

JUNE 2015

Wine World



FILTER POWDER FREE with STS

focus on BOTTLING, FLOW AND CONTROL SYSTEMS

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LET'S PLAY MONOPOLY

WINE ROUTES THINK OUTSIDE THE BOX

TIM HARRIS ON JOB CREATION & GAME CHANGERS

STEYTLERS SE STERK-PUNTE

STS200 installed at Cilmor Winery, Justin Corrans, Mark Geldenhuys, Quintin van der Westhuizen (cellar manager).



SOLID

SOLUTIONS

Proactive attention to solids during the winemaking process improves cellar production efficiencies. **By Wanda Augustyn**

Winemakers rarely give product solids management much thought except that they wish to have them remove before bottling. Yet by proactively managing solids, it is possible to improve cellar production efficiencies, reduce product losses and downgrades, and produce wines of specific styles.

Separator Technology Solutions is a wine industry centrifuge specialist with tried and tested expertise that grew out of the Australian wine industry. Operating in Australia, USA, France, Chile, New Zealand and in South Africa since 2006, STS is fast becoming the global wine industry centrifuge standard.

STS is overseen globally by Ashley Whittington, based in the USA office, with the South African team operating from its dedicated facility in Somerset West. The branches within the South African operation are After-Sales Service and Export Manufacturing, led by Mark Geldenhuys and

a team of dedicated technicians, while Wine Processing Optimisation led by Justin Corrans works with existing clients to refine production processes to improve efficiency and tailor wine styles accordingly.

FILTER POWDER FREE

While filter powder such as Diatomaceous Earth (DE) is a mainstream product used to filter and clarify wine, it is carcinogenic when airborne and potentially hazardous to the health of anyone inhaling the fine powder. Correct use as guided by Occupational Health and Safety and disposal in accordance with environmental, ISO and IPW regulations is an ever increasing cost which often negates any product recovery benefits.

"Through the years, wineries have sought a solution to eliminate, or at least reduce the use of DE filter powders,

but without great success due to the over-riding business considerations of excessive wine yield loss," says Justin. "Through the implementation of the STS 200 System – a uniquely modified centrifuge system – combined with a normal wine cross-filter, wineries are now able to go DE free.

"Many South African cellars are currently upgrading to this STS 200 System, which is exclusively designed and supplied globally by Separator Technology Solutions. Eliminating the need for filter powder represents significant cost savings. The STS 200 System not only reduces cost and waste, but also increases yield, quality and value, as well as improves employee safety. This is made possible, even for large-scale wineries, by intelligently re-engineering the process to leverage existing gravity and centrifugal technology, headlined by the STS 200 System."

STS FOR MULTIPLE SOLIDS REMOVAL APPLICATIONS

Solids are generated and removed throughout the wine production process. How they are managed has a huge impact on the cost effectiveness of the winery and the wine quality. The effective management of juice solids, processing speed, waste disposal and product quality. Although other technologies address solids removal, it's often not the most cost effective for a winery application due to addressing only one or some of these criteria."

Because established technologies used to remove solids – Rotary Vacuum Drum and Plate and Frame filters – are still dependent on diatomaceous earth, which is becoming an undesirable product, downgrades are the norm due to the high oxygen pick-up in the case of RDVs. The wine industry is now looking at alternative technologies.

Justin explains that less-crossflow gives excellent clarity, but at the expense of processing speed and product recovery. "Decanters, which are excellent at handling high solids at high processing speeds, fall short in effective product recovery and clarification with an extremely high percentage of solids still remaining in the product. Further clarification is often needed, adding to the processing steps and requiring additional capital outlay. And one must keep in mind that decanters are not used in low solids clarification applications such as wine polishing, due to the lower G force and high product losses as well as the high oxygen pickup."

"With competing lees processing techniques, systemic product downgrades are the norm: due in part to needing to firstly batch-up & transfer racked lees from multiple tanks, resulting in extremely high oxygen pick-up. Where left to stand separately at allocation tasting, these wines often fall well short of the racked wine!"

The STS system was designed specifically for the wine industry and addresses the different solids removal requirements across the winemaking process. Its ability to process higher solids with a greater product recovery via a thick solids discharge and negligible oxygen pick-up gives it a clear advantage over other disc centrifuges. No other single technology has multiple solids removal applications across the winemaking process, which makes the STS system the most cost effective choice.

"With a pro-active approach to solids management through the effective use of the STS centrifuge combined with a normal cross-flow filter, DE free is becoming a reality. By applying a revised combination of gravity and centrifugation, wineries can achieve a specific wine style and processing objectives of low solids in white and rosé fermentations, as well as subsequent rapid clarification of white, rosé and red wines post-fermentation. This holistic pro-active approach to solids management can result in the elimination of filter powder in the winery." **W**

Specific applications

STS supplies centrifuges of differing capacity to the wine industry, ranging from STS 45, STS 95, STS 200 for juice, wine & lees applications & also the STS 300, STS 400 & STS 500 for super high-capacity / low solids applications.

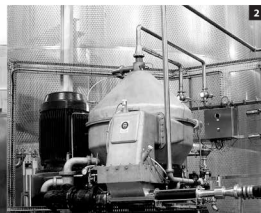
Polishing wine prior to final filtration reduces the solids load, which enables more effective cross-flow filtration with higher flow flux rates and reduced wear and tear on membranes. "The capital payback of including an STS centrifuge is justified throughout the production cycle and not only during harvest time like other solids removal technologies," says Justin.

STS centrifuges as part of a solids management programme can be used to obtain a desired wine style as a result of manipulating solids via juice clarification, yeast contact post-ferment and malolactic lees. Centrifuging wine prior to final filtration reduces the solids load, which enables more effective cross-flow filtration with higher flow flux rates and reduced wear on membranes.

Cilmor cellar manager, Quintin van der Westhuizen, is but one who swears by the STS 200. "By proactively using our STS, one machine has enabled us to eliminate the RDV and lees filters, but it also has the added benefit of clarifying wine quickly and efficiently with maximum recovery, so that that we can supply our customers timeously."

The wine team at Haute Cabrière agrees. "Since installing our second STS45, used in conjunction with our cross-flow, we have eliminated the use of all filter powder from the winery," says production manager Albertus Lourens. "We have also reduced losses and improved quality through minimal oxygen pick-up. Other added benefits include employee safety, because we no longer have to worry about the health risks of airborne filter powder. Using the STS45 has contributed to our overall environmental policy. We no longer have to dispose of spent filter powder, which aids IPW certification."

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1 The second STS45 installed at Haute Cabrière, Justin Corrans, Albertus Lourens (production manager), Mark Geldenhuys. 2 STS200 installed at Cilmor Winery. 3 STS controls, Mark Geldenhuys, Justin Corrans and Quintin van der Westhuizen cover. The second STS45 installed at Haute Cabrière, Mark Geldenhuys, Justin Corrans, Albertus Lourens. PICTURE: ADRIAN DELOESE, DOCCA PHOTOGRAPHY.



STS COVER PROMOTION