

Controlling bath care actions and optimising bath lifetime by monitoring bath contamination

Product: SITA ConSpector
Industry: Industrial parts cleaning
Measuring principle: Fluorescence measurement

Even with safely managed cleaning processes, contamination can accumulate in the cleaning baths and reduce efficiency. This ingress of contamination not only results in a lower cleaning performance, but can also lead to problems such as carry-over of contamination into subsequent rinsing baths and insufficient part cleanliness. In addition, cleaning agent components such as builders and surfactants are bound to the contamination, which impairs the actual cleaning process. In extreme cases, the parts may become regreased due to floating oil.

To ensure constant process quality, it is therefore essential to monitor the content of contamination in the cleaning and rinsing baths and to take suitable bath care actions before a new batch is necessary. Bath care actions can be carried out for example by using settling tanks, coalescence separators, separators or membrane filters and evaporators.

● Fluorescence measuring device SITA ConSpector

SITA offers an easy-to-use and robust solution for controlling the effectiveness and proper functioning of the bath care measures and for determining the optimum time for using new cleaning and rinsing baths.



Figure 1: Fluorescence measuring device SITA ConSpector

The fluorescence measuring device SITA ConSpector quickly and easily monitors the contamination levels of cleaning and rinsing baths at the process or in the laboratory. Due to adjustable bath-specific limit values, the device signals the optimal time for preparing a fresh cleaning bath solution visually and acoustically.

If the amount of contamination exceeds the filter capacity in the cleaning or rinsing bath, an increased contamination level will be determined immediately. Controlling the contamination level directly after filtration can ensure the functioning and effectiveness of the filter.

The example shows how the optimum time for preparing of a fresh cleaning bath can be determined by setting up individual process-specific limit values. The effects of bath care actions through continual monitoring are clearly obvious.

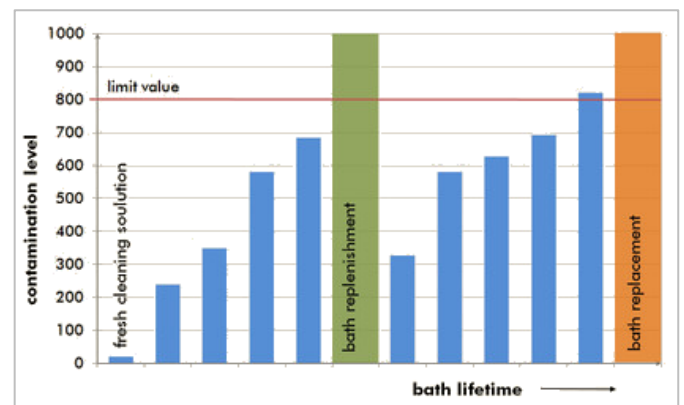


Figure 2: Bath contamination for a bath lifetime over 2 weeks

● SITA clean line BC

The SITA clean line BC inline system solution monitors bath contamination in cleaning and rinsing baths continuously. This allows to monitor and control bath maintenance measures in a targeted manner as well as to determine the optimal time for a fresh bath. As a plant component, the measuring system can be flexibly adapted to the respective cleaning technology and detects even the smallest amount of residual contamination in rinsing baths.