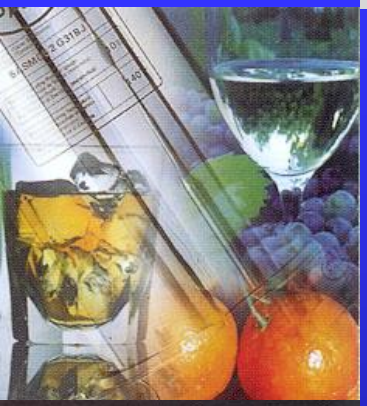

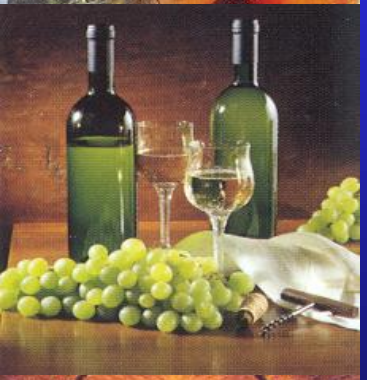

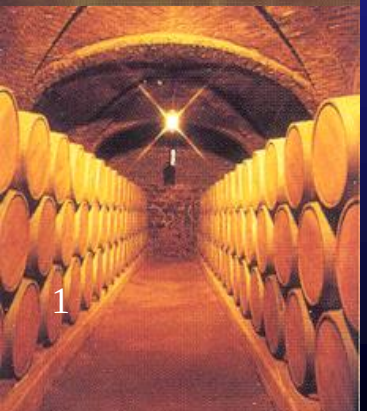

Why Winemakers are no longer **Cross**.....

and the savings are beginning to **Flow**

Allan Sheppard WEA 2008

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Why does Filtration traditionally tick Winemakers off ?

Seen as frustrating from a logistcial perspective, and expensive in terms of wine losses.

Why does Filtration traditionally tick Winemakers off ?

Diatomaceous earth

- Messy, unhealthy
- In consistent results
- Ties up staff

Why does Filtration traditionally tick Winemakers off ?

Filter Sheets

- Slow to set up
- Exposed to air
- Unless very large unit, will require pad change out mid run
- May require several stages of filtration

So remind me again? Why do we do it?

Increased demands, especially in the export arena:

- Clarity
- Spoilage
- Speed of production

Crossflow filtration

Crossflow filtration has enabled the winemaker to address these issues :

- Life becomes easier
- Reliable results – repeatable results
- Saves wine and time

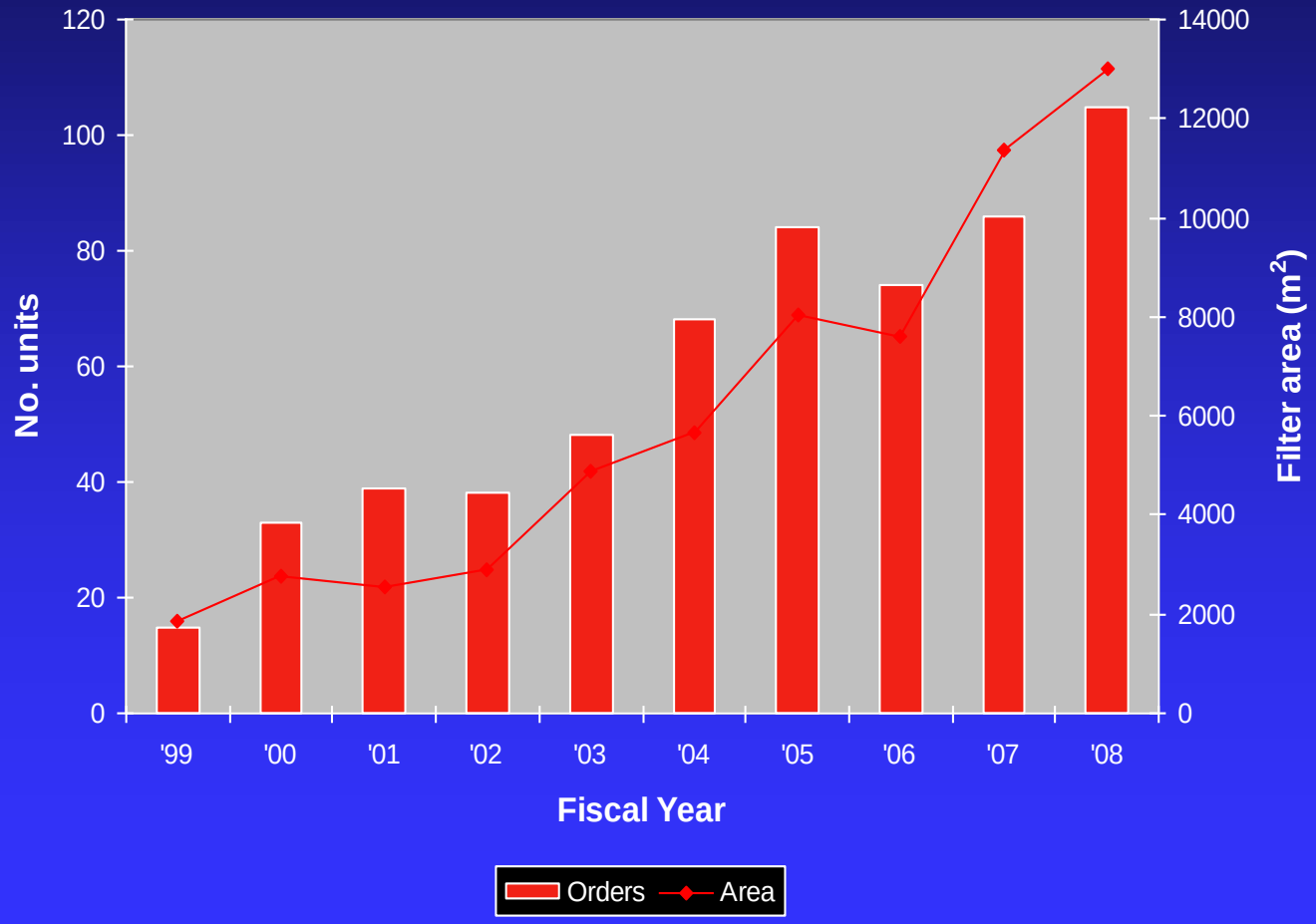
So who‘s doing it?

Globally

Australia, NZ, Sth Africa
Italy, France, Germany, Spain, Austria
Poland, CIS, Hungary, Romania
USA, Canada, Argentina, Chile
China, Taiwan

So who‘s doing it?

Globally



So who‘s doing it?

NZ and Australia:

- NZ I estimate total sqm at 1600 sqm
- Pall has around 900 of which a fair share are contract mobile machines doing large annual volumes.

So who‘s doing it?

Australia:

- Pall has over 5000 sqm – predominantly larger and more automated machines than in NZ

So who's doing it?

Back to the Global situation:

- Our sales exceeded 100 units in the past twelve months
- Pall estimate we have about half the membrane area in the wine world.
- Doing a calculation – using the total Pall membrane – running to end our units alone could filter 5000 million litres pa
- Aust 800 million export, NZ 80?

So who‘s doing it?

NZ example:

- Pall‘s 70,000 sqm running on Marlborough Sav Blanc
- Export volume 2006 57 million litres
- 8.5 hrs

An example of a happy customer

Masi Agricola:

VigneVini, Issue n. 4, April 2008

Published article written by the technical group at Masi.

Masi

- Enhanced system performance
  using Back Pulse and DSC to break the gel layer
- Single pass for reduced wine movements
  Filterability Index achieved
- Very low wine losses
  for increased yield
- User friendly operation and reduction of labor costs
  Intuitive touch screen
- Easy detection of failure
  Clear modules

Masi

- Convenience and accessibile design
  - Compact, with process connections on one side
- Simple Cleaning
- Wine Quality
  - No significant difference in taste or odour from the previous method
- Maximum respect for the properties of the wine
  - Minimal temperature increase
- Reduced Environmental Impact
  - No filter aid disposal
- Improved Operator Safety
  - No filter aid handling

Technical Developments

Improvements over the last decade:

- Wine Quality
- Opex
- Automation
- Green

Technical Developments

Wine Quality:

- Machine design – flow dynamics
- Lower oxygen pick up - gas cover, VSD,s

Technical Developments

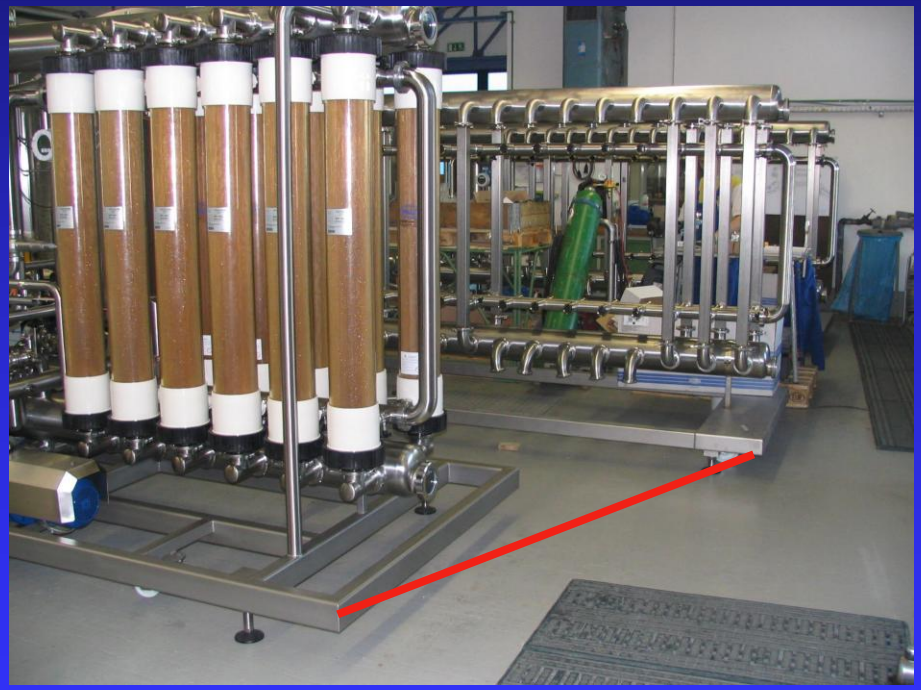
Opex:

- Membrane - warranty is the key
- Wine Losses
- Power , Chemical and Gas

Technical Developments

An example of Membrane Opex reduction:

- XL Membrane
- Reduced footprint
- Lower capital and replacement costs



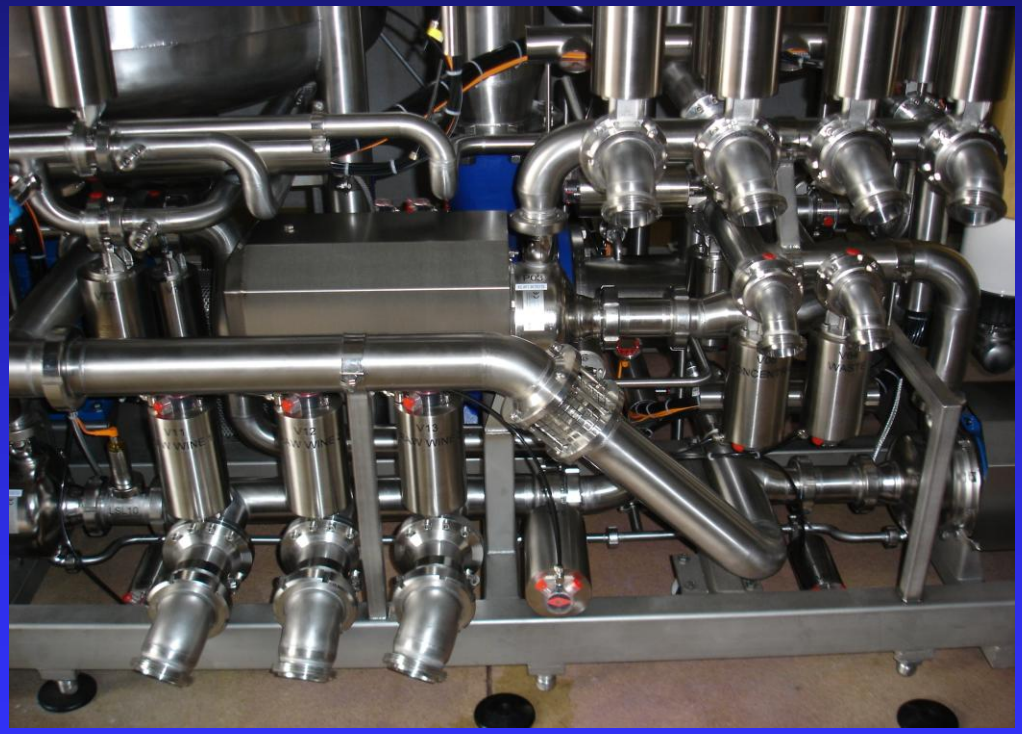
Technical Developments

Automation

- Fully automated, touch screen, modem
- Easier workflow management with pre programmable, wine batching and blending
- Automated CIP – H&S

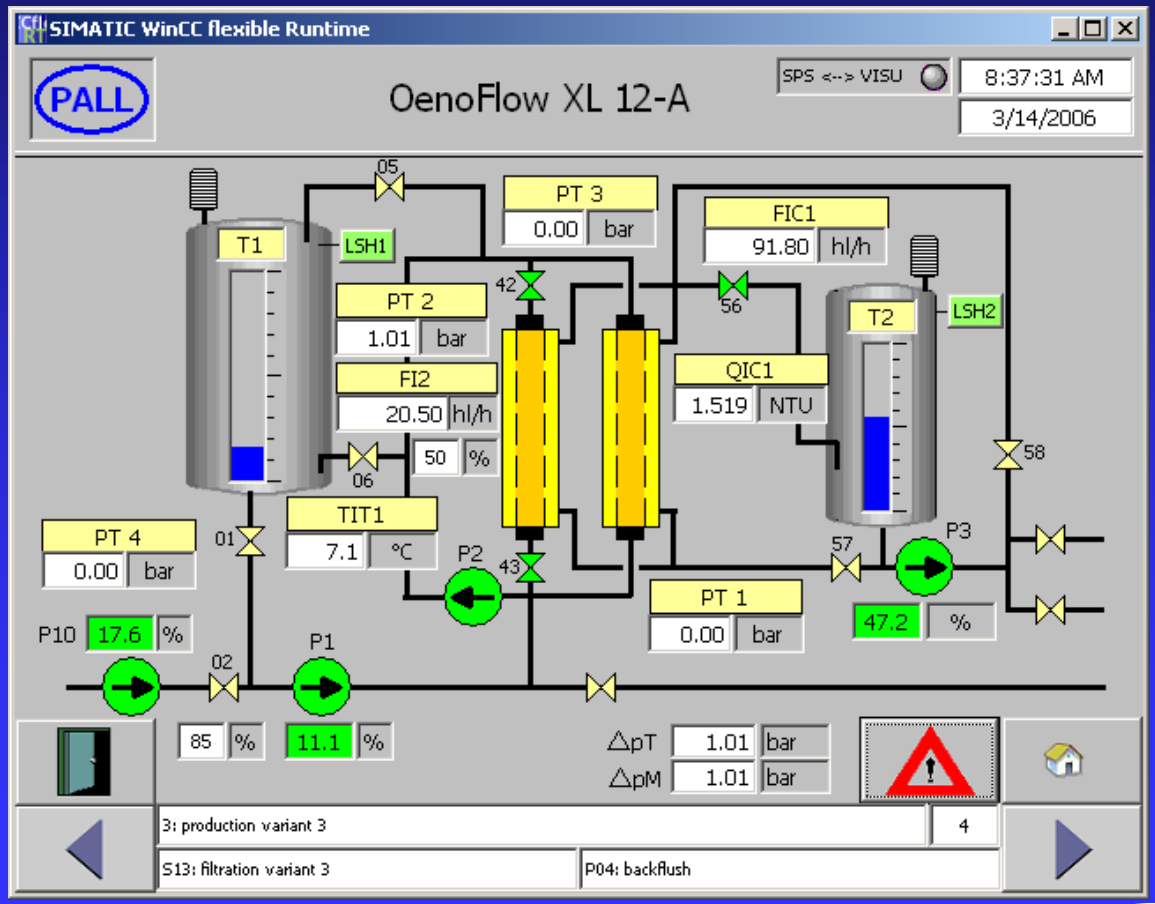
Technical Developments

Automation



Technical Developments

Automation



Technical Developments

Green

- Eliminates DE to landfill
- Electrical use - Select a system with low Kilowatts per litre of wine filtered

Future Developments

New applications

- Lees filtration
- " Pall Australia is well advanced with trials and system optimisation. Extremely high solids concentrations are being achieved.
- An announcement on system design and availability is expected early 2009. These systems will be foolproof, extremely robust and very simple to operate."