

SUBJECT OPERATION OF STAINLESS STEEL FILTERS
Process Specification

SUPERSEDED DATE

This specification covers instructions on use and maintenance of stainless steel filters used in connection with delivery of deionized and distilled water for use in preparation of fluorescent materials and for screen settling.

1. EQUIPMENT

Two (2) 4 sq. ft. Micrometallic Stainless Steel Filters - 35 micron mean pore opening.
One (1) Stainless Steel Acid Tank.

2. MATERIAL

Nitric Acid Solution: 1 part 42° Be, tech. grade Acid (A18) - 6 parts water.

DANGER

NITRIC ACID SAFETY PRECAUTIONS - See 33-2-7C.

3. OPERATIONS

- a. One filter shall be in service at all times on supply lines of water for screen settling. Two filters will be needed when distilled water is being used, to prevent excessive pressure drop.
- b. Alternate filter shall be cleaned in acid solution.
- c. Both filters shall be cleaned once each week at such time as pressure will permit (when deionized water is on supply).
- d. The porous unit shall be backwashed with filtered water at not more than 60 psi., emptied and capped with a stainless steel cap and laid to soak 1/2 hr. or longer, in a stainless steel pan of sufficient depth to cover the unit with free board. The acid pan shall be half filled with the nitric acid solution. After soaking the unit shall be backwashed with filtered water until all acid has been removed from the unit, that is, until blue litmus fails to turn red in the rinse water run off. The outside filter body shall be scrubbed with sponge or other non-scratching material and rinsed in water.

Caution:

Rubber gloves, rubber apron and "Chemical" goggles shall be worn while performing this operation.

The acid tank shall be flushed and filled with fresh acid solution after each 5th time used.

Filter used to separate deionizer resins should not be cleaned with caustic because cation resin swells in caustic solutions and will clog pores of filter.

- e. The solids collected on the porous unit shall be sampled and submitted for spectrographic analysis whenever the filters fail to deliver sufficient water for Settling Room operation over a one-week cycle of use.

ENGINEERING SECTION
STANDARDIZING

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