Reducing operating cost while improving quality

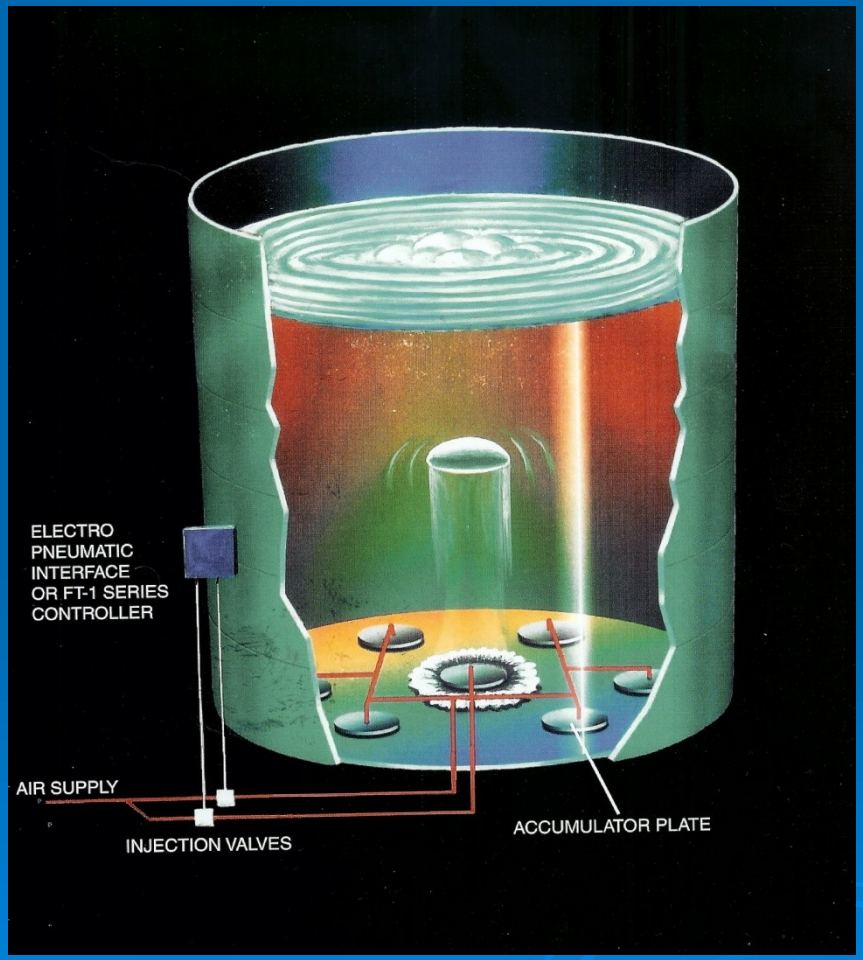
Presentation Overview

A quick recap from 2005.
Turning the ferment V. turning the tank
Mixing with Nitrogen.
Developing the technology.
Reducing operating costs.
Reducing process time.
Reducing the environmental impact.
Improving quality.

What We've learnt since 2005

- Quality questions answered.
- High end Pinot's in Aus and NZ made with Pulsair.
- High end reds from Coonawarra, Clare, The Barrossa and Victoria.
- Quliceda Creek WA.
- The only US wine out-side CA to receive the 100pt score by Parker and the only US wine to get two perfect scores in a row.
- 2nd on the best wines of the year for 2006 in wine spectator.

Ferments V turning the tank



Ferments

- High solids
- Bubble forms on bottom of cap.
- Creates movement in the cap.
- The cap mixes the tank.

V turning the tank

- The use of inert gas
- The absence of heavy solids.
- Less injection points.
- Extremely low gas demand.

Turning the tank

- E.g. A 225kl fermenter requires up to 12 injection valves.
- A similar storage vessel requires 2 valves.
- We mixed a 225 kl tank in under four minutes.

Mixing with gas

- Uses Nitrogen or other compressed, inert gas.
- Tank must be on ullage.
- Injects only a single pulse at any one time into the vessel.
- The 225 kl tank would require an maximum ullage of 125 litres.

Developing the technology

- Developed specifically for mixing finished wine and juice.
- Mix using the smallest volume of gas.
- Mix in the fastest possible time.
- With a low possibility for, and consequence from human error

Reducing operating costs

- Electricity costs set to rise.
- Maximum mixing time of 4 minutes.
- Mix a 225 kl tank with 240 litres of compressed gas.
- A 2 hp compressor creates 226 L/ min
- A 2 hp compressor would create sufficient gas to mix a 225 kl tank with a 25% runtime.
- Modular. Add tanks over time the more tanks installed the lower the per tank cost.

Reduces maintenance costs

- All moving parts are out side the tank and easily isolated.
- No Seals.
- No Gears
- No tank downtime, ever.

Reduces process time.

- Any tank can be mixed in a maximum of four minutes.
- Allows the operator to make an addition to a bottling tank, in the time it takes to change the hose.
- Automatically gasses Ullages. Every month, every week, or even every day .

Reducing environmental impact

- 25% run time on a 2 hp compressor.
- 75% less consumption.

Making better wine

- Zero shear.
- Consistent .
- All headspaces gassed on program.
- Hygienic.
- In place mixing.

Summary

- Quality issues.
- Turning the ferment V. turning the tank.
- Mixing with Nitrogen.
- Development of the technology.
- Reducing operating costs.
- Reducing process time.
- Reducing the environmental impact.

For more information please go to
www.byairmixing.com.au

Thank you for your interest.

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