Cooling With Care Not Brute Force

VinWizard

Wine Technology Solutions

AN INTRODUCTION TO WINE TECHNOLOGY SOLUTIONS

Pulse Cooling

Fill the jacket with coolant and hold it for a period.

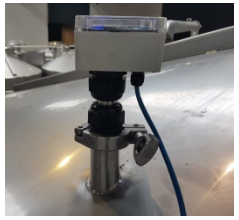
1. Eliminates Insulating Ice Layer on the outside and inside of the tank.
2. Return coolant is much warmer.
3. Better heat transference.
4. Natural Mixing
5. Much gentler on the wine and yeast
6. Coolant does not need to be as cold.
7. Less tanks calling for coolant at any given time.

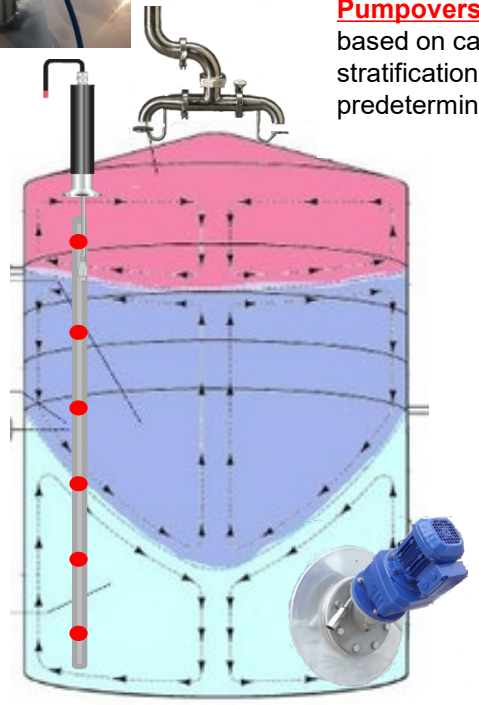
Multi-Level-Probe

The Multi-Level Probe (MLP) identifies and displays thermal stratification in tanks.

The MLP can monitor up to 30 temperature points from the cap down. The readings are displayed in a way that helps answer key questions affecting wine quality and cost of production:

- What is the true impact of heating and cooling on the wine in your tanks?
- Are pump-overs performed too often or not often enough?





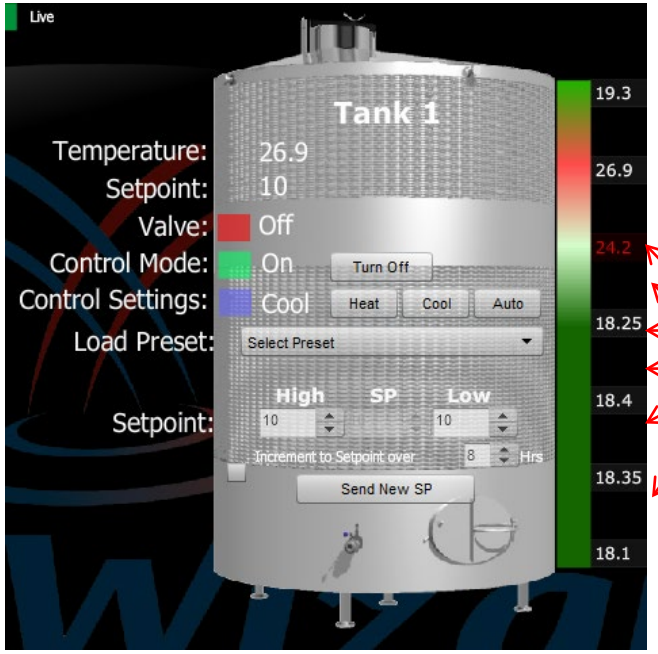
Pumpovers: Automate pump-overs based on cap temperature or when stratification in the tank is greater than a predetermined level

Stirrers: Automate agitators if stratification is greater than predetermined levels

Configurable for all tank sizes

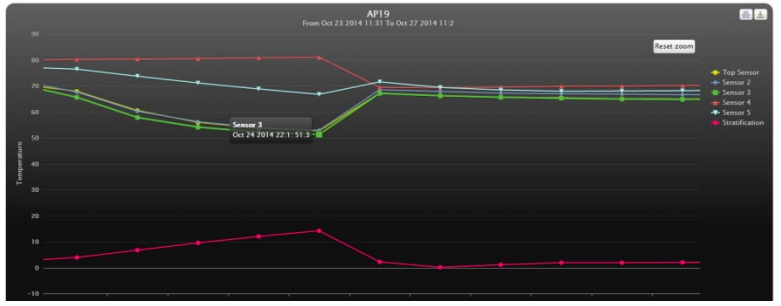
The MLP consists of multiple sensors inside a stainless tube made to fit your tank. Each probe can have between 5 to 30 temperature points. Immerse direct in liquid or fit inside a stainless tube.

Multiple temperature control point options:



Select any sensor point as the temperature control and alarm point

Thermal Chart Display:



Visualise thermal stratification of an entire ferment

Plant Control

What affects the cost of running your Chiller

1. Time of day
2. Current total electrical demand
3. Glycol setpoint
4. Ambient temperature and humidity.
5. Current load

Intelligent Layer

The Temperature control system is most important.

1. The Plant PLC is obvious both to control and monitor.
2. The production system has a lot of information about what's in the tank.
3. The electrical system tells us how much electricity is available without going outside boundaries.

Intelligent Layer

1. How many tanks are calling for cool or heat
2. How many tanks are set to cool or heat
3. The accumulative difference between the tank temperatures and setpoints.
4. The highest and lowest setpoint.
5. What wine and batch is in each tank
6. How many litres in each tank.
7. The status of the wine.
8. The glycol temperature.
9. How hard the plant is running.
10. The current total demand.
11. The sources of that demand

Control Strategies

1. Load Schedule
2. Load Control
3. System Temps
4. Lowest Setpoint Control
5. Pump Control
6. Production Interface
7. Cold Stabilisation

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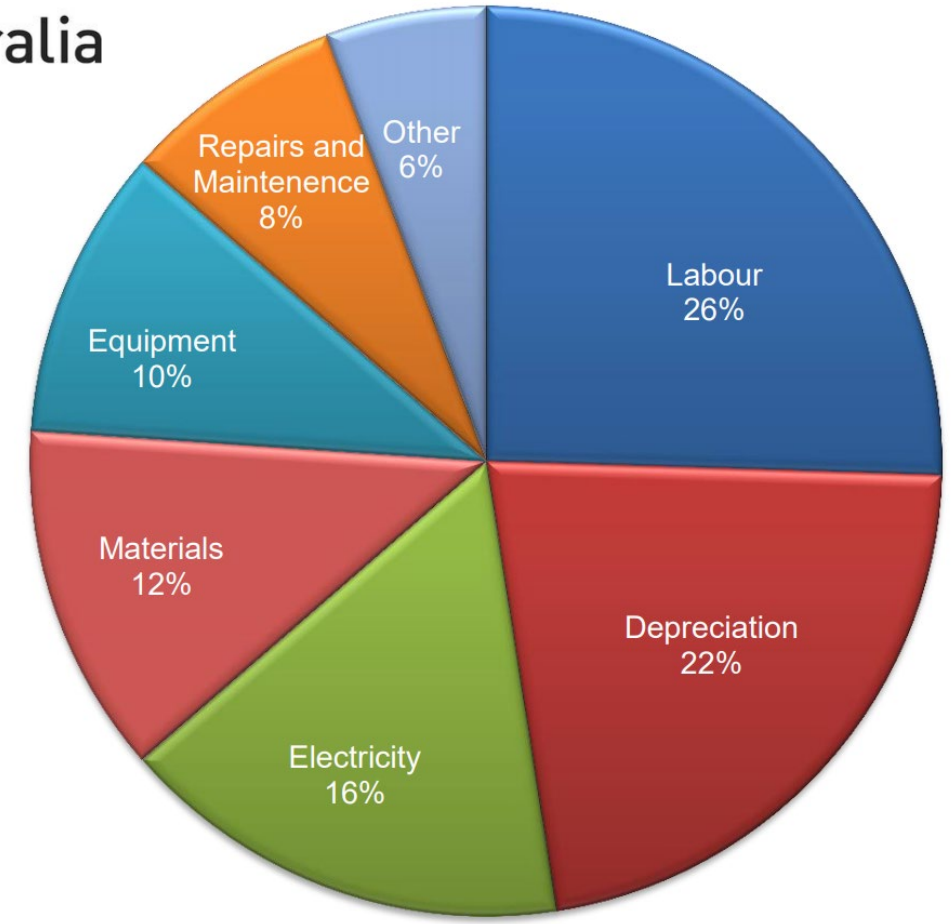
Life Cycle Cost Analysis of Wine Processing



Resource percentage cost of tank maturation