

PRODUCTION TECHNOLOGY

"BACTERIAL CONTAMINATION IS BECOMING A BIG ISSUE NOW"

Cleaning cycles, the use of special cleaning agents, and pipework need to be optimised in preparation for future demands

As a result of reductions in solvent content, the paints and coatings industry is shifting its product ranges more and more towards water-borne solutions. However, this shift is posing new challenges for the industry. Pascal Volkmer and André Oellrich from production equipment producer R+B Technik say that high-end products cannot be produced in conventional production plants. The entire production process needs to be put under the spotlight and reconsidered.

Cleaning processes are becoming more and more important in production. How do you rate the situation in the paints and coatings industry? The paints and coatings industry currently faces major challenges. Customer



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demands and legal requirements are imposing strict limits regarding the use of solvents and disinfectants in the industry, forcing it to shift its product ranges more and more towards water-borne solutions. However, expectations regarding the quality and variety

of the products obviously remain high. Developing this new range of products in a comparatively short period of time is proving to be a big challenge for the paints and coatings industry. As product development progresses, practical experience shows that these coatings cannot be handled properly in existing production plants. Bacterial contamination, which was easily controlled by solvents and biocides in the past, is now becoming a big issue. Consequently, the whole production process needs to be put under the spotlight and reconsidered. The main focus here has to be on production hygiene, which depends mainly on the production layout and the cleaning processes.

The cleaning cycles for production machines can be time-consuming, but necessary. To what extent do you see further

potential for extending the intervals between cycles or reducing downtimes? In our opinion, the intervals between cleaning cycles do not have to be extended. Advanced cleaning systems should instead pursue the goal of being as easy to use as possible. A modern concept needs to be highly automated and customised. Cleaning cycles, the use of special cleaning agents, and pipework need to be optimised in preparation for future demands. In combination with a properly thought-out production layout, integrating a simple, effective cleaning system as a regular process step confers a key advantage when it comes to production reliability. Lengthy downtimes entailing a great deal of manual effort for meticulous cleaning processes must be avoided if constant product quality at low production cost is to be guaranteed.

To what extent do environmentally-friendly systems, such as water-borne or biocide-free coatings, pose a challenge when it comes to cleaning production machines? In the past, the paints and coatings industry was used to keeping the pipework in production plants as flexible as possible. The use of solvents and disinfectants allowed stable products to be produced without the need to expend too much effort on hygiene design. Therefore, at that time, the salient objective of pipeline construction was to connect as many sources as possible to as many targets as possible. Because biocides were used, the many dead-ends that resulted from this design were considered a minor problem. Now, though, the use of water-borne or biocide-free coatings make it essential to keep the plants extremely clean. Besides the pipework design, all other de-



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vices, e.g. pumps, valves, filters, etc., also need to be chosen with this aim in mind. The synergy that results from integrating customised cleaning systems will render production plants sustainable enough to cope with the future demands of environmentally-friendly systems: 