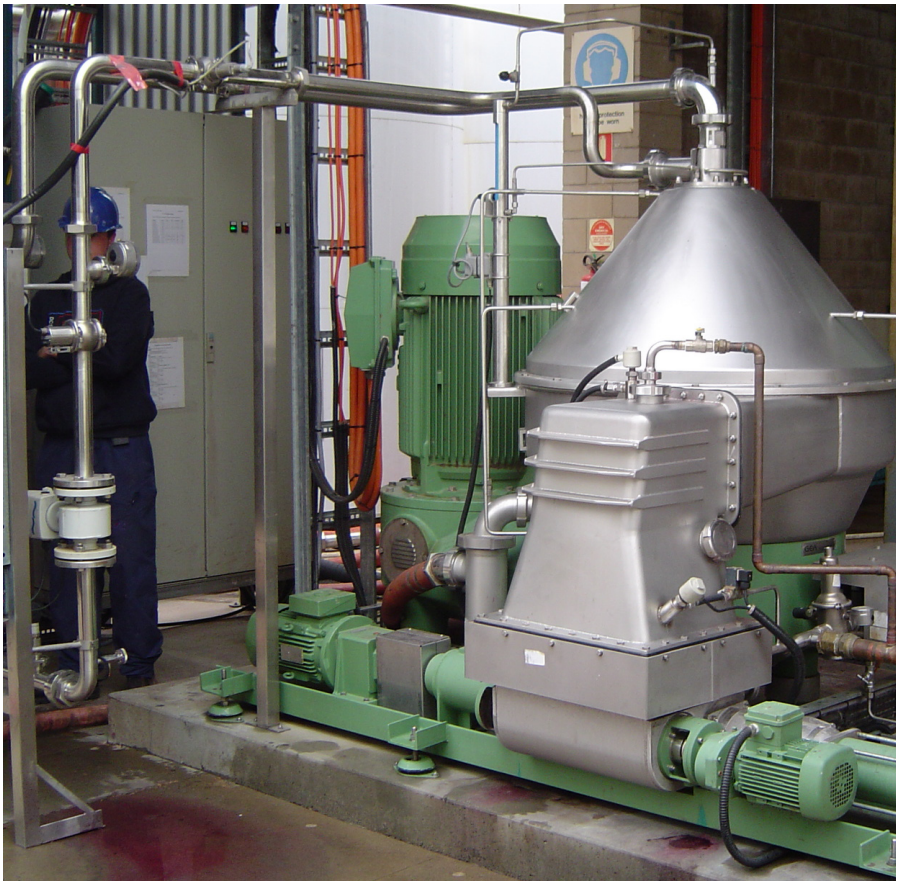
Excellent VLT® control of Australian wine centrifuge

A VLT® solution eliminated the need for special heat resistant motors and a 1000 liters water tank - and significantly improved productivity and profit operating wine centrifuges at the company Southcorp, Karadoc in Australia.



The Southcorp company had the issue with their wine centrifuges, that start-up drew high currents from the mains and demanded expensive heat resistant motors - and that stopping lasted one full hour.
In a test, Danfoss installed a 45 kW VLT® frequency converter, and the result was considerable less current draw. The currents never exceded the name plate value, and therefor no overheating occurred - and a less expensive standard motor would do the job.

Stop time reduced to 10 minutes
Having the VLT® drive decellerate the centrifuge using a 40% duty brake resistor decreased the stopping time froim 1 hour to 10 minutes.
This means that 50 minuts operation time is gained each time the centrifuge is stopped for maintenance-, production- and emergency reasons.
In the former set-up, the centrrifuges were fed with water from a 1000 l water tank to stabilise the centrifuge during stopping. Using the common DC-link, the drive will utilise the regenerative energy from the centrifuge to maintain the controlled braking of the centrifuge - saving 83 % of the water consumption.

1000 l water tank omissible
Further more: the regenerative energy from the centriufuge can operate another VLT® drive controlling a water pump to supply the required water to the centrifuge. This way the water can be pumped in from the normal water supply even during power loss - and the 1000 l water tank to provide water by gravity is omissible. Additional benefits of this are: no need for the tank and its associated maintenance.

B-option for safe speed monitoring

The new B-option for safe speed monitoring of a separator can be used to secure a safe monitoring of the max. speed. This has to be obtained in every separator in order to avoid critical situations and mechanical demolition by high g-forces.

Using the B-option, the separator manufacturer will saving installation costs and will need less components, as the safety functionality is integrated as an option within the VLT® drive.

Better process control

A side benefit from applying a VLT® drive is the ability to trim the centrifuge speed to improve the separation results.

All centrifuges on site have since been fitted with VLT® frequency converters.

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