WATER TREATMENT TECHNOLOGY FOR INDUSTRIAL, COMMERCIAL & ENVIRONMENTAL APPLICATIONS

SEPTEMBER 2012 - WATER TREATMENT NEWSLETTER

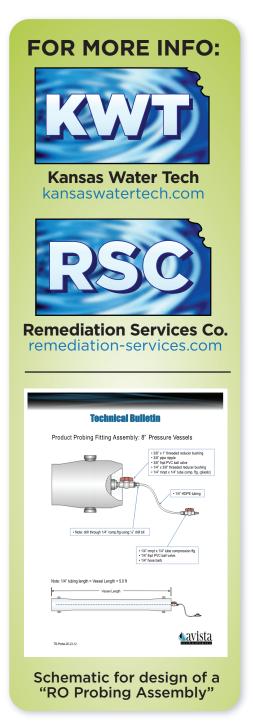
NEW SAFETY TRAINING VIDEO

The Association of Water Technologies has produced a safety training video specifically for those who handle water treatment chemicals. The hazards of these types of chemicals is explained and safe handling procedures, use of SDS's and first aid is emphasized. If you want to use this in your OSHA Hazcom training or want to review this video contact Eric Fraser and we can get you a copy. eric@kansaswatertech.com

RO MONITORING - A PROBING QUESTION

If you are getting unexplained high conductivity from your RO it might be time to profile and probe the pressure vessels. The probing assembly schematic shown in the diagram to the right has been provided us by Ken Robinson, Avista Technologies. KWT and Avista are supporting RO system operators in Kansas. Click Here for a download of the schematic visit www.kansaswatertech.com





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REMEDIATING WATERS WITH HIGH IRON CONTENT

Remediation Services Company a sister company of Kansas Water Technologies has developed treatment options for treating groundwater with high iron content in remediation systems. Modified jar test equipment has been used to simulate the effects of air stripping or other remediation processes on iron in groundwater. Treatment options have been determined and optimized with this procedure. A powerpoint regarding the use of specialty chemicals to prevent mineral deposition (including iron) in remediation systems can be found at our website

www.remediation-services.com

BOILER SYSTEM PRETREATMENT MATRIX

If you deal with boilers you know the importance of boiler feedwater pretreatment equipment. A useful 4 page matrix identifying various boiler pretreatment options and operating guidelines is included at our website www.kansaswatertech.com

CAST ALUMINUM "BOILERS" - A SPECIAL SITUATION

Cast aluminum generators require special treatment due to the nature of the chemistry of aluminum alloys. Successful treatment of these typically closed loop systems must address the manufacturer's guidelines for the treatment of the generators but also the other metallurgy found in the systems. Some systems also contain glycol for freeze protection. Unique vapor phase corrosion inhibitor formulations have been successfully used.



Kansas Water Tech kansaswatertech.com



Remediation Services Co. remediation-services.com



Modified Jar testing for testing ground waters with high iron

AVVITYY	Boile	r Pre	treatn	nent M	latrix	page '
System	Effect on Water	Control Tests	Service Checkpoints	Design Flow	Ease of Operation	Convents
Sedium Zeolite Softener	Replaces some cations: Ca, Mg, Fe, Bs, and 5* for Ns. Small increases in conductivity and TDS.	Total Hardness: for influent = 50 ppm as. CaCO _A effluent = 0.1 - influent of 500 ppm and influent at 1500 ppm and influent at 1500 ppm yields 2.8 ppm	- Check influent and offluent for total hands for total hands and total panders spile and at end of a service cycle Check after all valves to defect hand water topoess leaks Check & record unit capacity between regenerations.	2-4 gen/ft ² 2-14 gen/ft ²	Simple to automate and specials. Testing and monitoring also easy.	High TDG & hard sadders have highe levels of leadage. Etituent handness also influenced by amount of sait use during represented. Uses strong acid cation reals.
Sedium Chéride Dealkalizer	Replaces some selects: HCOs, SrCs, WOS, Brd. Administration of the selection is about 50 miles. HT case significantly. HT case significantly conductivity & TOS.	- Total Alhalinity: Responsible where delivent alkalinity is +13 - 20% of the influent alkalinity.	- Check influent and effluent for foldal silvations, - Tord during service of a service or any makeup water logoast lauk. - Check and record unit processing capacity between regenerations.	2-4 geneti [†] 2-14 geneti [†]	Single to automate and spenale. Testing and tromboting also easy.	Must be proceed by softening. Capacity is affect by brist exchanges anions. High influent changes anions. High influent changes anions alkelinity reduction thindides reduces alkelinity reduction to the process of t
Acid Deathwitestion / Decarbonator	Reduces ablatinity to applicating a strong acid such as selfant or hydrochloric acid. Sodium position acid. Sodium position acid. Sodium position process is common to obtain hardness reduction.	Typically drug pH to Cd 2 of to the silental solidly [PRA) point. Elicationates and carbonates are converted to carbonic seld. Water is passed over a decemberate to strip or carbon discide. NaCH is added teels to raise pil model.	Check gif after asid addition to achieve vs. 2 ptf 6.0 alkalenty. Check for CO, after document of accombonator and befare gif adjustment viewed be v. 30 pen. Test ptf after Nackt addition for desired ptf.	Flow design will be based upon the in-fine shifts referred for the sold and the design limitations of the decarbotates.	A stationly live cost absention for highly shallow enters. The operation is neightively easy to operate with a good setup, but request sold & causet handling and upen to an be very damaging to deventionany piping and boilers.	Excellent receits equipment is need with frequent man checks to avoid problems.
Weak Acid Ion Exchange	Replaces hardness associated walkfalling with hydrogen ine — and thereby reducing HOO ₂ .	Hadness in effuent shade equal the influent one extremels hardness. When alkalinity in the stitute of the street shadness in the street shade of the unit shade of the influent abasins the unit should be regerented.	water bypass leaks. - Check and record unit processing capacity between regenerations.		 Simple to automate and operate. Teeting & monitoring also easy. HICl or HUSO, solid used to regenerate, as these may be need for pH seutralization of the regenerate. 	A decarbonater is commonly used at the weak seld see release the carbon disorder overland. Wheek acid units is early afficient in the of acid, around 90 in Could be used to to advantage of get depression.
Spit Stream Softening	Lowers hardness, situatinity, and TDS. The situatinity residential is dependent upon how much water to directed to the sodium regenerated SAC and and how much is client to the acid regenerated SAC and and how with the country of the coun	- Tutal Handmess: O-1 porn Hydrogen unit statistics = 0, or operation with FMA. - Tatal attainity of binds: desired level below that of influent attainity. - Check CO ₃ after decembrance for biended mater +10 porn	Same as for sodium positio softeners.	2-14 gpm t ²	 Requires control to maintain the proper blend to achieve desired alkalinity. 	Applicable for higherdness and high alkalinity water.

Boiler Pretreatment Matrix available at Kansas Water Technologies website