

## Applications for the Wine Industry

### KENDALL JACKSON WINERY, SONOMA COUNTY, CALIFORNIA, USA

*“With more and more consumers supporting environmentally responsible companies and products, “going green” is imperative for the future survival of all Australian and NZ winemakers.”*

#### **A world first.**

Not much has changed in the 8,000 years mankind has been producing wine. However in terms of the environment, everything is about to change for the better. While many wine companies worldwide are attempting to “go green”, one large winery in northwest California has become the first on the planet to successfully pilot the innovative VSEP barrel rinse water treatment system to save water and drastically reduce their carbon footprint.



#### **Background.**

Conventionally disposing of wine lees, an unavoidable and largely unrecyclable by-product of winemaking, can take its toll on the environment.

Rinsing barrels can result in large quantities of otherwise perfectly reusable water being discharged as irrigation.

Membrane separation technology is a solution, however until recently the technology has been lab-based and on a small scale.

On top of that, conventional membrane systems suffered from excessive colloidal fouling and polarisation to obstruct filtration and restrict crossflow.

Thankfully, VSEP is here.

#### **Simple solution.**

VSEP’s vibratory shear enhanced process employs torsional vibration of the membrane surface, which creates high shear energy at the surface of the membrane.

The shear waves hold suspended particles above the membrane surface allowing free transport of the liquid media through the membrane.

Pre-treatment to prevent scale formation is not required and the throughput rates are 5-15 times higher than other types of membrane systems.

Importantly VSEP is able to continue to filter any liquid up until the point it becomes too thick and sludgy to be pumped, thus making it the ultimate filtration system.

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# CASE STUDY



Its membranes are stacked vertically to create a miniscule footprint. For example, 185m<sup>2</sup> of membrane area can be contained within a 1.2 metre square area – easily accommodated within your existing shed. That is an added bonus as it leaves more precious grape-growing land.

## Perfect for the Wine Industry.

Kendall Jackson Winery's goal was to obtain a high quality permeate (clean water) with low BOD and more concentrated wine lees slurry. VSEP far exceeded these goals.

Using a Reverse Osmosis membrane and operating in “batch” mode, the system is able to recover up to 90% of the clean water for re-use (rinsing barrels up to 10 times), with NO chemical pre-treatment.

The concentrated wine lees can also be recycled, thus virtually eliminating superfluous liquid discharge.

The bottom line is that the winery saves a staggering 22,712 kilolitres of water per year...the equivalent of 9 Olympic sized swimming pools!

And as well as the water cost savings, the winery also saves on heating as the recycled water retains up to 75% of its original heat during the filtration process.

Coupled with the fact that this sustainable Californian vineyard composts the concentrated wine lees and uses it as a natural fertiliser, VSEP makes perfect sense...economically, operationally AND environmentally.

## Ideal for Australian & NZ Winemakers.

The case for VSEP is even stronger down under, particularly in Australia with its drought-stricken water supplies. Similarly, New Zealand has always had a strong community focus on sustainability.

With more and more consumers supporting environmentally responsible companies and products, “going green” is imperative for the future survival of all Australian winemakers.

**For more details, visit [www.vsep-pacific.com](http://www.vsep-pacific.com) or call 1300 662 326 (Australia) or 0800 796 344 (NZ)**

