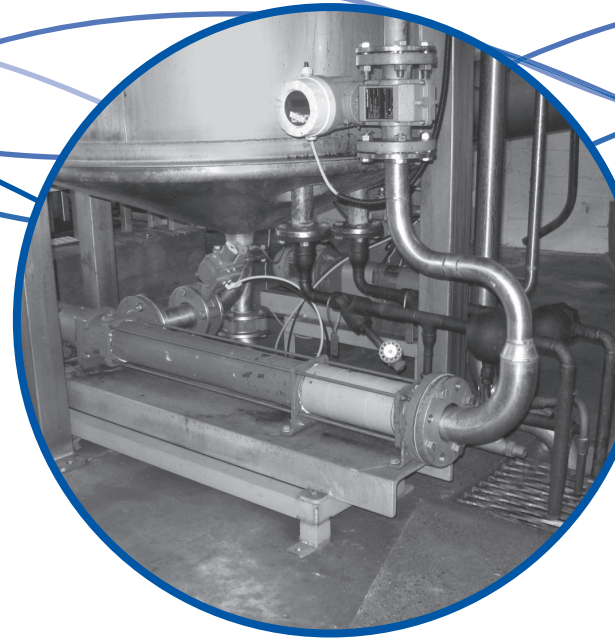


Waitoa Rendering Plant Upgrade Improves Efficiency And Production Output



A major upgrade of the rendering plant was undertaken in 2006. This involved the installation of a new two-stage evaporation process plant. Integral components of this plant are the Mono progressive cavity pumps that have high suction capability required in the evaporative process. The plant extracts valuable product from the stick water, helping increase production and improve the quality of the water that needs to be treated.

Established in 1939, the Waitoa rendering plant is the largest operation converting animal byproducts into stable, value added materials in New Zealand. The plant is operated by the Wallace Corporation, a Waikato-based meat and co-products exporter. NOV Mono® progressive cavity pumps have been used throughout the plant for the past 30 years.

The upgrade was to improve production and to more efficiently handle the vast amounts of renderable material and dead stock that come in each year.

A key focus of the upgrade was to increase product recovery from the stick water, which is full of fats and byproducts that can be further processed.

To achieve this, the stick water is now put through a two-stage evaporation process during which the fats and byproducts are extracted from the high temperature water via an evaporative system.

The pumps from the evaporators needed to be able to self-prime, have good suction capabilities, and be able to control the flow by varying their speed.

Mono's solution was to install six E range progressing cavity pumps of various sizes to transfer product off the evaporators and boil it down, and then treat the

condensation and boil-off. The CE051 pumps deliver 5.0m³/hr at pressures up to 6.0bar.

The E range's unique Flexishaft® drive makes it ideal for the handling of difficult product such as this and, like all progressive cavity pumps, it transfers the product without destroying its properties, making it easier to recover it from the stick water.

Since the upgrade, the plant's production has fully achieved the design criteria. Another advantage of the new process is the improved quality of waste water the company has to treat in order to meet its discharge consents.

The Waitoa rendering plant's project manager, Barry Dew, said about the installation, "We cannot afford unnecessary plant shut down, that's why we insist on the use of equipment with proven reliability and Mono E Range pumps fall into that category."

The application is based on the supply of 6 x CE051 pumps for the 2006 plant upgrade but this plant actually runs in excess of 22 E range pumps (possibly the single biggest installation in NZ) ranging from CE041's through to CE071's.

Pumps: 6 x CE051 E range progressing cavity pumps

Product: Stick water and tallow

Capacity: 5.0 m³/hr

Pressure: Up to 6.0 bar

Pump Speed: 235 rpm

Drive: 1.5kW

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