REV 0421

Resin Fouling — Organic Fouling of Anion Resins

Organic materials are present in most surface water supplies. The fouling of ion exchange resins by these organics cannot be predicted accurately because they vary widely in nature. Naturally occurring organic acids, which result from the decomposition of vegetation are the chief offenders. Most of these substances will foul the anion resins (strong base and weak base). Also, they have a tendency to leak through the anion resin bed, decreasing the pH and lowering the resistance of the effluent. As they build up, flow rate and temperature sensitivity increase, operating capacity decreases, and rinses become longer.

If organic fouling of the anion resin is suspected, the following procedure can be used:

1. Slowly brine the anion resin with a warm (120°F) saturated brine solution using a 10%, by weight, solution of 10 lbs. of salt per cubic foot of anion resin plus 1 lb. of sodium hydroxide per cubic foot. The brine solution flow rate should not exceed 0.25 gpm/cu. ft. Allow the brine solution to flow through the bed until the effluent runs clear of color.

2. Next, let the resin bed sit in the last bed volume of brine for at least one hour. The longer the resin soaks, the better. Time allowing, it is recommended to treat the resin with several brine and soak cycles, with the final soak taking place overnight.

3. Rinse the excess brine caustic solution from the resin bed at normal service cycle flow water.

4. Regenerate the resin with the normal dose of regenerant twice and return to normal service.

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

CORPORATE HEADQUARTERS 1801 Federal Street Camden, NJ 08105 USA PHONE 856.768.9600 FAX 856.768.9601 EMAIL info@resintech.com WEB resintech.com