

Marmon Industrial Water

Value Proposition 1171

Product: resin bed

Industry: power

Value Proposition: Condensate polishing with high ionic removal at up to 800 psi

Many Proven Advantages

- Graver, part of Marmon Industrial Water, is a leader in deep bed condensate polishing with many successful installations spanning decades and dealing with a range of fossil and nuclear applications

ADVANTAGES

- High ionic loading removal
- Up to 800psi service pressure
- Up to 50 gpm/sq. ft. flowrate
- Superior resin regeneration

Graver has Optimized Deep Bed Technology

- Graver Water has optimized deep bed condensate polishing technologies through the use of proprietary flow distribution enhancements and enhanced collection, to maximize resin utilization. For on-site regenerated systems Graver's trademarked and proprietary two-vessel SepraEight® regeneration design results in a smaller footprint for regeneration equipment without compromising separation efficiency or optimum regeneration.
- Deep bed/mixed bed condensate polishers are the preferred technology for plants using high TDS cooling waters such as seawater, as well as where there is a requirement to operate long term with small condenser leaks or an inability to control excessive air in-leakage.
- Both Deep Bed and Precoat type Polishers remove iron, copper, silica and salts, and suspended solids. However, Deep Bed Polishers provide the best method for the removal of high ionic loads due to their large ion exchange capacity. Graver's Deep Bed Condensate Polishers have been designed to handle service pressures of up to 800psi with inlet distributors and underdrain that operate more efficiently than competitive designs.

Resin Minimization

- Ion exchange resin selection and ratios can be optimized for the particular application and condensate chemistry. For instance, when “All Volatile Treatment” (AVT) is used the result is an elevated operating pH (amine level) the resin ratio of choice would be a high cation exchange to anion exchange resin ratio (2:1) when in a neutral pH environment, as would be seen in a boiling water reactor (BWR) a stoichiometric blend of the ion exchange media would be employed. Upon exhaustion, either due to ionic breakthrough or pressure drop, the units are regenerated through a series of backwash, chemical regenerants (either in situ, external or off site) and then returned to service.
- When Deep Bed Condensate Polishers are paired with a quality ion exchange resin such as Gravex[®] Bead Resin, efficient polishing of condensate is easily obtained. When the exchange capacity of the resin is exhausted it can either be sent **off-site for regeneration** or disposal, or it can be regenerated **on-site** using Graver’s SepraEight technology.