

Automation improves wood treatment processes

In their quest for accuracy, chemicals specialists from wood preservative chemicals company Dolphin Bay Chemicals have taken an innovative approach to determining the correct solution strength of Permacure CCA, which is a wood preservative, which involves using existing technology and adapting it to its specific needs.

Traditionally applied to the food and beverage industry, the

concept of eliminating the operator from the titration process presented itself when one of Dolphin Bay's clients – Mpumalanga-based timber company Low's Creek – approached Dolphin Bay to find a resolution to the inconsistent results they were getting from treatment operators, which is also a general industry problem.

"The titration used to determine the requisite solution strength

of Permacure CCA is important. Even small variations will make a huge difference to the actual retention of CCA in the timber," says Dolphin Bay laboratory manager Navi Moodley.

By automating the process, Dolphin Bay was able to deliver a better product, helping Low's Creek to achieve better accuracy, save time, and cut down on possible waste in terms of overtreatment.

Dolphin Bay chose to use a German-made model that is known for its versatility and adaptability. Moodley had to carry out a careful study of the titration in use to determine solution strength.

"The pH value at the end-point of the titration was carefully observed

Dolphin Bay is the first company in the country to make use of this technology

– NAVI MOODLEY

and an equation developed and programmed into the autotitration unit. We also used various volumes to find which one would work the best and tested a wide range of solution strengths," says Moodley.

He adds that, as far as he knows, Dolphin Bay is the first company in the country to make use of this technology, and subsequently named their adapted autotitrator to Securus Auto Titrator (AT).

Feedback from Low's Creek has been positive after Moodley installed the unit at its plant earlier in November 2014.

"Their results are now consistent across their operations and we will continue to work with Low's Creek to ensure the unit continues to operate correctly," says Moodley.

Low's Creek quality and control manager Marius Vermaak says the autotitrator has improved the traceability of results.

"Results are automatically transferred into Adobe format, which cannot be changed by operators. They get directly downloaded onto my computer. This process will definitely improve accuracy," says Vermaak.

Moodley says Low's Creek's openness to new ideas and technology made them the ideal partner to work with on this project. ■

ENGINEERING NEWS COUPON ON PAGE 82 E362036



Picture by: Chief Photographer: Dennis Diers

AUTOMATED PROCESS

The titration process has been automated to ensure the adequate retention of Permacure CCA in timber