REV 0521

Composition of Sea Water

CONSTITUENT	TYPICAL CONCENTRATION (ppm as $CaCO_3$)
Cations	
Sodium, Na^+	23,000
Potassium, K^+	500
Calcium, Ca^{++}	1,000
Magnesium, Mg^{++}	5,000
Anions	
Chloride, Cl^-	27,000
Sulfate, $SO_4^=$	3,000
Bicarbonate, HCO_3	150

SEA WATER AS BRINE REGENERANT

The concentration of salt (NaCl) in sea water is approximately 2 to 3% as compared with the 10% level normally employed for salt solutions used for the regeneration of water softeners. The hardness level of sea water (6,241 ppm) is considerably greater than the hardness level of waters normally softened by means of cation exchangers. In other words, sea water is too dilute and too hard to be a very effective regenerant for softeners and therefore should only be considered as a regenerant when there is no other alternative.

Obviously that sea water is used as a regenerant solely because of its unlimited availability in coastal areas and its “low cost.”

NOTE: As the sodium concentration of a solution increases, its effectiveness as a softener regenerant increases; however, as the hardness level increases, the regenerant efficiency decreases.

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