

Service Reference

Topic: Extended Plant Closure & Shutdown period's impact of the UF Machine

UF shutdown Best Practices advise to keep the UF membrane wet and do those things that suppress the growth of biological organisms. In other words, the paint process pump must run 24/7 and approved biocides must be used on a rotating basis so the biological organisms do not develop immunities.

Two-week summer shutdowns have been used in the automotive industry as a chance to award vacation time and to allow for model change-overs. Generally in these cases, manpower is still available in the plants to check on equipment and report as required.

In some cases, plants are being idled or closed down for many weeks or even months. Electric power and a source of DI water may or may not be available during this period. In addition, the only persons who may be looking at the equipment on a regular basis are plant security personnel.

Since the goal is to re-use the E-coat paint system once the plant is re-started, what can or should be done before the plant is idled? This document will consider two scenarios: First, electric power is available as well as DI water. In the second scenario, there is no electric power or DI water.

Tasks to be done regardless of scenario

UF Elements should be cleaned to remove paint solids. Afterwards, an approved biocide should be added (at the upper end of the dosage recommendation range) into a final permeate rinse. Pack the UF element in permeate/biocide mixture.

Electric Power & DI Water Available

Install the UF machine pipe spool piece by-pass. Continue to circulate the E-coat paint and by-pass the UF machine. Make sure to flush out all paint piping that is being by-passed.

At some point the effectiveness of the biocide may begin to degrade. If this begins to happen, use the UF cleaning system to perform a buffered DI rinse and follow up with another buffered DI rinse. Add the recommended dosage of biocide and lock the UF elements up again. Repeat as often as necessary.



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Electric Power & DI Water Not Available

Remove all paint from the E-coat tank and related supply, return, and drain piping lines. Do not allow paint solids to reside inside a pipe or object where it will harden and form an impediment to flow in the future.

When re-starting the system, first contact UFS Corporation to ask for recommendations. In addition, review the original UF machine manuals since the system will have to be re-started all over again, just like when it was first commissioned.

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