

SERFILCO®

FILTRATION OF PHOSPHATING SOLUTIONS (ZINC and IRON)

TECHNICAL BULLETIN
TF-156
DEC. 2003

DESCRIPTION

Phosphating is the treatment of bare steel which produces a clean surface, ideally suited for the further surface coating of paint or other materials.

Phosphate coatings may be either zinc, iron or solution with suitable accelerators. During the process the reactive metal is immersed (or sprayed) in the metal phosphate phosphoric acid at the surface and a protect bath, iron is dissolved at the surface and a phosphate coating is precipitated, which is a protective coating as well as a base for further coating.

Chlorate accelerated baths have a high sludging tendency while nitrate accelerated baths have a medium to low sludging tendency.

PROBLEM

The operation of these baths requires even application of solution and good chemical control. Lack of sludge removal results in poor quality and lost production in maintenance. The sludges generated do not harm the phosphating process as such, but are detrimental to operations at elevated temperatures. These sludges tend to foul and plug heat exchangers, circulating pumps, strainers, spray nozzles, etc., and must be periodically removed.

SOLUTION

SERFILCO offers a disposable fabric filtration system for continuous removal of the sludges with automatic indexing of the media as required for “un-attended” operation, reducing or eliminating down-time for maintenance and cleaning and facilitating chemical control of the bath.

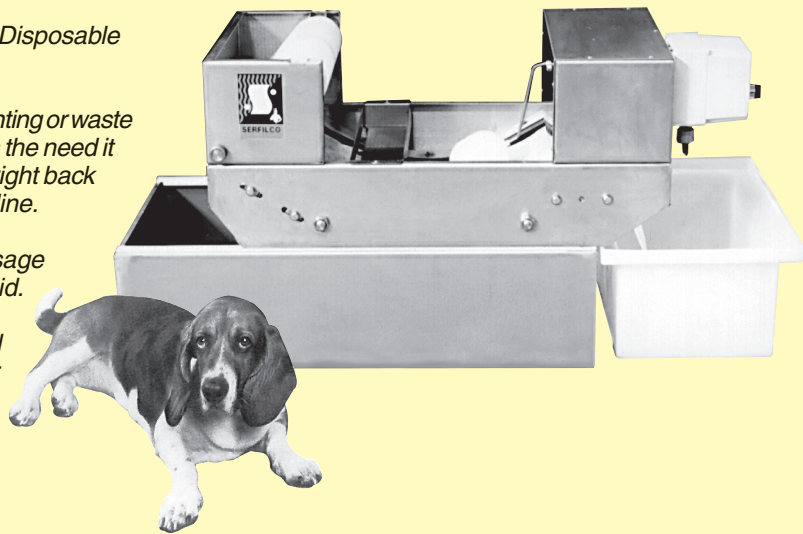
Zinc phosphate baths require acid resistant materials, such as 316 stainless steel and tend to generate more sludge than the iron phosphate bath which can be handled with carbon steel and cast iron. Two or more tank turnovers per day using medium porosity media (25 - 40 micron) has proved effective. Tapered bottom phosphate tanks aid in conveying the sludge to the pump. Either in-tank or out-of-tank pumps may be used to transfer the sludge laden solution to the filter. Filtrate may be returned to the tank by gravity or a return pump in the filter reservoir.

Just like an old faithful hound dog, our Disposable Fabric Filter only moves when it has to.

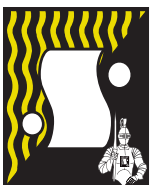
Mostly, it just sits by your phosphating, painting or waste line and filters — filters — filters. When it feels the need it will stretch out a few inches of fabric and go right back to protecting its master — your production line.

This means low energy use, media usage and effective separation of sludge from liquid.

So stop spinning, pulling pushing and shoving the hard way. Contact us today for literature on our low-cost, automatic Gravity Filter and hand operated Roll-A-Filter and filter the lazy way!



See Bulletin F-701



SERFILCO, LTD.

2900 MacArthur Blvd. 847-509-2900
Northbrook, IL 60062-2005 U.S.A. 800-323-5431
e-mail: sales@serfilco.com FAX: 847-559-1995
www.serfilco.com